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Mbali Conference 2023 Proceedings

Management, Business, Administration and Legal Initiatives

Africa Rising: Possibilities, Priorities, Partnerships.

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Associate Editors: Dr Damilola Kehinde Ilesanmi, Dr Sheunesu Zhou
and Ms Isabel Rawlins

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Foreword

We are exceedingly grateful to many of our national universities for their enthusiastic support in participating in the 2023 MBALI International Conference, including DUT, UKZN, UFH, UJ, WSU and LU whom I'd like to call our partner Universities for their overwhelming support with the large number of participants both online and face-to-face. Moreover, I am most grateful for the participation of international universities in Ghana, Uganda, Nigeria, Zimbabwe, Kenya, Botswana, Appalachian State (USA), Hemchal University (India), Uttar Pradesh University (India) and Xichang (China). We have received 44 articles for inclusion in our proceedings, after the double blinded peer review process we have accepted 32 papers for publication of which 7 are from UNIZULU.

MBALI, since its conception, has valued the notion of a credible voice for African innovations, ideas, and perspectives in respect of the fields of Commerce, Administration and Law, which is in perfect alignment with the University of Zululand's 2022-2027 vision of a *Node for African Thought*. In support and celebration of this enlightened vision, this year we rose to the occasion and chose the conference theme: "*Africa Rising: Possibilities, Priorities, Partnerships*" which asserts that while narratives over the past few decades have painted a wide range of views of Africa—as a child in need of development, a rising economic power, an imminent threat, a tinderbox of terrorism, a place of poverty, forced migration, and disease—the truth is, as always, more nuanced. One thing is certain: the transformation that Africa has undergone in recent decades has been remarkable. Africa is shaping its own destiny and should be referred to as "Africa Rising".

It is myopic to ignore our progress—but rather it is important to acknowledge our progress, taking full responsibility that it needs to be ratcheted upwards to ensure we work towards faster and greater, positive outcomes. By recognising Africa as an opportunity, rather than a threat, governments, citizens, and organisations on the continent and globally will be better positioned to face challenges confidently and further to promote sustained, positive outcomes.

We are heartened by the support we received by national and international academics to serve as reviewers of papers submitted for the accredited proceedings. These

collective efforts serve to build a strong foundation for the Conference and its Proceedings becoming the lofty voice for African ideas within the context of Management, Business Administration and Law Initiatives. Much work needs to be done in this regard and we are well prepared to rise to the challenge.

Successful conferences and their associated proceedings crucially depend on a dedicated team to manage such a complex project, therefore we are most grateful to the MBALI Steering Committee, but more especially to task coordinators which include Dr Lizelle Calvino for Venue and Catering, Mr Shalen Heeralal for Marketing and Media, Mrs Fortunate Tarwireyi for Administration and Procurement, Mr Innocent Mthembu for ICT and Mr Sakhile Fatyi for Web-Design, Ms Karen Enslin for Programme Design and Mrs Sinegugu Nkonde-Masondo for Secretarial Support. We are also grateful to Prof Greyling for her dedicated support and leadership as well as Prof Tewari who continues to assist us in taking MBALI to even greater heights through his refreshing innovative inputs.

Finally, I am grateful to Dr Damilola Kehinde Ilesanmi and Dr Sheunesu Zhou for their services as managing editors, and not forgetting Ms Isabel Rawlins for language editing.

Executive Editor

Prof Irrshad Kaseeram

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Sustainability of the impacts of the Fourth Industrial Revolution in supply chain management and the retail industry in South Africa

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ABSTRACT

Amazing technological innovation ushered in by the Fourth Industrial Revolution (4IR) created seismic shifts in the way we live, work, and interact with one another. It is also globally and locally transforming the retail sector with significant implications for supply chain management and marketing. Concurrently, the depth of innovation accentuated a fault line in the supply chain due to disruptive technologies and exponential growth of the 'new' digital consumer. The nexus between supply, demand, and augmented customer experiences inspired value creation and industry innovation to remain relevant in an evolving economy. The 'just in time' narrative of products delivered to a retailer for sale has been reimaged to products being delivered directly to the consumers as new retail channels gained traction. This paper reviews and explores the literature on the impact of 4IR on the retail industry in South Africa, specifically in relation to supply chain management and marketing. It highlights the pivotal role of artificial intelligence (AI) in optimising inventory management, improving supply chain visibility, logistic management, and enhancing demand forecasting.

The paper further attempts to demonstrate that the Fourth Industrial Revolution is more than technological advancement, big data, predictive analytics, and artificial intelligence. Technologies can be inclusive and empowering consequently offering avenues of engagement at every stratum of society. Whilst the study examines the sustainability of supply chain management and its posturing effect on marketing and retail strategies, it further discloses the impact of an upended retail landscape on

consumer behaviour, marketing, and supply chain management. It is important for retailers in South Africa to adopt agile value proposition strategies for tech-savvy consumers. The proliferation of new technologies requires multiple skill sets for the industry to remain competitive. However, digital migration is not the panacea to supply chain challenges, it will require prudent implementation.

Keywords: 4IR, marketing, supply chain management, retail, digital marketing, and business growth

INTRODUCTION AND BACKGROUND

South Africa witnessed an exponential spike of the Fourth Industrial Revolution (4IR) technologies during the COVID-19 pandemic as an avalanche of digital technologies penetrated various segments of society. Globally the pandemic had exerted immense pressure on states, industries, and educational institutions to embrace digital platforms to manage disruption in their environments (Maphosa and Maphosa, 2023). The era of 4IR has presented the world with a range of value-adding possibilities in all spheres of society. However it should not be seen as a silver bullet for challenges in the humanities as it also gives rise to new challenges. Digital technologies, including artificial intelligence, machine learning, the Internet of Things, big data, blockchain, robotics, 3D printing, and many others, have evolved into the means and answers to a number of the world's issues as we stand on the brink of a disruptive industrial revolution (Hoosain, Pual and Ramakrishna, 2020). 4IR tools have spurred and triggered greater organisational change and agility. The increasing use of technologies amongst organisations in their supply chain operations present an opportunity to investigate the level, depth, and complexity of the utilisation of big data and artificial intelligence. By exploring the benefits and pitfalls of digital technologies in the supply chain the study intended to glean how variables such as organisational efficiencies, better margins, enhanced customer inspiration and workforce preparation will shape future strategies.

The snowballing penetration of the internet and the disruptive effect of technologies has altered the world we live in and how we transact. Infante and Mardikaningsih (2022) state that companies are using the Internet to execute a variety of commercial activities online, including transactions, internal operations, and information sharing with customers and suppliers to maintain relationships before, during, and post the

purchase process. According to Gawer and Srnicek (2021) Google, Amazon, and Facebook play a mediating and vibrant role via the pervasive utilisation of data in the economy. They have effectively linked and aggregated sectors and markets and modified engagements between consumers, marketing agencies, employers, and employees. The South African retail industry has been no exception as 4IR innovations had significant effects on supply chain management (Munongo and Pooe, 2022). Managing human capital also required reflection and modifications. According to Pretorius, Pillay, Letsoko, and Huston (2022) 4IR has created uneasiness and uncertainty among employees who are at risk of becoming irrelevant due to a mismatch of skillsets. It can be gleaned that the Fourth Industrial Revolution has had a disruptive effect on various components of industry and commerce.

MATERIALS AND METHODS

Methods

The retail sector is changing due to the Fourth Industrial Revolution, particularly in South Africa. This has substantial effects on supply chain management and marketing (Munongo and Pooe, 2022). These changes are bringing the business sectors together in ways that encourage online communication (Whitfield and Mkhabela, 2023). Therefore, in order to understand the effects of the Fourth Industrial Revolution on supply chain management and marketing, this study reviewed works of literature and discussed experts' opinions on 4IR in the context of supply chain management. Furthermore, several studies were explored and examined to apprehend the effects of the speed, scope, and depth of this shift, which embark on human resources skills upgrading and force businesses to re-evaluate strategies and adapt to new technologies or processes (Kashem, Shamsuddoha, Nasir, Chowdhury, 2023). The in-depth analysis and evaluation of works of literature explored intends to demonstrate that 4IR is more than just technological advancement; it is an opportunity for everyone, including leaders, decision-makers, and individuals from all socio-economic categories and organisations, to take advantage of convergent technologies and build a future that is open to everyone. In addition, literature aligned to 4IR's effects on the South African retail sector, notably with respect to supply chain management and marketing, is reviewed and examined in this paper. It also highlights the role of artificial

intelligence (AI) in optimising inventory management, improving supply chain visibility, logistic management, and enhancing demand forecasting.

Materials

This paper intends to demonstrate the impact of 4IR on the retail industry in South Africa, specifically in relation to supply chain management and marketing. It highlights the pivotal role of artificial intelligence (AI) in optimising inventory management, improving supply chain visibility, logistic management, and enhancing demand forecasting. Furthermore, it attempts to discuss and show that the Fourth Industrial Revolution is more than just technological advancement, big data, predictive analytics, and artificial intelligence. The description and comprehension of concepts aligned to the impact of 4IR on the supply chain management and marketing are discussed in the following subsections.

The retail sector upended

Enhanced digital technologies in commerce and industry, in tandem with the proliferation of digital devices across communities, facilitated wider utilisation of mobile applications connecting consumers with the economy at different touch points. Online shopping with its ubiquitous nature is driven by new modes of sales transactions, easier payment options, and deliveries that were made simpler and more appealing. (Ali, 2020). This has reconfigured how people engage with one another and the marketplace. Terms like multi-channeling and omni-channeling have changed the consumer roadmap of conventionally defined shopping and have presented multiple road maps and vehicles with regard to when and how to shop. Interestingly, the prefix, 'omni', in the term omni-channeling, is synonymous with the implied divine power of omnipresence. Słowikowska (2019) contends that Generation Y consumers are likely to use the effect of research online and purchase offline (ROPO) which is also referred to as web rooming as opposed to visiting showrooms (showrooming).

These digital flexibilities contribute to increasing the popularity of click-and-collect consumer patterns. The online shopper at a business-to-customer (B2C) and business-to-business (B2B) level has become all-powerful in the manner companies transact. Ownership of mobile devices and social media engagement have become a universal norm among people. Digital platforms have become powerful tools for consumers to transact with their benefits (Njomane and Telukdarie, 2022).

Concomitantly, it presents retailers with abundant data on shopper preferences and patterns. Data analytics shape customised and personalised marketing strategies by cementing customer loyalty and increasing sales revenue. Personalisation, according to a survey by Accenture Report, has the potential to increase retail revenue by \$2.95 trillion by 2025. Alexander (2022) identified four significant enabling factors for the retail sector emanating from the 4th Industrial Revolution. The beneficial spin-offs offer value-creation prospects for retail customers and linked profitability outcomes. Augmented opportunities and drivers that can aid retailers toward growth include:

- The potential for cost reduction in retail processing with heightened organisational efficiencies.
- Enhanced, seamless, and real-time customer engagement adding value to customer experience.
- Empowering and permitting retailers to customise and personalise shopping journeys, consequently improving customer relations management.
- Expanding and including supplier knowledge of customer purchasing patterns and demands contributing to improved supply chain and delivery outputs.

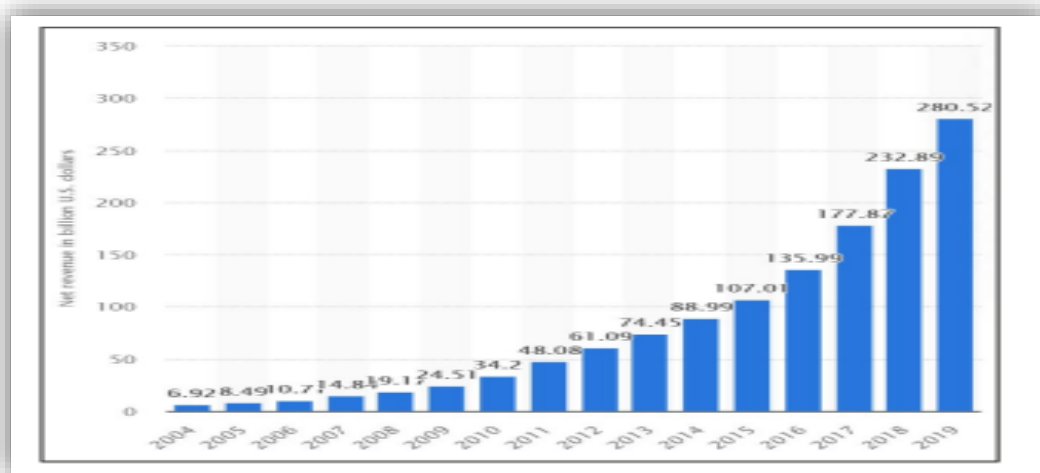
Coupled with the above benefits, the varied banking payment apps, 'tap and go', e-wallet, and zipper cashless facilities have been game-changing. Induced by unending innovative technologies retailers are in the position to reinvent and refashion operational outputs and transact at diverse and optimum levels surpassing customer expectations.

Retail engagement with 4IR technologies

From the factory floors of manufacturers to retail outlets and to the consumer, the supply chain journey of products is being reimaged. The retail and supply chain slogan "Just in time" has changed perceptions of various actors in the product movement as the empowered end-user consumer has the ability to short-circuit the supply chain by expecting direct deliveries. Innovative technology and disruption demand that organisations are agile. Amazon reconstructed its buying and selling model replacing brick-and-mortar businesses with technology-driven innovations like one-click ordering, tailored recommendations, smart speakers, and anticipatory shipping (Shankar, Kalyanam, Setia, Golmohammadi, Tirunillai, Douglass, Hennessey, Bull, and Waddoups, 2021). Amazon's cloud business, Amazon Web

Services (AWS), consistently reflected robust growth along with rising profitability. It announced a net income of more than \$11 billion and total revenues of over \$280 billion for 2019, an increase of 20% from the previous year. Revenue from Amazon Web Services rose by 37% in 2019 to \$35 billion, with retail activities being its biggest income (Shankar, Kalyanam, Setia, Golmohammadi, Tirunillai, Douglass, Hennessey, Bull, and Waddoups, 2021). AWS was a significant contributor to its overall profits (Gawer and Srnicek, 2021). Significantly, these were pre-pandemic growth figures, which would display compounded growth figures fuelled by a greater appetite for online shopping. Figure 1 below shows how Amazon's net income changed between 2004 and 2019.

Figure 1. Amazon's net income changed between 2004 and 2019.



Source: Shankar et al (2021).

Within the South African context, Kruger and Steyn (2020) observed that South Africa had made significant and progressive strides towards latching on to opportunities and challenges emanating from digital migration. A study conducted in the retail sector in South Africa by Redflank, in association with the Wholesale and Retail SETA, presents a diametrically contesting perspective. The study findings present a lethargic effort by retailers in a rapidly evolving digital landscape with only 8% of the sector organisations integrating their systems to be future-fit and 41% having not ventured into digitalisation. Whilst 30% were delicately researching, the advantages and challenges of digitisation, and 19% were in the concept and experimental phase. Although South African retailers have been slow implementers of digital technologies and have

negated the use of big data to analyse product and consumer trends. They have started to include environmental sustainability and traceability in their business strategies. Retailers are catching up with global trends connected to creating omnichannels, particularly online stores, and advanced analytics.

The Totalsport, Foschini Group, and Truworths were investing in enhancing their online platforms, while Mr. Price was both investing in e-commerce and using advanced analytics to accelerate decision cycles. Woolworths aims to have a fully transparent, traceable, and ethical supply chain by 2025. Quick-response items made for 87% of the units that the TFG Merchandise Supply Chain produced in 2021. Instead of investing in vertical integration, retailers are fortifying their supply chains to collaborate with a small number of global direct suppliers. Locally they are tightening their grip on their value chains (Whitfield and Mkhabela, 2023). However, some retailer adoption of technology depends more on competitor adoption of related technologies than it does on customer adoption. Retailers who consider themselves to be fast followers rather than early adopters of technology may find that the perceived risk of technology is reduced when industry leaders, use it (Shankar, et al, 2021), explaining the apparent lethargy in being innovators. To be competent testers in a rapidly evolving environment requires bold initiatives. South Africa's largest retailer, the Shoprite Group, has led the online order and swift delivery channel with its Sixty60 model. The Group is committed to delivering "a truly customer-first culture" propelled by a frictionless omnichannel experience.

According to the Group's Chief Executive Officer, Pieter Engelbrecht "The next era of growth for us is about precision retailing. ShopriteX will use our rich customer data to supercharge a 'Smarter Shoprite' and ultimately fuse the best of digital with our operational strength across the continent." To ensure a more customer-centric business the Group has crafted a future-fit talent strategy to recruit and retain 250 of the country's eminent data science, technology, media, digital commerce, and personalisation specialists (Shoprite website). At the front end of the business, the Group had launched the 'Checker's Rush' concept store, which mirrors the 'Amazon Go' stores. The store has no cashiers and lets customers simply scan their phones, take products from the shelves and then walk out. Cutting-edge AI camera technology recognises the products being picked from the shelves, and Checkers Rush bills customers' bank cards upon their stepping out of the store (Ellis, 2021). For retailers to deliver on their technologically driven promises they have to be powered

by an equally confident digitally propelled supply chain for a seamless movement of products from producer to consumer.

Delivering on customer expectations

Disruptive technologies in the economy are not confined to consumers only, it has transformed and reinvented various aspects of the supply chain, for example, sourcing, procuring, manufacturing, and delivering mechanisms. Consequently, demonstrating a requisite for businesses to devise a multitude of strategies to suitably satisfy the evolving requirements of participants in the economy (Owuso and Jaja, 2022). Supply chains are being shaped by the evolving concept of a customer experience and value creation. Customers at different levels in the supply journey are embracing technology as the retail landscape has been upended. Customer expectations are continuously changing at a rapid rate; products are being enhanced by data which in turn improves asset productivity; new partnerships are being formed since now companies have learned the new forms of collaboration, and lastly operating models are being transformed into new digital models. Furthermore, it has become evident that 4IR has had a significant impact on data analytics (Okwu, Dominic, Orji, Mbachu, and Michael, 2021; Mayounga, 2022). Given the increasing amount of data generated by retail operations, companies can now use advanced analytics tools to gain insights into their supply chain.

Data analytics and supply chain

By analysing data on factors such as customer buying patterns, inventory levels, and supply chain performance, retailers can optimise their supply chain processes and enhance overall efficiency and productivity. For example, companies can use predictive analytics to forecast demand, adjust inventory levels, and optimise logistics operations. Thus, data analytics is a critical area where 4IR has had an impact on supply chain management in the retail industry (Fanoro, Božani, and Sinha, 2021). In addition, advanced analytics tools allow retailers to analyse data on customer preferences, purchasing behaviour, and market trends, among other things, to make informed decisions on inventory management, pricing, and supply chain optimisation. According to a study by the World Economic Forum, 70% of respondents said that data analytics would be critical to managing supply chains in the now and future. Moreover, 4IR has impacted supply chain management and inventory management in

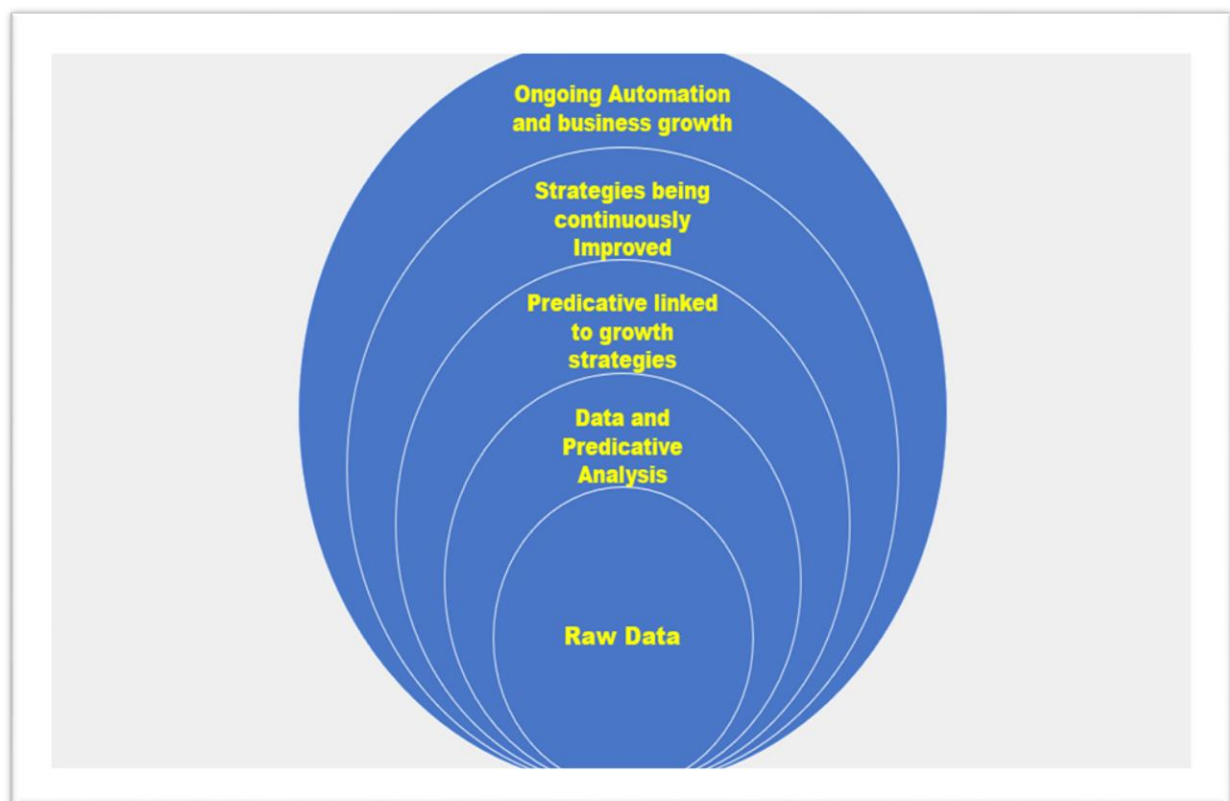
a lot of ways, by using Internet of Things (IoT)-enabled sensors and Radio-frequency Identification (RFID) tags, retailers can track inventory levels in real-time, which enables them to reduce stockouts, optimise inventory levels, and improve supply chain visibility. As a result, leading to significant cost savings for retailers, as they can reduce their inventory carrying costs and improve their overall supply chain efficiency. In essence, inventory management is an additional extent to which 4IR has transformed supply chain management in the retail industry in South Africa. Furthermore, supply chain visibility is an additional critical area where 4IR has had an influence. Retailers can now use advanced technologies such as blockchain and real-time tracking to gain better visibility into their supply chains which enables them to monitor their suppliers, track shipments, and ensure compliance with regulations and standards (Kashem, Shamsuddoha, Nasir, and Chowdhury, 2023). This increases supply chain visibility and helps retailers identify potential disruptions and to take proactive measures to mitigate them. Considering the above discussion, improved supply chain visibility also helps retailers ensure compliance with regulations and standards. A report by the McKinsey Global Institute estimated that blockchain technology could potentially generate between \$80 billion and \$120 billion in annual value for retail and consumer-packaged-goods (CPG) supply chains by 2025 (McKinsey, 2022).

Real-time supply chain visibility using predictive analytics

A predictive monitoring system that is supported by big data analytics is necessary. To improve strategic planning and execution, organisations need a monitoring system, real-time emergent data, and predictive analysis (Bag, Rahman, Srivastava, Chan, and Bryde, 2022; Mageto, 2021). Given that in today's hectic business environment, achieving real-time visibility into the supply chain has grown in importance for businesses. Therefore, some businesses are using predictive analytics to acquire a deeper understanding of their supply chain processes. Companies can use predictive analytics to evaluate data from a variety of sources, including customer behaviour, inventory levels, and pricing trends, to predict future demand and supply chain disruptions. Predictive analytics can help businesses manage their inventories and resources more effectively and make better decisions regarding their supply chain operations (Bag, Rahman, Srivastava, Chan, and Bryde, 2022; Mageto, 2021). Predictive analytics are increasingly being used, and it is becoming obvious that they

may be a potent tool for enhancing the visibility and efficiency of the supply chain. Companies may improve their supply chain operations, acquire more insight and knowledge, and better plan by adopting predictive analytics. Figure 2 represents artificial intelligence (AI) driving smart supply chain management.

Figure 2: AI Driving the smart supply chain management



Source: Self-generated by the researcher

When smart machines are being used in supply chains to solve problems, this is referred to as using AI. Without any manual input, this automated process of smart industry manufacturing powered by the Industrial IoT can operate the entire supply chain. Businesses that implement AI in supply chain operations seek to improve the supply chain industries. The integration of advanced technologies, including data analytics, inventory management, supply chain visibility, demand forecasting, and consumer behaviour analysis, has enabled retailers to optimise their supply chain processes, improve efficiency and responsiveness, and enhance customer satisfaction.

Customer expectation and forecasting: The impact on the supply chain

Demand forecasting is an area where 4IR has transformed supply chain management in the retail industry in South Africa (Alexander, 2022; Munongo and Poee, 2022). Retailers can now use advanced analytics tools to forecast demand more accurately, which enables them to adjust production and supply chain processes accordingly. Thus, it reduces the risk of stockouts and overstocking and ensures that customers can access the products they need when they need them. In a survey by Gartner, 47% of respondents said that demand forecasting and planning would be the most critical capabilities for future supply chain operations. 4IR has given rise to advanced technology that has taken the retail world by storm making customers more connected than ever before to the various brands and products (Kashem, Shamsuddoha, Nasir and Chowdhury, 2023). Customers have the power to choose where they want to spend their money. Customers have also experienced the high level of service they receive through technology and now do not support companies that are not keeping up with the evolving standards. Moreover, customers live in a world of convenience in which the Fourth Industrial Revolution has increased the presence of customer service technology (Jin and Shin, 2021).

Technological platform options provide great service in the most convenient way to shoppers. Not all businesses have these platforms and are now beginning to realise that to keep their customers happy as well as to retain these customers; they must introduce such technological platforms. This means that retailers need to be more proactive. Finally, 4IR has shaped consumer behaviour in the retail industry in South Africa. The increasing use of mobile devices and social media has enabled retailers to gather data on consumer preferences and behavior, which they can use to personalise marketing campaigns and improve the overall customer experience. 4IR has had a significant influence on supply chain management in the retail industry in South Africa. This shows that by leveraging advanced technologies such as data analytics, inventory management, supply chain visibility, demand forecasting, and consumer behaviour analysis, retailers can optimise their supply chain processes, reduce costs, and enhance customer satisfaction (Serumaga-Zake and van der Poll, 2021). As the retail industry continues to evolve, 4IR makes a significant difference and important role in shaping the future of supply chain management.

The impact of technology: Re-imagining supply chains

The era of 4IR has presented the world with a range of value-adding possibilities in all spheres of society, and concomitantly, it has also not been seen as a silver bullet to humanity's challenges and, to an extent, has also created new challenges. Whitfield and Mkhabela (2023) contend that the fourth industrial revolution institutes a diverse change inspired by the integration of new automation technologies with big data analytics and increased interconnectivity along the global value chain. These technologies have the potential to increase industrial productivity and agility by enabling businesses to alter, reconfigure, and manage stock supply, production, and delivery linkages in real time. The business and finance sectors, transportation, social interaction, and a range of other sectors have embraced these technologies. At the same time, digitisation is instrumental in global interconnectivity, stimulating and fostering economic and social engagement, which in turn has a favourable impact on re-imagining business operations, supply chains, business engagement, and business growth.

Nyagadza, Pashapa, Chare, Mazuruse, and Hove (2022) state that digital technologies, as they are adapted and scaled, are unlocking the potential for sustainable industrial innovation in emerging economies. Hence, technologies facilitate inter-linkages internally and externally, enhancing production processes and focusing on an enhanced growth trajectory. The IoT and big data can help with improved planning, refined resource management, and enhanced costing and profit margins. Machine learning, robotics, and smart sensors can lead to additional gains in productivity. The rapid development of the communication technology sector and the growth of global interconnectivity will play an increasingly important role in fostering economic expansion and social change (Whitfield and Mkhabela 2023). Interconnectivity has allowed businesses to expand organisational footprints across borders and offshore; products can now be sourced from a wider supplier base, meeting evolving customer expectations. International trade deregulation and liberalisation gave impetus to global value chains (GVCs), significantly influencing business operations, transportation systems, and finance. Inventory manufacture and procurement are now dispersed across different countries and continents, influencing inventory planning, acquisition, and distribution, bringing the product from its point of origin to the end-user and beyond (Nyagadza *et al.*, 2022).

Role of artificial intelligence (AI) in optimising inventory management, improving supply chain visibility and enhancing demand forecasting

Supply chain management is not an exception to how artificial intelligence (AI) is transforming enterprises across all sectors. By giving businesses new opportunities to boost productivity, save expenses, and boost customer satisfaction, AI is revolutionising the supply chain environment. Additionally, modern supply chain management employs AI to optimise stockpiles. While preserving incredibly high precision, dependability, and authenticity, applying AI may ease the strain of making supply chain optimisation decisions and speed up talks. As a result, there will be information that is easily accessible. Knowledge always enables AI systems to organise work sharing, negotiate with suppliers, and do tasks at a high rate in a structured, quick, and secure manner (Kashem, Shamsuddoha, Nasir, Chowdhury, 2023).

Artificial intelligence includes machine learning (ML), which is a subset of AI. To learn and adapt without specialised programming, it uses algorithms, software, or systems. Through trend analysis, anomaly detection, and the provision of predictive insights, ML models continuously improve. It identifies trends in frequently collected data and offers recommendations for the following steps. This could be devising more efficient warehouse picking routes, anticipating impending equipment failures in order to avoid breakdowns, or tracking packages across the entire supply chain in order to optimise the route (Kashem, Shamsuddoha, Nasir, Chowdhury, 2023). Consequently, AI will continue automating demand forecasting, route optimisation, and inventory management tasks, allowing companies to operate more efficiently. Thus, predictive analytics is another area where AI will become increasingly sophisticated. As a result, this will enable to predict demand and identify patterns, allowing companies to make better-informed decisions.

Considering this, real-time monitoring is a different area where future growth is anticipated to be significant. For this reason, AI-enabled sensors and IoT technologies will enable businesses to track the performance of their supply chains in real-time, delivering insightful data that can help with decision-making. Therefore, the logistics network will also be connected, and collaborative AI will work with partners, suppliers, and customers to improve operations. Supply chain operations will become more

productive and efficient as a result of the companies' ability to exchange data and insights in real-time. Artificial intelligence will be crucial in advanced robotics, which is another sector. To handle order picking, packing, and delivery operations, AI will be combined with cutting-edge robotics and driverless cars. In addition, operations will become more precise and effective while spending less on labour (Soori *et al.*, 2023). The incorporation of blockchain technology will also be a future topic of emphasis and blockchain technology will be combined with AI to increase the logistics network's security and transparency. Due to the ability to trace goods and commodities in real-time as they pass through the logistics network, businesses will benefit from increased visibility and security.

Machine learning can also point out opportunities for development that a human might overlook or take longer to find. By doing so, the possibility of future problems emerging is decreased, and possible problems are dealt with before they manifest (Kashem, Shamsuddoha, Nasir, Chowdhury, 2023):

- **Enhanced forecasting:** Supply chain systems with AI capabilities may examine a tremendous quantity of data from many different sources, including historical data, market trends, and consumer behaviour. In order to manage inventory levels, cut down on stockouts, and optimise production schedules, businesses need to be able to estimate demand accurately. Businesses may make wiser decisions that improve customer satisfaction and lower inventory costs with the help of precise forecasting.
- **Streamlined logistics:** By optimising routing and scheduling, cutting down on transportation expenses, and speeding up delivery times, AI can assist businesses in streamlining their logistics operations. AI may also assess weather patterns and traffic patterns to suggest the most effective routes, lowering pollutants and fuel use. AI-powered systems can also track shipments in real-time, giving businesses real-time supply chain visibility and allowing them to react rapidly to interruptions.
- **Innovative supplier management:** By analysing supplier performance data and spotting possible problems early on, artificial intelligence (AI) can assist businesses in managing their suppliers more efficiently. AI-driven systems can also spot supplier trends and suggest substitute providers to reduce risks.

Organisations can use this information to negotiate better contracts, lower supplier prices, and foster stronger relationships with their suppliers.

The potential for AI in supply chain management is great, and the technology is likely to play a significant part in maximising operations and assisting businesses in competing in a globally competitive market. Artificial intelligence will be a critical element in creating new technologies and procedures that will shape the future of logistics network management as the sector adapts and develops.

Digital technology: The business growth nexus supply chain management in South Africa

The effect of 4IR and the marketing nexus on supply chain management in the retail industry in South Africa provides several innovative opportunities (Alexander, 2022; Serumaga-Zake and van der Poll, 2021; (Munongo and Poee, 2022)). The multitude of benefits includes:

- **Improved efficiency:** The use of 4IR technologies and marketing strategies can help retailers to streamline their supply chain processes, leading to improved efficiency and reduced costs.
- **Enhanced customer experience:** 4IR technologies, such as AI and IoT, can help retailers to better understand their customers' needs and preferences, allowing them to tailor their marketing and supply chain strategies accordingly.
- **Increased agility:** By leveraging 4IR technologies, retailers can respond more quickly to changes in customer demand and market trends, allowing them to adapt their supply chain and marketing strategies in real-time.
- **Competitive advantage:** Retailers that are able to successfully integrate 4IR technologies and marketing strategies into their supply chain management practices may gain a significant competitive advantage over their peers.
- **Increased efficiency:** By integrating technology and marketing strategies, supply chain management in the retail industry can become more streamlined, reducing costs and improving delivery times.
- **Enhanced customer experience:** By leveraging data and analytics, retailers can better understand customer needs and preferences, resulting in more personalised and relevant marketing campaigns and product offerings.

- **Improved inventory management:** By utilising technologies such as RFID, retailers can more accurately track inventory levels and demand, reducing waste and improving stock availability.
- **Increased agility and adaptability:** With the ability to quickly adapt to changing market conditions, retailers can stay ahead of the competition and respond to emerging trends.
- **Reduced costs:** By automating tasks and identifying inefficiencies, AI can help companies reduce labour and transportation costs.
- **Increased revenue:** By improving efficiency and reducing costs, artificial intelligence can help companies increase revenue and improve their bottom line.
- **Increased sustainability:** By optimising transportation routes, reducing waste, and leveraging renewable energy sources, retailers can reduce their carbon footprint and contribute to a more sustainable future.
- **Better decision-making:** AI algorithms can analyse data to identify trends and patterns, providing companies with valuable insights that can inform strategic decision-making.
- **Predictive Maintenance of Supply Chain Technologies:** Organisations can perform predictive analysis and decide when maintenance activities should be performed by having access to real-time data. As a result, businesses can more precisely forecast when a repair is required, which helps them cut maintenance expenses. More importantly, it will prevent the complete halt of its supply chain due to technological failures.

Disruptive technologies giving traction to disintermediation: Customer and business opportunities

With emerging technologies now available to the end user, the value chain is further disrupted by shortening the supply chain from production to the end user directly through a process of disintermediation in the supply chain. Through disintermediation, middlemen between producers are removed, and traditional distribution routes with intermediaries like distributors, dealers, or agents are avoided (Heinemann, 2023). Disintermediation is the removal of a phase from the process, such as when the manufacturer deals directly with the consumer, making the supply chain easier and

more transparent. Dealing directly with customers or end-users allows businesses and manufacturers to also cut costs. Disintermediation enables high market visibility, which allows customers to pay less as they deal directly with the supplier, bypassing the entire distributor and retailer.

The exponential growth of online shopping has created an empowered consumer who can trade via a multitude of trading channels, presenting organisations with an opportunity to re-think their supply chain to include disintermediation as technologies have changed the linear supplier chain process (Heinemann, 2023). Gamage confidently asserts three key benefits of disintermediation, which include the ability to deliver in a timely (speed) manner by removing intermediaries in the business process, the ability to deliver personalised (flexibility) goods within a short period of time, and the ability to offer high-quality products in a reliable manner (Gamage, Vidanapathirana, and Karunathilaka, 2020).

Artificial intelligence (AI) drawbacks in supply chain and logistics management

While integrating AI has many potential advantages for supply chain and logistics management, there are also difficulties and things to consider (Shrivastav, 2022).

- **Complexity:** Putting artificial intelligence into practice in logistics networks and logistics management can be difficult and expensive in terms of both technology and resources.
- **Data quality:** For AI algorithms to work properly, high-quality data is necessary. Data accuracy and completeness might be difficult to ensure.
- **Human resources:** Implementing artificial intelligence may necessitate retraining current staff members and identifying fresh talent with the required qualifications.
- **Security and regulatory compliance:** These are crucial since AI systems are susceptible to online threats. To prevent this, it is vital to make sure that data is protected, and that the business abides by all applicable laws.
- **Ethics-related issues:** As artificial intelligence becomes more integrated into the supply chain and logistics management; it is important to consider the ethical implications of its use and to ensure that it is used in a responsible and fair manner.

Despite acknowledging the strength and usefulness of data and AI, businesses will probably still have trouble expanding the impact of their investments. The following section discusses the potential effects of 4IR on job creation in the retail industry in South Africa.

The potential effects of 4IR on job creation in the retail industry in South Africa.

4IR is creating different impacts across occupational categories and creating different opportunities and challenges across sectors based on factors such as the complexity of the products or services involved, opportunities for standardisation and customisation, and positions in GVCs (Lorenz *et al.*, 2019). Even though technology has allowed the retail industry many opportunities such as meeting and servicing consumers' needs much more efficiently and at a faster rate, on the other hand many jobs have been lost. Instead of employees in the retail environment explaining the details of a product, this is now done seamlessly through data that informs the customer about the types of products available and shopping can be done online. Online shopping also records the shopper's preferences, which allows their shopping to become much more convenient than going to an actual store. Therefore, this has decreased the foot count of stores (Alexander, 2022).

Rapid digital migration has brought about employees having to reconsider their skill sets in order to survive in the retail environment and has also caused employees' skillset to become irrelevant, which has resulted in the uncertainty of the skills required by employees. In order to survive this revolution in the retail environment Alexander (2021) has outlined that the risk of job losses is directly linked to the mismatch of the skills required by jobs that are relevant in the era of innovation and change. Consequently, employees working in the retail environment need to ensure that they are fully equipped to meet the ever-changing skills needed. Considering the Fourth Industrial Revolution, seven key skills are expected to be required namely complex problem-solving, critical thinking, creativity, system analysis, emotional intelligence, judgment, and decision-making, and lastly service orientation (Lamprecht, 2020). Furthermore, in the retail industry, technological evolution demands a "new breed of worker", one that is skilled, "technologically savvy" and innovative (Alexander, 2022). Therefore, increasing the need for new 'future' skills is necessary to ensure that humans are not left behind and are not replaced through automation. Accordingly,

emphasis needs to be put on education and training, and the need to ensure that employees of the future must be well equipped with the appropriate skills to be able to contribute to 4IR. To reduce a variance in skills there is an urgent requirement to reskill and upskill all employees in order to keep up with the technological advances that 4IR brought. However, for retail businesses to remain competitive, they need to rethink how and where work is done and therefore potentially reshape their organisational structures, cultures, and processes in order to fit the changing developments of the Fourth Industrial Revolution (Alexander, 2022).

Due to the speed of technological updates, the speed of current and future talent must be upskilled and trained, which leaves a gap between the skills needed and the skills available. In such an environment in which employees in the retail environment will acquire new job roles and thus, knowledge in multidisciplinary fields will be a necessity (PC4IR, 2020). However, 4IR also has the potential to create significant effects on employment prospects. A key overarching opportunity is that the potential that has been identified for the growth of businesses can also result in the creation of new jobs. With the wide range of new products and services being created, multiple business opportunities exist, which can create future jobs. Such growth can also trigger a wider spread of job growth. Specifically, the growth of new businesses can result in the creation of new jobs related to support services and supply chains. Through such processes, numerous spillover jobs could be created (Alexander, 2022). 4IR-related innovation can also create a variety of improvements in work processes.

A major one is decreased health and safety risks. Changes can benefit workers and can also extend to the users of end products. Improved health and safety outcomes were reported by 27% of South African businesses that engaged in product or process innovations between 2014 to 2016 (CeSTII 2020). Another change could be that unskilled or lower-skilled workers can work with advanced digital technologies through the creation of easy-to-use and intuitive user interfaces. Furthermore, advances in technology can increase productivity per worker. Through such changes, companies can and are maintaining employment levels by expanding production. A further opportunity is the creation of higher-skilled, better-paying jobs. With the increased demand for such jobs, higher education institutions could expand their offerings of related programs. In addition, 4IR creates risks related to employment. A major risk is that increased automation and the use of AI can decrease the need for human labour

in the future. For some job types, this is already inevitable. PC4IR (2020) notes that plans need to be made for workers who will lose their jobs in the short term.

Another risk is that as more processes become automated, the remaining jobs will require skills that are more sophisticated. Some factory-based employment and drivers have notable risks related to this issue. This challenge is a particular problem for South Africa, as the country has high levels of unemployment among people with less formal education. An additional risk is that a small group can hold benefits from growth. If changes are not managed well, employees may end up receiving low incomes as jobs become more streamlined. This could result in both precarity and an increase in competition. A final challenge is that disparities exist between different groups related to employment. Access to opportunities varies widely by region. Without planning, 4IR may create a further divergence between regions.

CONCLUSION

Overall, the impact of 4IR and the business growth on supply chain management in the retail industry in South Africa reflects numerous benefits, which can lead to improved efficiency, increased profitability, and a better customer experience. Leveraging 4IR technologies and business strategies in supply chain management can lead to a more efficient and effective retail industry in South Africa. In relation to digital entrepreneurship in South Africa, reducing the rural-urban boundary by supporting extension programs and providing active support to promote diversity in digital entrepreneurship could be profitable. In addition, it is critical to reinforce the spatial integration between economic hubs where jobs are located and underserved informal settlements in order to address poverty issues. Generally, across the areas of overall economic outcomes, environmental outcomes, and employment outcomes, a diverse set of opportunities and risks can be identified. As 4IR spreads in South Africa, associated risks from 4IR need to be critically managed. In some cases, public policy improvement and flexibility are needed. If consideration can be given to the above recommendations, private actors can find opportunities in providing solutions in relation to the associated risks from 4IR. Multiple factors that shape the prospects for businesses to innovate and adopt 4IR technology and systems need to be continually explored, identified, and examined.

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The influence of accounting information systems on profitability in chosen non-public firms in Pinetown, South Africa

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ABSTRACT

An accounting information system is a combination of individuals, instruments, regulations, and processes that operate collectively to acquire information and transform it into beneficial information. It is a system, a collection of different establishments and employees, offering information to promote administrative decision-making procedures. Despite the necessity of financial systems, most non-public firms in South Africa have not set up this system. This has finally resulted in accounting malfeasance, inefficiencies in accounting reports creation, false reporting of income statements, and distortion of financial data, resulting in skewed information. Therefore, the aim of this research is to investigate the influence of accounting information on profitability in a sample of non-public firms in Pinetown, South Africa. The paper used a descripto-exploratory research strategy. The research used a non-probability judgement sampling method since selecting the proper participants required some judgement on the side of the researcher. The population was calculated using the staff members in the accounting and finance departments of ten non-public firms in the Pinetown area. The ten non-public firms in the Pinetown area were chosen at random. There were 71 staff working in the finance and accounting division. There were 61 people in total in the sample. Nevertheless, the total number of questionnaires received was 56. According to the results, expenses and managerial assistance are

important factors in the deployment of accounting software for chosen non-public firms in Pinetown, South Africa. The study suggested that management assist efforts to use computerised accounting in a bid to enhance the profitability of chosen non-public firms in South Africa.

Keywords: Pinetown, South Africa, accounting, accounting information and profitability

JEL codes: M41, G32, L26

INTRODUCTION

The advancement of Communication and Information Technology (CIT) has revolutionised financial, managerial, and accounting practices, providing a competitive edge to firms, banks, industrial sectors, and the Financial Accounting Standards Board (Gofwan, 2022). CIT has played a vital role in developing effective and reliable accounting information, leading to enhanced organisational profitability (Hutahayan, 2020). Accounting is a critical component of any organisation, small or large, as it establishes the profitability of its activities over a given period, making it crucial to the success or failure of modern commercial entities (Al-Wattar *et al.*, 2019). The variables such as cost, administration help, technology, employee perspective simpleness of usage, firm size, facilities and the external environment are influencing the adoption of computerised accounting information and are a crucial consideration in non-public firms in Pinetown, South Africa (Wang *et al.*, 2020). Therefore, setting up an accounting software that captures, analyses, and reports accounting and financial information for management is an efficient approach (Ali and Oudat, 2021). Compared to traditional mechanical accounting methods, accounting software guarantees the timeliness, accuracy, and reliability of financial data.

Prior to the adoption of CIT in the accounting profession, all accountancy tasks were done manually. However, with the rise of computerised accounting software, it has become easier for any accountant or accounting professional to employ this method (Hashem and Alqatamin, 2021). The research of Monteiro *et al.* (2022) on financial reporting and conventional accounting information systems in Nigerian microenterprises from 2012 to 2019 showed that accounting information systems significantly contributed to bank profitability when compared to manual systems. The report recommended that banks should employ accounting information systems as

they boost overall corporate profitability. In South Africa, computerised accounting information systems were first initiated in public organisations in 2005, with the government evaluating a few computerised elements of business deals on financial managerial activities, assisting them in transitioning from a traditional accounting information system to a computerised one (A Ali and AlSondos, 2020). This marked the beginning of South Africa's efforts to improve financial processes. Over the years, South Africa has updated its accounting computer program, increasing financial efficiency in both public and commercial sectors (Khaghaany *et al.*, 2019).

Before the use of accounting software, all accounting measures were handled manually, including obtaining financial information, storing, analysing, and summarising data. The traditional system of paper and pen made accounting jobs more challenging to complete. Accounting documents were easily overlooked and subsequently lost, and papers were sometimes taken since there was no backup procedure in place to protect financial information. Hence, the accounting system was altered or modified on purpose to hide information for illicit financial operations (Massicotte and Henri, 2021). The auditors and controllers' assessment board of authorities has also been questioning the financial statement's strength due to flaws in the manual method (Zuo and Lin, 2022). Because of the shortcomings of the conventional accounting method, extensive public and non-public organisations have shifted to computerised accounting information systems. Several studies have investigated the implications of computerised accounting information systems in government or non-public service (Nguyen *et al.*, 2021). Unfortunately, no research has been done to investigate the influence of computerised accounting on the profitability of non-public enterprises.

The non-adoption of computerised accounting information systems has resulted in accounting malfeasance, delayed creation of accounting reports, false reporting of income statements, and distortion of accounting reporting, leading to skewed information and fraudulent acts in public corporations by accountants or accounting professionals (Setyaningsih *et al.*, 2021). Accounting information systems are critical components of the information system required for strategic planning in organisations, and knowledge has been identified as the most valuable resource in the knowledge society. Weak accounting information systems undermine administrative effectiveness, leaving administrators operationally starved, especially within the

financial industry (Hosen *et al.*, 2020). An accounting information system is a well-organised, quick method of supplying precise financial data and management. The use of accounting information has become increasingly important for businesses to make informed decisions and improve their profitability (Hosen *et al.*, 2020). In South Africa, there is a growing need for non-public firms to adopt computerised accounting systems to enhance their accounting information capabilities. The development of a successful accounting system must consider regulatory requirements as well as affect the internal standards (Harjito *et al.*, 2022). Accounting systems display the documents, records, vouchers, and folders, as well as relevant supportive evidence that come from the financial accounting. It entails the design of papers and the movement of activities through the firm (Deyganto and Alemu, 2019). The research is essential for financial organisations and other financial firms in analysing the advantages of integrating accounting information systems into their processes.

The significance of the study lies in its potential to contribute to the improvement of the financial performance of non-public firms in South Africa. The study will shed light on the relationship between computerised accounting information and profitability in non-public firms. The findings of the study will assist financial and accounting professionals in chosen non-public firms in Pinetown to understand the importance of adopting computerised accounting information systems for strategic planning and efficient management. Additionally, the study will be beneficial to financial organisations and other financial firms in analysing the advantages of integrating accounting information systems into their processes. The research will help these firms evaluate the approach in order to enhance profitability and efficiency. Therefore, this study investigates the influence of accounting information systems on profitability in selected non-public firms in Pinetown, South Africa. To achieve this, three research aims have been developed. Firstly, the study seeks to determine the population factors of financial and accounting professionals in these firms. Secondly, it aims to identify the variables that contribute to the implementation of a computerised accounting information system in these firms. Finally, the study seeks to establish the relationship between computerised accounting information and profitability in these non-public firms. The responses to these research aims are expected to shed light on the factors that influence the profitability of non-public firms in Pinetown and inform strategies for enhancing their profitability.

LITERATURE REVIEW

This section gives a summary of multiple research principles, hypotheses, and an empirical review of this subject. According to Khalid and Kot (2021), an accounting software is a structured technique for collecting, recording, and interpreting accounting data using a laptop or automated equipment. In other terms, it is a computerised system that collects or enters financial transactions into a laptop and then analyses them to make appropriate papers and therefore help keep the financial to offer the applicable accounting records (Wang *et al.*, 2020). The use of accounting information has been studied extensively over the years, with many researchers investigating the impact of this information on various aspects of a firm's performance, including profitability (Arimany-Serrat *et al.*, 2022). Several studies have shown that the use of accounting information is associated with improved financial performance and profitability. One of the earliest studies on the relationship between accounting information and profitability was conducted by Lev and Sunder in 1979 (Crous and Van Wyk, 2021). They found that the use of accounting information was positively associated with firm performance and profitability. This finding was supported by subsequent studies, including those conducted by Hope and Thomas in 2008 and the study by Sufian and Mohamad in 2011 (Saus–Sala *et al.*, 2021).

Salehi, Rostami, and Mogadam (2010) investigated the effect of accounting information systems (AIS) in certain sectors in Iran and discovered that AIS adoption contributes to improved corporate forecasting, more accurate statements of operations, and increasingly dependable accounting records. Despite this, the researchers discovered that accounting information programmes does not conform to Iranian requirements for accounting, along with Iranian AIS cannot be verified with additional financial and administrative structures, resulting in a gap between AIS and financial issues and managerial systems and a weakness between Iranian companies. Emeka Nwokeji (2012) proposed that all Accounting Information System partners receive education to keep their expertise up to date with current technologies and methods in order to avoid the impacts of inadequate quality of data. Soudani (2012) investigated the impact of AIS on organisational efficiency using 236 surveys issued to certain enterprises' accountants, financial managers, and senior managers. The results revealed a strong association among all of the variables, with a correlation of 0.662 among AIS and economic performance and a correlation of 0.252 among

financial achievement and successful administration. In addition, AIS has the greatest influence on financial success and the least on managing performance.

Furthermore, the use of computerised accounting systems has become increasingly popular in recent years, and several studies have examined the impact of such systems on firm performance. For instance, the study by Hameed *et al.* in 2015 found that the adoption of computerised accounting systems was positively associated with firm profitability (Mioduchowska-Jaroszewicz, 2019). This study also identified factors such as cost, administration help, appropriate technology, employee perspective, simpleness of usage, firm size, facilities and the external environment as important considerations for the successful implementation of such systems. In addition, some studies have explored the role of accounting information in different industries, such as the hospitality industry. For example, the study by Matuszak-Flejszman and Wojciechowska-Skrobisz in 2016 found that the use of accounting information was positively associated with the financial performance of hotels (Harjito *et al.*, 2022). Despite the existing literature on the relationship between accounting information and profitability, there is still a lack of research on the specific context of non-public firms, particularly in South Africa. Therefore, this study addresses this research gap by investigating the influence of accounting information on the profitability of non-public firms in South Africa. According to this description, the primary goal of a computerised accounting information system is to provide trustworthy and precise financial data or reports in a periodic manner. Simultaneously, computerised accounting systems must provide interesting facts and data that can be used to make informed choices.

Research gaps

Many studies on AIS have been undertaken, according to the literature review. Some research looked at how AIS affected the company's financial results, profitability, governance of corporations, along with accountability to society. However, the bulk of the research has been done in foreign contexts, with barely any research undertaken on companies in Pinetown, South Africa. The scholar was unable to identify one research paper that evaluated the influence of accounting information on the profitability in chosen non-public firms in Pinetown, South Africa.

Computerised accounting information

The impact of computerised accounting information on profitability has received much attention. Given the significant advancement in computerised accounting systems, multiple research projects have investigated this problem in depth. Erhinyoja and Marcella (2019) performed research on the influence of computerised accounting systems on external audit functions. The study's results demonstrated that, while an auditor's understanding of computers plays an important role in his successful audit of a computerised accounting information system, some circumstances restrict its efficacy. Ha (2020) explored research on the implementation of Computerised Accounting Information (CAI) in public enterprises in Singapore and discovered that Computerised Accounting Information usage is significant within public enterprises. The research results also showed that the process innovation of public enterprise' CEOs contributes to the utilisation of CAI. The following research on accounting information systems in South Africa give a detailed examination of the empirical investigations for this study. Safkaur *et al.* (2021) evaluates the influence of the Pastel accounting information system on corporate efficiency in South Africa, with such a concentration on Pinetown Local Government Authorities (LGAs).

According to the research, the legislature must include adequate training for accounting staff members to enhance accounting information understanding and obtain excellent efficiency. Ahmad and Al-Shbiel (2019) evaluated the effects of computerised accounting systems in maintaining efficient financial management in South African local government agencies. Western Cape Province Council did this case study. The research findings indicated that the computer accounting system has a substantial influence on the overall budgetary management in the Pietermaritzburg area council after thorough data processing. In the context of these results, the author suggested that an administrator network be established to oversee and prevent unauthorised people from accessing the accounting system. Al-Fatlawi *et al.* (2021) examined the influence of computerised accounting on payroll quality of financial reporting to broaden the entire discussion of empirical research. This was a case study undertaken by the Municipal Water and Sewerage Authority (MWSA). The findings revealed that the use of computer accounting technologies in accounting operations has both positive and negative consequences. Considering these findings, the author advised that MWSA continue with the implementation of a computerised data system

by offering staff training in the finance and personnel management departments in the hopes of avoiding revenue damage and reducing the danger of fraud.

THEORETICAL FRAMEWORK

Agency theory

Jensen and Meckling promoted the agency theory in 1976. The agency theory outlines the shareholder's delegation of responsibility to the management (or the representative) to administer the firms on their behalf, with the owners' prosperity reliant on the administrator (Panda and Leepsa, 2017). Since administrators may strategically utilise firm assets to fulfil their own preferences, the agency theory aims to resolve the potential clash of interests among executives and owners (Mitnick, 2015). In addition, corporations seek to maximise the value of shareholders, which can vary from executives' personal interests. When the person in charge (those in managerial positions) has greater knowledge than the shareholders, information asymmetry emerges, therefore the possibility of the person acting in a manner to further advance their personal benefits increases (Bendickson *et al.*, 2016). A firm's fundamental goal is to maximise the financial resources of its shareholders. Personnel managers (also known as agents) are exclusively responsible for this. As a result, managers' use of accounting information systems to improve profitability fulfils the agency responsibility management have for their individual owners.

RESEARCH METHODS

The research used quantitative methods and it used a descripto-exploratory research design. This study strategy combines the experimental and descriptive research design. The research used a non-probability judgement sampling method since selecting the proper participants required some judgement on the side of the researcher (Newman and Gough, 2020). Simultaneously, this exploratory study identified the connection among the independent as well as dependent variables (Zhou *et al.*, 2022). The above suggests that an explanatory research method has been employed to determine a link among computerised accounting information systems on profitability for a selection of South African firms. The population was calculated using the number of workers in the accounting and finance departments of ten non-public firms in Pinetown. The ten non-public firms in Pinetown were chosen randomly. There were 71 workers working in the accounting and financial section. The

firms' names were withheld due to their refusal to recognise themselves as study participants. Moreover, the table below offers a summary of every firm's specialised sector.

Table 1: Firm demographic subsidiary

Firm name	Population	Size
Hospitality	12	11
Nutrition	5	4
Financial institution	8	7
Meats	7	6
Delivery	4	3
Detail shop	4	3
Electricity	8	7
Agriculture	5	4
Distributor shop	5	4
Producing	13	12
Total	71	61

The total sample for investigation has been determined using the following sampling technique. Following stratified sampling, this same questionnaire will be presented to 61 accounting workers from 10 chosen at random non-public firms in Pinetown. The research will make the most of both primary and secondary data. The primary data collection tool was a survey. There were 3 parts to the survey. Part A asked the study participants demographic questions. Part B contained questions about computerised accounting information systems. Part C discussed the profitability of non-public firms.

A pilot study was done prior to data collection to assess the internal consistency or reliability of the research instrument. The pilot research included 30 employees from three different non-public firms in New Germany. Following that, Cronbach Coefficient Alpha was utilised to establish the study instrument's dependability. At the identical moment, the total validity of the study instrument was determined using content validity, construct validity, and confirmability. The content validity index was used to establish content validity, whereas factorial analysis will be used to evaluate construct validity using Kaiser-Meyer-Olkin metrics of good reliability (Mukherjee, 2019). Simultaneously, the face validity was evaluated by eliciting feedback from participants in the study on the basic questions in the data collection instrument. The survey's reliability is seen in Table 2.

Table 2: Survey's reliability findings

Variable Description	Number of items	Alpha Cronbach's
Accounting Software for Computers	15	0.825
Profitability	5	0.902

In data analysis, both inferential and descriptive statistics were used. Descriptive statistics were particularly employed to assess the demographic features of the research participants. In contrast, inferential statistics were used to investigate questions 2 and 3. In addition, the Pearson correlation was utilised to examine the association among a computerised accounting information system and profitability in a sample of Pinetown, South Africa's non-public firms.

RESULTS

The outcomes of every research question in this research are presented therefore in part. The first part includes a descriptive analysis of the statistics on the population of the research's participants in this study. The statistical techniques for questions 1 through 3 are included in the second part. Selected respondents returned 56 surveys.

1. What are the statistics on the population of financial and accounting professionals in Pinetown, South Africa?

Table 3: Statistics on the population of accounting and finance professionals

Classification	Representation	Number	%
Sex	Men	24	42.9
	Women	32	57.1
Selection	Executives	11	19.6
	Accountants	37	66.1
	Financial workers	8	14.3
Expertise	0-1 Years	12	21.4
	1-5 Years	14	25.0
	5=10 Years	23	41.1
	<10 Years	7	12.5
Total		56	100

Table 3 shows that 24 (42.9%) of the respondents were women, whereas 32 (57.1%) were men. There were 11 (19.6%) executives, 37 (66.1%) accountants, and 8 (14.3%) other financial workers present at the exact same time. In addition, 12 (21.4%) included expertise ranging from 0 to 1 year, even as 14 (25%) had expertise ranging from 1 to 5 years. Moreover, 23 (41.1%) had job expertise ranging from 5 to 10 years, whereas 7 (12.5%) had over 10 years of expertise.

2. What are the variables influencing the use of computerised accounting information in chosen non-public firms in Pinetown, South Africa?

Table 4 shows the findings regarding the variables impacting the use of computerised accounting information systems in chosen non-public firms in Pinetown.

Table 4: Variables influencing computerised accounting information system adoption

Describe	Mean	Explanation
Cost	4.53	Strongly Agree
Technology	4.07	Agree
Employee Perspective	1.10	Strongly Disagree
Firm size	1.32	Strongly Disagree
Administration help	4.57	Strongly Agree
Simpleness of Usage	3.18	Neutral in some ways
Facilities	2.31	Disagree
External environment	2.43	Disagree

Table 4 shows that accounting and finance staff significantly agree (Mean = 4.53) that cost is a major issue to a firm's adoption of a computerised accounting information system. Furthermore, accounting and finance professionals strongly agree (Mean = 4.57) that administration help is a decisive element in computer information adaption. In this regard, accounting and finance staff generally agree (Mean = 4.07) that technological difficulties are another rationale for using a computerised accounting information system. Meanwhile, respondents were rather impartial (Mean = 3.18) when it came to the simplicity of using a computerised accounting information system as a deciding factor in a company's flexibility. In contrast to these results, survey respondents strongly disagreed that employee perspective (Mean = 1.10) or firm size (Mean = 1.32) were substantial variables to keep in mind in computerised accounting information system adoption. The results also demonstrated that accounting and finance professionals are divided on whether facilities (Mean = 2.31) and the external environment (Mean = 2.43) have a major impact on the adaption of computerised accounting information systems.

3. What is the link among computerised accounting information systems and profitability at chosen Pinetown non-public firms?

Table 5: A bivariate examination of the association among variables impacting computerised accounting information system deployment and the profitability of chosen non-public firms in Pinetown.

SN	Description	Results		Significance
		Pearson Correlation	Mean	P
1.	Cost	0.543	3.32	0.00*
2.	Technology	0.291	2.28	0.00*
3.	Employee Perception	0.065	2.38	0.00*
4.	Firm Size	-0.432	3.45	0.02*
5.	Administration help	0.697	3.42	0.04
6.	Simpleness of Usage	0.164	2.20	0.23
7.	Facilities	0.487	2.27	0.03*
8.	External environment	0.287	2.43	0.12

*Difference is significant

Table 5 presents a bivariate examination of the association among variables impacting computerised accounting information system deployment and the profitability of chosen non-public firms in Pinetown. The association is substantial at 0.01 and 0.05 levels. Cost and profitability have a substantial positive connection ($r = 0.543$, $p < 0.05$). This suggests that cost has an impact on profitability. Management support and profitability have a substantially positive connection ($r = 0.697$, $p < 0.05$). This suggests that administration help has a considerable impact on the profitability of chosen non-public firms in Pinetown. Some elements that contribute to profitability show a marginally favourable association. Technology, for example, has a rather poor link with profitability ($r = 0.291$, $p < 0.05$). This is also shown in the association among employee impression of computerised accounting information systems and their impact on profitability ($r = 0.065$, $p < 0.05$). There is no significant link between computerised accounting information systems ease of usage and profitability ($r = 0.169$, $p > 0.05$). Similarly, external environment has an impact on profitability ($r = 0.287$, $p > 0.05$). Furthermore, in non-public firms, there is an unfavourable link between company size and profitability ($r = -0.432$, $p < 0.05$).

CONCLUSIONS

The conclusions and recommendations presented in this study are based on an analysis of the determinants of accounting information system adoption for non-public firms in Pinetown, South Africa. An accounting information system is a formal process

for collecting, establishing, and interacting with accounting information concerning the activities of a company. It is a financial information system that comprises accounting terminology, documents, manuals of operation, flow charts, programmes, and statistics that suit the demands of the company. Furthermore, it is a system made up of interconnected subsystems that operate together to offer fast, trustworthy, and precise details for taking decisions. It is a network developed within an organisation to offer administration information to help make decisions. It is a routine and automated method for obtaining and exchanging data with the goal of assisting and managing collective decision-making considering a firm's overall objectives. An effective accounting information system could contribute to the company's achievement in accomplishing its objectives, whereas a failing information system might result in the failure of the company in attaining its goals, implying an inability to develop and continue to exist. In addition, the findings indicate that cost and administration help are the primary factors influencing the adoption of computerised accounting systems. In addition, technology is a crucial consideration in the deployment of such systems. The study also reveals a significant relationship between cost, innovation, employee perspective, administration help, company size, structure for the use of computerised accounting information, and the profitability of non-public firms in Pinetown, South Africa. However, there is no statistically significant connection between the convenience of usage or external factors affecting the adoption of computerised accounting information and the profitability of the selected firms.

RECOMMENDATIONS

Overall, the results recommend that non-public firms in Pinetown, South Africa should carefully consider cost, administration help, and technology when implementing computerised accounting systems to improve their profitability. Implementing computerised accounting systems requires the support of management, as they are the authorities in the company. Therefore, managerial help is crucial for the successful deployment of computerised accounting systems. In addition to this, cost is a significant factor that businesses must consider when contemplating the implementation of such systems. Management should purchase cost-effective accounting information packages that meet the organisation's requirements. Moreover, when installing a computerised accounting system, it is essential to consider the appropriate technology and personnel perspective. Employees need to

understand the benefits of the accounting system to have an open mind towards the program's implementation. Hence, careful consideration of managerial help, cost, technology, and personnel perspective is necessary for a successful implementation of computerised accounting systems in any firms.

AUTHOR CONTRIBUTIONS

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Sustainable Development Goals (SDGs) and its impact on Family Businesses: a scoping review

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ABSTRACT

Family businesses play a crucial role in the global economy, and as such, their contribution to achieving the United Nations Sustainable Development Goals (SDGs) cannot be overstated. This article explores the impact of SDGs on family businesses and the role of family businesses in achieving the SDGs. It examines the ways in which family businesses can help to promote sustainable development through their operations, strategies, and social responsibility initiatives. The article also considers the challenges faced by family businesses in aligning with SDGs and the strategies they can adopt to overcome these challenges.

The article draws on a range of academic and industry sources to provide insights into the opportunities and challenges that SDGs present to family businesses from 2012 to 2022. This article employed the scoping literature review approach. Key findings include the need for family businesses to adopt a long-term view of sustainable development, the importance of collaboration with other stakeholders, and the role of innovation in driving sustainable growth. The literature was analysed and presented, using various themes.

Overall, the article demonstrates that family businesses have a crucial role to play in achieving the SDGs, and that by adopting sustainable practices, they can not only contribute to the achievement of the goals, but also drive long-term growth and profitability.

Keywords: sustainable development goals, family business, social responsibility, collaboration, innovation, long-term growth.

INTRODUCTION

Family businesses are known to be the backbone of many economies around the world. They contribute significantly to the gross domestic product (GDP) and provide employment opportunities. Family businesses also have unique characteristics such as long-term perspective, strong family values, and a sense of ownership, which can be both a strength and a challenge. One of the biggest challenges that family businesses face is succession planning (Berndt and Meintjes, 2023).

A family business is one in which the majority of the ownership or control rights are held by members of a single family or multiple families who are related by blood, marriage, or adoption (Randerson, 2022). The family must own 51% or above to be regarded as a family business.

According to a study by the Family Business Institute, only about 30% of family businesses survive into the second generation, 12% into the third generation, and only 3% into the fourth generation and beyond. Another study by Harvard Business Review found that family businesses have a failure rate of around 70% to 80% within the first generation. Therefore, it is crucial for family businesses to have a succession plan in place to ensure their survival.

LITERATURE REVIEW

Importance of family businesses

Summary	Themes	Authors
Family businesses prioritise sustainable growth, guided by a commitment to the future generations, fostering stability and strategic planning.	Long-Term Vision and Commitment	Magrelli, Rovelli, Benedetti, Überbacher & De Massis, 2022.
Rooted in strong values, family businesses cultivate distinct corporate cultures, shaping identity and purpose, driving their operations.	Strong Core Values	Parada, Samara, Dawson, & Bonet, 2020

Their streamlined decision-making enables family businesses to swiftly adapt to market shifts, ensuring agility and responsiveness.	Flexibility and Agility	Zapata-Cantu, Sanguino, Barroso & Nicola-Gavrila, 2023.
Family businesses prioritise employee well-being, fostering loyalty, engagement, and skill development among their workforce.	Employee Engagement and Development	Rajan, Salunkhe & Kumar, 2023.
With strong ties to their communities, family businesses often engage in philanthropy, contributing significantly to local social causes.	Community and Social Impact	Leonidou, Eteokleous, Christodoulides, & Eduardsen, 2023.
Across generations, family businesses transfer crucial knowledge and expertise, fostering mentorship that sustains their business operations.	Knowledge Transfer and Mentorship	Mosolygó-Kiss, Heidrich, & Chandler, 2023.
Family businesses exhibit resilience, navigating challenges adeptly due to their adaptive nature and long-term outlook.	Resilience and Adaptability	Lin, & Wen,, 2021.
They significantly contribute to economies by creating jobs and improving economic growth, particularly at local and regional levels.	Economic Contribution	Pieper, Kellermanns & Astrachan, 2021.
Ensuring smooth transitions between generations is crucial for business continuity and family harmony, a key focus in family business planning.	Succession Planning	Alkahtani, 2021.
Transparent governance structures aid in balancing family interests with business goals, crucial for sustainable growth.	Governance and Decision-Making	Steier, Chrisman & Chua, 2015.
Implementing effective conflict resolution	Conflict Resolution	Caputo, Marzi, Pellegrini & Rialti, 2018.

mechanisms helps maintain harmony and productivity within the business.		
Incorporating professional management practices alongside family values drives innovation and ensures competitiveness.	Professionalisation and Innovation	Cattaneo & Bassani, 2020.
Establishing clear boundaries between personal family matters and business operations maintains professionalism and clarity.	Managing Family and Business Boundaries	Bennedsen, Fan, Jian & Yeh, 2015.
Leveraging family networks provides access to vital resources, including capital, expertise, and networks, aiding in business growth.	Access to Capital and Resources	Gudmunson & Danes, 2013.
Family businesses aim not just for immediate success but also work to preserve their legacy, safeguarding their reputation and values for future generations.	Success and Legacy Sustainability	Muhumed, Bodolica, & Spraggon, 2017.

RELEVANT THEORIES UNDERPINNING THE STUDY

Agency Theory: Agency theory posits that conflicts of interest arise in organisations when there is a separation between ownership and control (Jensen and Meckling, 1976).

The central tenet of agency theory, as formulated by Jensen and Meckling in 1976, is that conflicts of interest arise in organisations when ownership and control are clearly segregated. This division frequently takes place in big businesses when owners, or shareholders, give managerial agents the power to make decisions. Conflicting objectives and motivations can result from the principal-agent relationship because managers may put their personal interests ahead of the shareholders'. Due to this potential mismatch of incentives, agents may not behave in the principals' best interests, which could result in agency difficulties. In order to reduce conflicts and match the interests of owners and managers, agency theory emphasises the necessity

for mechanisms like performance-based incentives, monitoring, and contractual agreements, encouraging a more efficient environment.

Resource-Based View (RBV): The resource-based view emphasises the importance of unique and valuable resources possessed by firms that contribute to their competitive advantage (Barney, 1991).

Barney (1991) introduced the Resource-Based View (RBV), which emphasises the importance of unique and valuable resources that organisations possess as critical components of their competitive advantage. RBV holds that companies can maintain a competitive edge by utilising internal resources that are unique, valuable, uncommon, and non-substitutable, in addition to external market conditions. These resources can include a variety of assets like in-house technology, a highly qualified personnel, a well-known brand, or special organisational skills. Since these resources are the cornerstone for creating and preserving a competitive advantage in the market, the RBV framework urges businesses to systematically identify and develop these resources. RBV offers an alternative viewpoint to conventional industry-based evaluations by emphasising internal strengths and resources. It also highlights the significance of firm-specific competencies.

Socioemotional Wealth (SEW) Theory: Socioemotional Wealth Theory focuses on the unique non-financial goals and aspirations of family business owners. (Gómez-Mejía, Haynes, Núñez-Nickel, Jacobson, & Moyano-Fuentes, 2007).

Gómez-Mejía et al. (2007) presented the Socioemotional Wealth (SEW) Theory, which highlights the unique non-financial goals and emotional factors influencing family company owners. In contrast to conventional economic theories, which mostly focus on financial performance, SEW emphasises the significance of emotional and familial elements in influencing the objectives of family-owned businesses. According to this notion, family companies frequently give socioemotional wealth—which includes things like family identity, succession continuity, and maintaining family harmony—priority over financial profits. In order to recognise the importance of emotional fulfilment and a family history in the decision-making processes of family-owned enterprises, SEW promotes a more expansive definition of success that goes beyond financial measures. Maintaining the long-term health and cohesiveness of family

businesses depends on identifying and managing socioemotional wealth, offering a distinctive viewpoint.

Stewardship Theory: Stewardship Theory suggests that family businesses can benefit from the strong sense of stewardship and long-term orientation displayed by family members (Donaldson and Davis, 1989).

According to Stewardship Theory, which was put forth by Donaldson and Davis in 1989, family businesses can benefit from the enduring perspective and inherent sense of stewardship exhibited by family members who are active in ownership and management. In contrast to the agency theory, this view maintains that family members naturally align their interests with the firm's, acting as stewards and encouraging a commitment to the organisation's long-term success. Stewardship theorists contend that family businesses' shared history and close ties to one another foster a stronger feeling of duty and loyalty among employees, which lowers the possibility of agency issues that are frequently present in non-family enterprises. Stewardship theory essentially asserts that a family's dedication to the organisation's well-being fosters an atmosphere that is favourable to wise decisions, cooperative efforts

Family Systems Theory: Family Systems Theory focuses on the interdependence and interactions among family members within the business context. It examines how family dynamics, relationships, and communication patterns influence the functioning and outcomes of the family business (Bowen, 1966).

Family Systems Theory was developed by Bowen in 1966 and focuses on the complex relationships and interdependencies that exist between family members in the context of family businesses. According to this theoretical paradigm, the family and the business are interdependent systems, and any changes or dynamics in one can have a significant impact on the other. Family Systems Theory investigates the ways in which emotional dynamics, communication styles, and family interactions affect the family business's overall performance. This theory offers insights into how family dynamics may affect decision-making procedures, succession planning, and organisational culture within family-owned businesses by acknowledging the intricate interactions between family and company. Family Systems Theory provides a

framework for understanding and managing these familial relationships, which is essential for the survival and development of family enterprises.

Sustainable Development Goals (SDGs) linked to family business

There are other theories related to family business, and there are several other perspectives and authors who have contributed to this field of study.

No Poverty (SDG 1) - Family businesses contribute to ending poverty by creating jobs and generating income for families and communities.

Education and Innovation (SDGs 4): Family businesses can invest in education and skill development for their employees, contributing to human capital development. Additionally, they can foster innovation and technological advancement in their industries.

Gender Equality (SDG 5): Family businesses often have unique dynamics that can either hinder or support gender equality. Implementing policies that promote gender diversity in leadership and decision-making can lead to better outcomes for both the business and society.

Decent Work and Economic Growth (SDG 8 & 9) - Family businesses provide decent work and support economic growth through their operations, investment, and employment practices.

Reduced Inequalities (SDG 10) - Family businesses play a role in reducing inequalities by creating a fair and inclusive economy that benefits all stakeholders.

Sustainable Cities and Communities (SDG 11) - Family businesses contribute to sustainable cities and communities by investing in sustainable infrastructure, reducing their environmental impact, and promoting sustainable consumption and production.

Responsible Consumption and Production (SDG 12) - Family businesses lead by example in promoting responsible consumption and production through sustainable practices and products.

Climate Action (SDG 13) - Family businesses can help address the impacts of climate change by reducing their own carbon footprint and promoting sustainable solutions.

Partnerships for the Goals (SDG 17): Collaboration between family businesses, governments, NGOs, and other stakeholders is crucial for achieving the SDGs. Family businesses can participate in partnerships to amplify their impact and contribute to sustainable development efforts.

AIM OF THE STUDY

The aim of this article is to investigate the various ways in which family businesses, as key players in the global economy, engage with and are influenced by the SDGs.

PROBLEM STATEMENT

The problem at hand is the lack of comprehensive strategies and frameworks that guide family businesses in integrating SDGs into their core practices (Labaki, & D'Allura, 2021). Many family businesses face challenges in identifying relevant SDGs, understanding their implications, and translating these goals into actionable steps that fit their unique structures, values, and goals (Jiménez, de la Cuesta-González, & Boronat-Navarro, 2021). This gap not only limits the potential of family businesses to contribute to sustainable development but also prevents them from fully capitalising on the benefits that such alignment can bring in terms of reputation, resilience, and long-term success.

RESEARCH QUESTIONS

To what extent do family businesses align with the principles and targets outlined in the Sustainable Development Goals?

What are the direct and indirect impacts of SDGs on the performance of family businesses (financial growth, market positioning, reputation, and long-term sustainability)?

RESEARCH OBJECTIVES

To assess the extent to which family businesses align with the principles and targets outlined in the Sustainable Development Goals. Investigate the strategies, policies, and practices adopted by family businesses to integrate sustainability principles into their operations and decision-making processes.

To analyse the direct and indirect impacts of SDGs on the performance of family businesses in terms of financial growth, market positioning, reputation, and long-term

sustainability. To investigate whether adherence to SDGs leads to enhanced competitive advantages and resilience for family-owned enterprises.

RESEARCH METHODOLOGY

Fox and Bayat (2007) suggest that researchers need to justify the suitability of the research design and methodology used in their research projects, indicating why the research design and methodology are more acceptable than existing ones. This is because the choice of and justification for a research method are a vital part of the research process (Wolhuter, 2015).

Notably, while it is important for researchers to decide the type of research design they are going to use from the outset (Van Wyk & Taole, 2015), some researchers rarely mention the approach used in their study (Neuman, 2014).

Emerging from the above, a desktop research approach was proposed for this study following a scoping literature review.

The inclusion and exclusion criteria were carefully defined to focus on works that directly addressed the research question and provided empirical evidence or theoretical insights.

The gathered literature was then critically examined and synthesised to identify patterns, trends, and gaps in the existing knowledge.

The integration of diverse perspectives and methodologies from various studies enabled the article to present a robust and evidence-based account of the subject matter.

The articles analysed were 172 and ranged from 2012 to 2023. These articles were family business and SGDS related and had different data bases.

Scoping review approach used for the study

A scoping review of literature is a systematic approach to mapping and analysing existing research on a specific topic. It aims to identify the key concepts, trends, gaps, and areas of research within a particular field. Here are the typical steps involved in conducting a scoping review of literature:

1. Identify the Research Question or Objective: Define the scope of your review by formulating a clear research question or objective. This question should guide your entire review process.
2. Search Strategy Development: Develop a comprehensive search strategy to identify relevant literature. This includes identifying appropriate databases, search terms, keywords, and Boolean operators (AND, OR, NOT) to effectively retrieve relevant articles.
3. Search and Selection of Studies: Conduct the literature search using the defined search strategy. Collect all potentially relevant articles and documents. Then, screen the retrieved results based on predetermined inclusion and exclusion criteria to select studies that align with your research question.
4. Data Extraction: Extract relevant information from the selected studies. This can include details such as authors, publication year, research methods, key findings, and other relevant data points.
5. Charting the Data: Organise and synthesise the extracted data using appropriate methods. This can involve creating tables, matrices, or diagrams to visually represent the key characteristics and findings of each study.
6. Data Analysis and Synthesis: Analyse the collected data to identify trends, patterns, and themes across the selected studies. This can involve qualitative content analysis, thematic analysis, or other suitable methods. Identify commonalities, differences, and gaps in the literature.
7. Summarise and Report Findings: Write a comprehensive summary of the findings, including an overview of the research landscape, key themes, gaps, and trends. Use clear and organised writing to communicate the synthesised information effectively.
8. Consultation and Validation: Depending on your approach, you might involve experts or stakeholders in the field to validate your findings and interpretations. Their insights can help ensure the accuracy and completeness of your review.

9. **Discussion and Implications:** Reflect on the implications of your findings in relation to the research question or objective. Discuss the potential implications for practice, policy, or future research directions.
10. **Limitations and Future Directions:** Address any limitations of your scoping review, such as potential biases or gaps in the included studies. Provide suggestions for future research areas based on the identified gaps.
11. **Write and Publish the Review:** Compile all the sections into a cohesive review paper. Follow the specific guidelines of your target publication venue or institution for structuring and formatting the review.
12. **Peer Review and Revisions:** Submit your review to a peer-reviewed journal or other appropriate outlet. Be prepared to make revisions based on feedback from reviewers.

FINDINGS FROM THE LITERATURE

Research objective 1 - Discussion

The numbers at the end of each points refer to the number of articles that relates to the point discussed.

1. Industry and Sector: The extent to which a family business aligns with the SDGs depends on its industry. Some industries naturally align more closely with certain SDGs. For instance, a renewable energy family business might contribute significantly to SDG 7 (Affordable and Clean Energy) and SDG 13 (Climate Action), while an agribusiness might impact SDG 2 (Zero Hunger) and SDG 15 (Life on Land). – 23 articles

2. Corporate Governance and Values: Family businesses often have strong ties to their local communities and may prioritise long-term sustainability over short-term profits due to their intergenerational perspective. This can lead to alignment with SDGs related to responsible business practices (SDG 12) and decent work (SDG 8). – 16 articles

3. Innovation and Entrepreneurship: Family businesses that innovate and adopt sustainable practices do contribute to several SDGs. For example, promoting

innovation within the business may align with SDG 9 (Industry, Innovation, and Infrastructure). -19 articles

4. Local Impact: Family businesses are often deeply embedded in their local communities. This localisation can lead to positive contributions to SDGs such as poverty reduction (SDG 1), quality education (SDG 4), and good health and well-being (SDG 3). 11 articles

5. Social and Environmental Responsibility: Family businesses with a strong commitment to ethical and responsible practices do align with a range of SDGs related to environmental protection, gender equality (SDG 5), reduced inequalities (SDG 10), and more. – 31 articles

6. Partnerships and Collaboration: It was found that some family businesses engaged in partnerships with other organisations, governments, and NGOs to amplify their impact on various SDGs. These collaboration may lead to contributions to SDG 17 (Partnerships for the Goals). – 41 articles

7. Challenges and Limitations: However, family businesses may also face challenges in aligning with certain SDGs, especially if they operate in industries that are resource-intensive or have limited regulatory oversight. Balancing profit motives with sustainability objectives can sometimes be a challenge, particularly for businesses that need to ensure short-term survival. – 17 articles

8. Transparency and Reporting: Aligning with the SDGs often involves transparency and reporting on social and environmental initiatives. It was found that some family businesses have improved their reporting mechanisms to showcase their contributions effectively. – 25 articles

Research objective 2 - Discussion

Direct Impacts:

1. Innovation and Opportunity: Pursuing SDGs led to innovative business models and products that address societal challenges. This can open up new markets and revenue streams, contributing to financial growth. – 49 articles

2. Access to Capital: Many investors are increasingly interested in businesses that align with SDGs. Family businesses committed to these goals might find it easier to attract funding, leading to financial growth. -69 articles

3. Cost Savings: Sustainable practices often result in reduced resource consumption and operational costs. For instance, energy-efficient measures can lead to lower utility bills, contributing to improved financial performance. – 41 articles

4. Regulatory Compliance: As governments adopt policies in line with the SDGs, businesses that proactively align with these goals can avoid compliance issues, potential fines, and legal hassles. - 53 articles

Indirect Impacts:

5. Enhanced Reputation and Brand Value: By actively contributing to SDGs, family businesses build a positive reputation as socially responsible entities. This can lead to increased customer loyalty, better market positioning, and enhanced brand value. -17 articles

6. Attracting and Retaining Talent: The younger workforce often seeks employers with a strong commitment to sustainability and social responsibility. Family businesses aligned with SDGs are more likely to attract and retain top talent, contributing to long-term success. – 51 articles

7. Risk Mitigation: Addressing environmental and social issues can mitigate risks related to reputational damage and regulatory changes. This can help family businesses maintain stability and sustainability over the long term. – 46 articles

8. Access to Partnerships and Networks: Engaging with the SDGs do open doors to collaboration with other businesses, NGOs, and governmental bodies. These partnerships can lead to joint initiatives, shared resources, and expanded market opportunities. – 61 articles

9. Long-Term Sustainability: Integrating SDGs into business practices can help family businesses transition toward more sustainable operations. This, in turn, enhances their resilience in the face of changing market dynamics and environmental challenges. – 40 articles

10. Consumer Preference: As consumer awareness about sustainability grows, businesses aligned with SDGs might attract a larger customer base that prefers to support ethically responsible brands. -31 articles

11. Future-Proofing: The world is moving toward a more sustainable and socially conscious future. Family businesses that align with SDGs are better positioned to adapt to changing market expectations and regulatory landscapes. – 29 articles

RECOMMENDATIONS

This study makes the following recommendations:

The integration of Sustainable Development Goals (SDGs) into a family business's strategy is a critical step toward achieving sustainability while aligning with global development objectives. By embedding these goals into their core operations, family businesses can drive meaningful change and contribute positively to society and the environment.

Alignment of SDGs with Business Strategy: Integrating SDGs involves a thorough analysis of which specific goals resonate with the family business's values, industry, and operations. By identifying these alignment points, businesses can set clear targets and action plans to actively contribute to those goals. This alignment not only enhances the company's reputation but also attracts socially-conscious customers, leading to long-term sustainability and competitiveness.

Stakeholder Engagement: Engaging various stakeholders - family members, employees, suppliers, customers, and local communities - is pivotal. By involving them in discussions about SDGs and sustainability, family businesses ensure a more inclusive and comprehensive approach. This inclusivity encourages diverse perspectives, innovative ideas, and collective commitment toward achieving the SDGs.

Innovation and Technology: Embracing innovation and technology plays a pivotal role in addressing SDGs. Family businesses can explore opportunities to develop sustainable products, processes, and services that contribute positively to these goals. Investing in eco-friendly technologies, renewable energy, and efficient resource management not only minimises environmental impact but also leads to cost savings and operational efficiencies.

Capacity Building: Investing in training and capacity-building programs for employees and family members is crucial. These programs increase awareness and understanding of SDGs, fostering a culture of sustainability within the business. Workshops, seminars, and training sessions help in aligning everyone within the organisation with the overarching sustainability goals.

Transparency and Reporting: Family businesses should prioritise transparency in their sustainability efforts. Regular reporting on sustainability performance, encompassing social and environmental impacts, builds trust with stakeholders. This transparency demonstrates a genuine commitment to responsible business practices and helps hold the business accountable for its actions.

The integration of SDGs into a family business's strategy is a multi-faceted process that involves aligning goals, engaging stakeholders, leveraging innovation, empowering employees, and fostering transparency. By adopting these practices, family businesses can effectively contribute to global sustainability while enhancing their own resilience and reputation in the market.

CONCLUSION

The Sustainable Development Goals (SDGs) provide a comprehensive framework for addressing global challenges, and their impact extends to family businesses as well. Family businesses play a crucial role in driving economic growth, employment, and community development. By aligning their operations with the SDGs, these businesses can contribute significantly to sustainable development on both local and global levels.

Through responsible business practices that consider economic, social, and environmental aspects, family businesses can enhance their resilience and longevity. Integrating the SDGs into their strategies helps innovation, attracts socially-conscious consumers, and positively influences their reputation. By engaging stakeholders, embracing technology, and being transparent about their efforts, family businesses can make meaningful contributions to the achievement of SDGs while securing their own future success. The journey towards sustainability requires ongoing commitment and adaptation, and family businesses are well-positioned to drive positive change for the betterment of society and the planet.

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An exploratory investigation into the reasons for quiet quitting: A case study of a private tertiary institution in Durban

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ABSTRACT

Employees today choose to limit their passion for work. Quiet quitting is a contemporary term meaning not to finish a job, but to do it just enough to satisfy a job description. Increasingly, contemporary workers are "quiet quitting," a situation where workers nonetheless carry out their regular responsibilities but no longer go above and beyond the duties enshrined in their job description. Premised on the notion of quiet quitting employees claim they are simply setting boundaries. However, the human resource department under study is concerned about the effects of quiet quitting. Therefore, this study made a qualitative, exploratory investigation into the reasons and motivations for quiet quitting at a private tertiary institution in Durban. The effect of quiet quitting and recommendations on the prevention and mitigation of quiet quitting was averred. The target population were employees of a private tertiary educational institution in Durban South Africa wherein eight of them were purposively chosen for the study. Data was collected using in-depth interviews with the aid of a schedule of 8 unstructured questions built around the aims of the study and that provide the opportunity of finding out the reasons and motivations for quiet quitting in organisations such as the private tertiary institution under study. The purposive sampling method was used and for data analysis, thematic analysis was employed. Findings revealed themes that act as catalysts for quiet quitting in organisations. Following these outcomes, it is recommended that organisational management take actions that can mitigate quiet quitting. The study concluded with deliberations and recommendations

on further studies in the form of quantitative or mixed-methods research on the contemporary human resource management problem in the form of quiet quitting.

Keywords: quiet quitting, engagement, communication, and organisational management

INTRODUCTION AND BACKGROUND

Businesses may be facing greater issues than ever in the first quarter of the twenty-first century. The COVID-19 epidemic spread globally (Tooze, 2020); the 2008 economic crisis shook the entire world (Uslaner, 2010); and these are just a few of the factors that contributed to widespread financial difficulties (Gharehgozli & Lee, 2022). Premised on human resource management, a new trend is emerging that will influence both domestic and global economies (Harter, 2022). The term "quiet quitting" refers to a new sort of job avoidance where employees do little, to purposefully slow down and do not quit but are not dismissed necessitating greater accountability for business expansion or development (Hancock & Sanninger, 2022).

In line with the preceding assertion it is important to consider a recent *Wall Street Journal* article that stated 50% of today's workers limit their work passion (Smith, 2022). Accordingly, Harter (2022) states that the "quiet quitting" phenomenon and its effects on a firm's advantage over its rivals are now widely prevalent. Therefore, it is significant to understand the reasons for quiet quitting in an organisation including recommendations on how to mitigate it.

PROBLEM STATEMENT

Although the exact beginning and location of the idea of quiet quitting are unknown, several sources cite TikTok as the first instance where it was introduced. Employees made their resignations known through the content they published on TikTok, which has become a global phenomenon. The economic and psychological effects of returning to regular working hours and a post-work life following quiet quitting are demonstrated by recent studies. In line with the preceding assertion, the main problem to be investigated in this study is that quiet quitting is now a global phenomenon with limited insights and is a concern for management and companies. Therefore, the need for the study of quiet quitting is now imperative.

OBJECTIVES

- Understand what is quiet quitting;
- Establish the factors responsible for quiet quitting;
- Offer recommendations on the effective mitigation of quiet quitting in organisations.

LITERATURE REVIEW

In the last few years, organisations have had to deal with a global pandemic; a bad economy; the destruction of civil liberties, and the gradual erosion of democracy. As a result, workers were tired, overworked, and left and returned to the office, resisting doing jobs that were not for them. Permitting Ratnatunga (2022) the reality of this resistance is the so-called "quiet quitting," a term that refers to a new era wherein workers only do the job for which they are paid and do not take on additional responsibilities or participate in the job characteristics of the job. Quiet quitting is when an employee comes to work with the intention of not doing something to get the job done. (Klotz and Bolino, 2022).

Classification of quiet quitting

Corresponding to Buscaglia (2022), quiet quitting refers to the minimal commitment that an employee displays towards their work, which is essentially a term for a behaviour that has existed for a significant duration. Zenger and Folkman (2022) state that quiet quitting often occurs when employees refuse to continue working due to the organisation's inability to foster positive relationships with them. Additionally, Harter (2022) suggests that employees who engage in quiet quitting typically limit their efforts at work to maintain a healthy equilibrium between their personal and professional lives or to prioritise their well-being in the workplace.

Furthermore, Walker (2022) explains that quiet quitting involves the employee's decision to not extend their workload or take on additional responsibilities. According to Serenko (2023), quiet quitting is a state of mind in which employees deliberately restrict their performance to meet the requirements of their job description, meeting but not exceeding the predefined expectations. This behavioural pattern reflects their desire to continue working while prioritising self-care and striving to meet the organisation's objectives simultaneously.

In line with the ongoing discussion, employees quietly quit because of external motivation, pressure, and resentment against their manager or the organisation.

However, quietly leaving is a double-edged sword. While it can help employees stay out of trouble, the behaviour can, however, affect their careers.

Factors responsible for quiet quitting in organisations

Our research offers valuable insights into the phenomenon of quiet quitting, highlighting the key factors that contribute to this issue. Additionally, we provide useful recommendations on effective measures to address and minimise instances of quiet quitting within organisations.

Failure to value employees

Mahand and Caldwell (2023) suggest that a phenomenon known as quiet quitting can occur when employees feel undervalued. Many workers and managers lack empathy and compassion for their colleagues, often disregarding signs of stress and treating people more like commodities than important partners (Worline & Dutton, 2017). Consequently, these actions can result in employees becoming dissatisfied with their leaders, particularly in organisations with a top-down culture (Matos, O'Neill, & Lei, 2018). In such cases, workers who complain about harassment, micromanagement, and inappropriate behaviour may be swiftly dismissed (Aubrey, Godfrey, & Harris, 2013).

Increased employee disconnection

Based on the ongoing discussion, another significant factor responsible for quiet quitting can be viewed through the lens of increased employee disconnection. Thus, Herbert, Bendig, and Rojas, (2019) concluded that concerning employees and health, the main issue of human resource management (HRM) for organisations in 2023 is employee engagement. Other researchers and experts concur that collaboration and employee engagement are interrelated concepts (Filstad, Traavik & Gorli, 2019; Caldwell & Anderson, 2023). However, just being a member of an organisation is not enough to feel included (Adejumo, 2021). Therefore, when employees feel that they are not fully informed or involved in work-related decisions, they feel isolated and disconnected from their colleagues and the company. (Gallagher, 2020).

Insufficient investment in professional development

There are many reasons for quiet quitting. One such reason is founded on insufficient investment in professional development. Referring to the results of Gallup's international research, a good job requires companies to commit to the professionalism and personal development of their employees (Clifton & Harter, 2019). However, this is not the case in many organisations. Consequently, numerous employees opt to depart from the organisation due to the erosion of their confidence in its long-term growth commitment (Hom, Allen, and Griffith, 2019).

Loss of balance between work and leisure

Furthermore, because of the measures implemented during the COVID-19 pandemic, metropolitan areas experienced a significant reduction in activity. This necessitated individuals to adhere to stay-at-home orders, causing a disruption in personal connections. Consequently, the ability for employees to establish a healthy work-life balance was compromised. As a result, there was an inadequate equilibrium between professional responsibilities and leisure activities, leading to increased levels of job-related stress and diminished motivation (Vyas, 2022). The quarantine measures enforced amid the pandemic also had adverse consequences on both familial and business dynamics. The requirement to remain at home in accordance with isolation protocols occasionally impeded communication between partners, potentially contributing to conflicts within the family unit. Such conflicts, in turn, may have a detrimental impact on the employee's professional performance and ultimately result in quiet quitting (Wade, Prime & Browne, 2020).

Economic uncertainty during COVID-19

As mentioned earlier, due to the COVID-19 pandemic, many businesses had to temporarily close or operate without capacity due to government restrictions of isolation and social distancing measures. In addition, the economic uncertainty caused by the pandemic made it difficult for companies to finance and grow their businesses (World Bank, 2021). Thus, this led to developments that slowed down economic growth, a decrease in the supply of goods and services, and thus great losses for many businesses (Bloom, Fletcher, & Yeh, 2021). The loss of operating income caused many workers to lose time and some to lose their jobs during and after the epidemic (Lopes & Carreira, 2022). Therefore, it can be affirmed the preceding factors were highly linked to quiet quitting. Away from the meaning of quiet quitting and the

factors responsible for it, the most important aspect of quiet quitting is its effect on employees and businesses.

Burnout

Burnout refers to a person feeling discouraged and physically, emotionally, and mentally exhausted due to stress, anxiety, and depression (Bakker, Demerouti, & Sanz-Vergel, 2014). The most important symptoms of burnout are job stress, decreased motivation for work, and a negative and unpleasant work environment that causes physical, emotional, and mental fatigue at work (Van Cutsem, Marcora, De Pauw, Bailey, Meeusen, & Roelands, 2017). In this context, considering that employee burnout and mental health epidemics are real facts that point to quiet quitting, these facts alone are considered sufficient.

Toxic workplace culture

Poor leadership is recognised as a significant factor contributing to employees silently resigning from their positions (Sull, Sull, Zweig, 2022). The overall workplace culture is another primary reason for employees opting for quiet quitting (SHRM, 2019, as cited in Braje, 2022). In their research, Sull, Sull, and Zweig (2022) examined the 2021 performance of employees in Culture 500 companies according to Öztürk, Arıkan, and Ocak (2023), and identified that a key contributing factor to quiet quitting was linked to toxic culture. They argue that the failure to promote diversity, equity, and inclusion within the work culture leads to employee indifference and lack of integrity. Consistent with this argument, the culture of the organisation is also described as one that generates uncertainty and erodes employees' confidence in their leaders' capabilities, ultimately compelling them to seek alternatives and consequently engage in quiet quitting (SHRM, 2019, cited in Braje, 2022).

RESEARCH METHODOLOGY AND DESIGN

This study applied a qualitative research technique. Philipsen, and Vernooij-Dassen, (2007) state that qualitative research involves the investigation of the essence of phenomena, encompassing their distinctive characteristics, various expressions, the surrounding context, and diverse perspectives for perception while excluding quantitative attributes such as range, frequency, and clear causal connections. This method is considered relevant for this study because it relies on the collection of non-

numerical primary data such as words and pictures which makes it well-suited for providing factual and descriptive information (Johnson and Christensen, 2012).

Data collection and sampling methods

According to Sekeran and Bougie (2013), data collection in a research process that involves gathering information for research purposes to enable informed decision-making. Saunders, Lewis, and Thornhill, (2012) emphasise that data collection is a vital aspect of the research process, offering various methods such as interviews (structured or unstructured), questionnaires, and focus groups. For this study, data was collected through in-depth interviews with the aid of a schedule which included eight open-ended questions built around research objectives, providing an opportunity to understand the reasons and motivations for quiet quitting in organisations such as the private tertiary institution studied. The interviews were recorded, and notes were taken.

Sampling

For Verma, Gautam, Pandey, Mishra, and Shukla, (2017) sampling refers to the practice of carefully selecting a proportionate and representative subset from a larger population to effectively determine the parameters or traits of the entire population. Sampling strategies play a crucial role in various forms of experimental research, particularly in the realm of social sciences (Suresh, Thomas, and Suresh, 2011). The frequently employed sampling techniques are categorised as probability sampling and non-probability sampling (Rahman *et al.*, 2022; Elfil and Negida, 2017; Shorten and Moorley, 2014).

As maintained by Wretman (2010) probability sampling methods allow all subjects in the target population to have equal chances of being selected. Shorten, and Moorley (2014) on the other hand state that non-probability sampling methods describe a process where the sample population is selected in a non-systematic manner that does not guarantee equal chances for each subject in the target population to be chosen. For this study, non-probability sampling was selected over probability sampling by the researcher. Taking into consideration the preceding assertion the non-probability sample technique of purposive sampling was used. Purposive sampling was perfect for this exploratory study because it allowed for the selection of only individuals relevant to the study. Furthermore, cost-effectiveness in terms of time and

money were also two major benefits of the application of purposive sampling in research (Taherdoost, 2016).

Target population

By following the appropriate research process, it was determined by Alvi (2016) that the target group for this study consists of individuals who meet specific research criteria. Moreover, to ensure that participants are representative of the research needs and relevant to the ethnic groups of interest, Casteel and Bridier (2021) suggest that the target population should be clearly defined.

For this study, the target group was composed of employees working in the human resource management (HRM) department of a private university in Durban, South Africa. A total of eight employees were selected to participate in the study. The choice of the human resource management department at this specific private tertiary in Durban, South Africa was made due to their expertise in employee development, motivation, and overall job performance.

DATA ANALYSIS

Cohen, Manion, and Morrison (2018) explain that data analysis is the process of using statistical methods and/or appropriate methods to interpret and sample, condense, generalise and analyse data. In this context, Leavy (2017) suggests that thematic analysis is a qualitative data analysis method that involves reading datasets and distinguishing themes in data to provide context. Therefore, thematic data analysis was used for data analysis in this study. In the utilisation of thematic data analysis for this study, the six-step process was employed:

Phase One: Familiarisation with the data

The first phase (familiarisation with the data), as its name suggests, is concerned with an understanding of the data around the objectives of the study. This phase helps to figure out the type (and number) of themes that might emerge through the data.

Phase Two: Generating initial codes

The data analysis phase was successfully completed prior to the discovery phase. However, it is deemed essential to review the document thoroughly before proceeding to generate the code. As a result, the researchers meticulously examined the

transcripts and compiled all relevant information pertaining to periods of silence, the underlying reasons for quiet quitting, and potential suggestions for mitigating its impact within organisations.

Phase Three: Searching for themes

As stated by Braun and Clarke (2006), this stage commences with a comprehensive list of numbers that are defined within the dataset. The primary objective of this stage is to identify patterns and relationships among all the data sets (Chamberlain, 2015). It is important to thoroughly analyse the numbers to determine how they converge to generate meaningful content (Braun and Clarke, 2006).

Phase Four: Reviewing themes

At this stage, all content (master content, main content and sub-content) is deliberately brought together to correct the initial content and further disseminate this content. Braun and Clarke (2006) suggest that both internal homogeneity (reliability and consistency) and external heterogeneity (content differences) between subjects should be examined.

Phase Five: Defining and naming themes

This phase began with the aim of further refining and defining the themes, that is, "identifying the essence of what each theme is about (as well as the themes overall) and determining what aspect of the data each theme captures" (Braun & Clarke, 2006).

Phase Six: Writing the report

The final stage of the analysis is to write a report on the findings. Braun and Clarke (2006) stated that thematic research articles should convince readers of the quality and validity of the analysis. Neuman (2018) explains that a theme is a pattern that captures something important or interesting about the theme, information and/or research questions. Additionally, the curation of thematic material allows for the examination of topics. During this period, the determined points are revised and converted into preliminary points. Babbie and Mouton (2019) pointed out that organising and curating content with the aim of discovering the "essentials" of each aspect is the final refinement of content. Finally, the last point is about journaling.

TRUSTWORTHINESS OF THE STUDY

Conferring to Bell, Bryman and Harley, (2018) trustworthiness is concerned with the level of accuracy in processing, collecting, analysing and understanding data. Founded in the research process, Leavy (2017) states that trustworthiness comprises credibility, transferability, confirmability, and dependability. Therefore, for trustworthiness in this study, the following were ensured.

Credibility: determine whether the findings represent evidence derived from the participants' original data and are an accurate interpretation of the participants' original views. (Neuman, 2018). In this study, a method of iterative questioning was implemented to detect intentional falsehoods. This method encompasses the use of probes to obtain detailed information and iterative questioning, where the researcher revisits previously discussed topics and retrieves relevant data by rephrasing questions.

Transferability: demonstrate the extent to which qualitative research can be generalised or applied to other contexts or settings (Babbie and Mouton 2019). The research clearly explains the background of the research and the assumptions behind the research question, and the findings were related to various background information of the research.

Confirmability: is concerned with a degree wherein the findings are confirmed by other researchers. The validity of this study was confirmed by an external review in which researchers not involved in the study evaluated the study's methods and products (Ball and Gaskell, 2019).

Dependability: is a critical element of trust as it guarantees the consistency and replicability of research findings (Bell, Brightman, & Harley, 2018). Therefore, to maintain dependability, the researcher ensured that all opinions and suggestions presented in the study were based on robust data provided by the participants who responded to the survey.

FINDINGS AND DISCUSSION

Thematic analysis is considered a flexible approach to data analysis that allows qualitative researchers to develop themes from interview data. This approach is flexible because there is no specific science associated with it. Therefore, data

science, phenomenology, and general and descriptive research can be used in these areas (Bryman and Bell, 2018). Premised on this assertion, below are the key themes relevant to the research objectives classified in the study.

Theme: Reduced work effort

In line with the question asked ‘what is quiet quitting?’ most of the respondents provided an in-depth understanding of quiet quitting. Respondent 8 indicated that quiet quitting *is concerned with employees who meet requirements but are unable to work overtime, or volunteer for additional work or responsibilities.*

Premised on the ongoing deliberations respondent 4 suggests that quiet quitting *involves employees [who] don’t make extra trips to workplaces while employees continue to make less of an effort to get their work done.*

Respondent 1 states that quiet quitting is characterised *by employees who make minimal effort to get their job done but do not spend more time or energy on their tasks.*

While respondent 6 *asserts that quiet quitting is concerned with a situation wherein an employee performs minimal work by deliberately slowing down.*

Findings in this category can be viewed through the assertion of Christian, (2022) who states that quiet quitting is defined as doing the bare minimum for the work and not going above and beyond.

Theme: Failure to value employees

A significant number of the participants provided insight into the factors responsible for quiet quitting. Thus respondent 4 states that *limited recognition can often be a significant catalyst for quiet quitting among employees. In the absence of appreciation, there is a possibility that their diligent contributions may go unnoticed, consequently leading to decreased motivation and reluctance to expend valuable effort.* Unfortunately, supervisors and managers in an alarming number of companies lack empathy and compassion toward their employees – often ignoring signs of employee suffering and treating employees as commodities rather than as valued partners (Worline & Dutton, 2017).

Theme: Increased employee disconnection

Most of the respondents further illuminated factors responsible for quiet quitting; one such factor is concerned with increased employee disconnection. Respondent 7 states *that the ultimate reason for quiet quitting is the disconnect between management and staff*. Furthermore, respondent 5 suggests that *employee disconnection can lead to disgruntled employees who often have a negative attitude towards their job and organisation therefore leading to quiet quitting*.

This outcome is viewed through the lens of Clifton and Harter, (2019), stating that the lack of connection between employees can lead to negative reactions and poor performance and can lead to decreased individual and team performance and decreased employee engagement (Hopke, 2022).

Theme: Insufficient investment in professional development

Most of the respondents in this category strongly approved of the link between quiet quitting and the lack of career development and advancement. The 6 respondents suggest that *lack of advancement opportunities and feeling disrespected at work are the main reasons for quiet quitting*.

Respondent 4 indicated that *when companies do not provide adequate training and development, employees' willingness to work overtime decreases thus leading to quiet quitting*.

This response can be linked to Kruse (2022) stating that failure by employers to communicate their organisation's goals and strategies to their employees, coupled with their failure to invest in employee development, leaves employees unsure of their future.

Theme: Loss of balance between work and leisure

Respondents in this study suggested an informed insight into the loss of balance between work and leisure. Thus respondent 2 states that *failure to achieve the right balance between work and leisure can carry serious consequences including diminished career opportunities, family problems, stress-related complications and eventually quiet quitting*.

Respondent 6 states that *employees [who] quiet quit are looking because of a lack of balance between monetary rewards and work–life balance*. Respondent 4 indicated that a lack of life-work balance is forcing employees out the door.

Ong (2023) emphasises that in today's professional environment, a lack of efficient scheduling of leisure time, particularly with regard to achieving work-life balance, may result in disengagement from work. For this reason, employees' vacation periods need to be revised. Additionally, managers should give their employees time for regular exercise, good sleep and healthy nutrition. Additionally, yoga, meditation, therapy or stress management should be planned to reduce employees' stress.

Theme: Economic uncertainty during COVID-19

Most of the respondents in this category linked quiet quitting to the COVID-19 pandemic. Respondent 2 states that *indeed, the global pandemic of COVID-19 has brought about numerous challenges and economic hardships that have significantly impacted individuals and necessitated a re-evaluation of their circumstances thus leading quiet quitting*.

Respondent 1 affirmed that *fluctuating business conditions may result in employees quietly quitting their jobs*.

Respondent 7 indicated that *the economy is uncertain after the COVID-19 outbreak. ... Employers are seeing the emergence of quiet quitting*.

Öztürk, Arıkan, & Ocak, (2023) state that the COVID-19 pandemic has had a significant impact on the global workforce, necessitating changes in work dynamics for both employers and employees. Implementing new management systems, such as flexible working hours and remote work arrangements, has resulted in challenges related to work-life balance. These challenges, in turn, have the potential to contribute to unexpressed resignations.

Theme: Burnout

Respondents in this category agreed that burnout can be a catalyst for quiet quitting, Respondent 2 stated that *burnout can lead to exhaustion among employees, causing a decrease in their willingness and ability to exceed expectations in their work which is an act of quiet quitting*.

Respondent 6 indicated that the *phenomenon of burnout when experienced by employees, can potentially impact their inclination to quietly leave their current role or disengage from the position.*

Respondent 4 suggests that *quiet quitting refers to a phenomenon observed in which individuals prioritise accomplishing only the essential tasks within their job responsibilities. This behaviour often arises as a societal reaction towards burnout.*

Outcomes are in line with a Gallup survey by Forbes magazine of 15,091 employees and who show that burnout caused at least 50 percent of employees to quiet quit their jobs. The gap between workers and employers is widening. Another 18% of workers say they are regularly unemployed, and only 32% of workers in the U.S. are unionised.

Theme: Toxic workplace culture

Responses in this category were mainly in the affirmative. Respondent 6 states that a *toxic work environment characterised by unfavourable behaviours, interoffice politics, and conflicts can lead employees to quiet quit.*

Respondent 1 stated that *toxic work culture and excessive pressure can cause quiet quitting* and Respondent 8 lamented that *toxicity in the workplace can influence employee disentanglement and attrition, thus leading to quiet quitting.*

Respondent 8 indicated *that if employees perceive that the workplace culture is unfavourable or that they do not receive adequate support to perform their duties, they might reassess their positions and opt to fulfil only the essential requirements of their jobs.*

Ong (2023) states that the inability to arrange leisure time, especially within the work-life balance efficiently, creates quiet quitting in today's businesses.

CONCLUSION AND RECOMMENDATIONS

Preliminary investigations revealed insight into the concept and factors responsible for quiet quitting. The study sought to explore an understanding of quiet quitting and the reasons for quiet quitting at a private tertiary institution in Durban. In this regard, the following were derived:

RECOMMENDATIONS

The above recommendations can help managers prevent and mitigate quiet quitting when it occurs in an organisation. Although quiet quitting is not a new phenomenon, organisations cannot ignore it because employee performance plays an important role in organisational performance. Therefore, being cognisant of the performance of employees helps in understanding their behaviours or any challenges being faced.

Valuing Employees

The management of the tertiary institution under study should place value on their employees. Findings from a study by Dorkenoo, Nyarko, Semordey and Agbemava (2015) affirmed that employee values are recommended because they identify the values that employees deem important in their daily lives and help them improve their behaviours in every situation they encounter. Because values often have an impact on attitudes and behaviour, they can be a personal characteristic of employees' behaviour in the workplace. The results help determine whether employees are satisfied with their jobs and the workplace; This can lead to higher turnover, higher employee satisfaction, and a strong and unified team.

Increase employee engagement

It is recommended that the human resource management department of the private tertiary institution under study should discourage employees from disconnecting in the workplace this is because the concept is related to employees' feelings of alienation. Employee disconnect is related to basic relationships and people's need to connect with others. Sull, Sull, & Bersin, (2020) state that employees with a good sense of collaboration are six times more engaged than those without.

Professional development (PD) opportunities

Premised on the ongoing recommendations, it is suggested that organisations improve with the development of the economy and society, which also leads to changes in the required skills. Therefore, it is recommended that establishing a clear career development structure provides employees with security and stability thus preventing quiet quitting. Professional development opportunities refer to formal coherent plans that meet the professional needs of the staff and personnel requirements of enterprises (Ayodele *et al.*, 2020). This complex process affects people's lives.

Loss of balance between work and leisure

As people get older, their values, responsibilities, and overall lives change. Factors affecting work-life balance may vary by age, as different life stages take on more importance and responsibility. Therefore the human resource management department of the private tertiary institution should try and understand how different factors affect work-life balance for different age groups. Factors affecting work-life balance may vary by age, as different life stages take on more importance and responsibility. Understanding how different behaviours affect work-life balance for different age groups is important for organisations to adjust their strategies and provide good support (Richert-Kaźmierska, and Stankiewicz, 2016).

Economic uncertainty during COVID-19

According to Spiegel (2022), a key priority for the company is to actively engage with its employees to address and prevent quiet quitting. The post-COVID-19 pandemic is allowing employees to gradually transition back to the physical workplace following an extended period of remote work. However, it is also important to acknowledge that many employees may be facing personal and family challenges during this time. Therefore, it is recommended that managers of private tertiary institutions should thoroughly assess the potential psychological, economic, and managerial obstacles that could give rise to a phenomenon known as "quiet quitting" among employees who resume their normal work settings after the COVID-19 pandemic (Daugherty, 2022).

Introduce burnout management programs

Since burnout is one of the main drivers of quiet quitting, it is recommended that organisations create programs and mobilise employees dedicated to burnout prevention. To this end, practical evidence shows how human resources should demonstrate how to manage stress, enable employees to work effectively, provide social support, involve employees in decision-making processes and guide performance management (Gabriel and Aguinis, 2022).

Toxic workplace culture

Without a comprehensive understanding of the factors that impact employee behaviours, senior leaders within an organisation may struggle to establish a consistent organisational culture that aligns with individual actions, business

objectives, and expectations (McCann and McCann, 2022). In line with the preceding assertion, it is recommended that top management creates a culture and establishes systems that reinforce values, and models those values into a healthy organisational workplace culture.

Limitations and future areas for study

The study was qualitative, and respondents were chosen because of their experience in handling employee behaviour associated with quiet quitting. In terms of limitation, the study was restricted to the human resource management department of the specific tertiary educational institution studied. Therefore, generalisation is limited. However, it recommended that future studies on how to detect quiet quitting and the psychological aspect of it should be done. Furthermore, studies that adopt quantitative or mixed methods will prove valuable in providing an empirical and in-depth understanding of quiet quitting.

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An appraisal of the amendments of Section 3A (4) of Marine Pollution (Prevention of Pollution from Ships) Act 2 of 1986: Putting an end to a roller coaster

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ABSTRACT

This paper posits that a roller coaster of amendments to Section 3A (4) of Marine Pollution (Prevention of Pollution from Ships) Act 2 of 1986 (hereinafter referred to as the MPA) needs to be stopped. This can be done by adopting progressive measures to deter the contravention of the MPA. The MPA in its quest to protect the marine environment from pollution, fails to keep up with the ever-changing world that also has constantly changing circumstances. These changes directly affect the marine environment and accelerate marine pollution. The changes include, but are not limited to, human population growth and the ocean economy. This calls for a need to strengthen the enforcement section of the legislation that regulates marine pollution. In justifying this need, the paper exposes current difficulties and proposes factors that can be adopted to ensure proper enforcement of the MPA. The paper also highlights the theories of punishment that can assist the courts to impose fair and just punishment when sentencing offenders who contravene the Act. Lastly, the paper provides a proposed Amendment Bill as part of the recommendations.

Keywords: Marine Pollution Act, combined theory of punishment, maximum fine, maximum period for imprisonment, sentencing

INTRODUCTION

The Anthropocene era has placed the ocean in a vulnerable position regarding pollution (Rockström *et al*, 2014). Thus, marine pollution has become a global issue. This is informed by the rapid growth of marine pollution that is taking place around the

world (Landrigan *et al*, 2020). The ocean plays an important role in human life including, but not limited to, food provisions, carbon storage, cultural benefits, and recreational opportunities (Kathryn *et al*, 2022). Hence, many countries around the world took a stance against marine pollution by enacting laws that prevent and control this pollution (Löhr *et al*, 2017). In this case, South Africa was not an exception. This is underscored by the existence of the legal framework that regulates marine pollution in South Africa (Odeku, 2017). Amongst these legal frameworks is the MPA (Marine Pollution Act, 1986). The MPA was promulgated to prevent and control pollution of the marine environment from oil and other harmful substances discharged from ships.

Akella and Cannon (2013) posit that the strength of every legislation lies in the power to deter contravention. The MPA is not immune to this fact. The MPA gained a reputation for going through proposed amendments. However, the amendments that relate to enforcement merely increase the monetary value of fines (Marine Pollution Amendment Bill, 2019). Sometimes the amendments increase both monetary value and the period for imprisonment. This is despite the changing circumstances of the world that have a direct impact on this Act such as, but not limited to, human population growth and the ocean economy. The impact of human population growth on the MPA is that the ocean no longer deals with pollution from ships as the only stressor. Human beings exacerbate the pressure through deliberate dumping and run-off of drains (Yamada, 2017). On the part of the ocean economy, different states interact through the ocean for the purpose of trade and industrialisation (Rayner, 2019). These become added stressors to the marine environment in so far as marine pollution is concerned. Considering this, it is important that there exist stringent and progressive measures in place to deter perpetrators from causing marine pollution.

The MPA should help in ensuring that the marine environment is protected from pollution caused by ships. Unfortunately, it receives half-hearted attention from the legislator in so far as enforcement is concerned. A prime example can best be found in Section 4 of the Marine Pollution (Prevention of Pollution from Ships) Amendment Bill, 2019 (hereinafter referred to as the 2019 Bill) and Section 4 of the Marine Pollution (Prevention of Pollution from Ships) Amendment Bill, 2021 (hereinafter referred to as the 2021 Bill). As a result of the unpredictable changing circumstances of the world, the proposed amendments in respect of these Bills may not serve their purpose in the future. The 2019 Bill proposed an increment of the maximum fine that is stipulated in

terms of section 3A (4) of the MPA. The 2021 Bill also proposes an increment of the maximum fine stipulated in the same section of the MPA. This underscores the need to put a stop to a roller coaster of amendments to the MPA in respect of this section pertaining to the prescribed maximum fine. It is against this backdrop that this paper demonstrates that the enforcement measures as stipulated in both Section 3A (4) of the MPA, and the proposed Bills are not effective enough to deter perpetrators from causing marine pollution. They limit the courts from imposing a fair and just sentence upon contravention. The paper proposes factors that can improve the enforcement of this Act. Lastly, the paper recommends how the Bill should amend section 3A (4) of the MPA and any section related thereto. A proposed Amendment Bill in respect of this section shall be drawn to demonstrate how it should read in order to put a stop to this roller coaster.

The MPA and the respective Bills

The MPA is a national legislation that emanates from the International Convention for the Prevention of Pollution from Ships (International Convention for the Prevention of Pollution from Ships). South Africa ratified and assented to this Convention in 1995 (Magadzi, 2014). Article 1 of this Convention places an obligation on every State Party to prevent marine pollution. Hence, South Africa as a State Party had to come up with a national legislation to prevent pollution of the marine environment from ships. Article 4(1) of the same Convention prohibits contravention and violation of this convention. This article gives the State Party the powers to deal with an act of marine pollution that occurred within its territory to use its laws when sanctioning violation. Having interpreted this Article, I submit that its passages detract from the expected effectiveness of an international instrument because its good purport may be lost in countries with lax laws and an ineffective justice system. Regarding lax laws and ineffective justice systems, South Africa is either flirting with this reality or is living this reality due to the MPA's compromised enforcement section. Its sanctions or penalties for violation are very lenient and limiting. They limit the courts to apply the law effectively and pass judgments that are commensurate to the damage caused because there is a prescribed fine set as a maximum value, the court cannot go beyond that value when imposing a sentence.

Another challenge in respect of Article 4(1) is the potential of opening a loophole in what this Convention seeks to achieve. This Convention in terms of Article 1 seeks to “prevent” the pollution of the marine environment by the discharge of harmful substances or effluents from ships. A loophole is created in that, other states may conduct thorough research on which states have lax laws in regulating marine pollution and those that have the most stringent regulations. The states with the most lenient legal framework are likely to be the most preferred routes in terms of transportation through ships. Thus, they will become more vulnerable or more susceptible to marine pollution incidents. This is because other states will be aware that should they cause violations in the process of transporting their goods while they are within the territory of those parties’ states, the sanctions that will be imposed against them will be bearable because of the leniency of those states’ regulatory legal framework.

Still on MARPOL, the Convention provides that where a violation has occurred, the aggrieved state has two options, which are stipulated in terms of Article 4(2) paragraph (a) and (b) respectively. The Convention allows for the appropriate sanction or punishment to be determined by the State Parties either: (a) according to procedures applicable in their laws or (b) provide the relevant information to the State of the ship in question “such information and evidence as may be in its possession that a violation has occurred”. Being cautious of repetition, the author will focus on Article 4(2) (b). This is because paragraph (a) falls within the explanation given above pertaining to Article 4(1). Paragraph (b) is concerning because the state can decide not to do anything with the offender. This relaxation towards offenders does not reflect the determination to deter people from engaging in marine pollution activities.

Domestically, South Africa as a State Party to this Convention, took heed of Article 1(1). The Preamble of the Marine Pollution (Prevention from Ships) Act outlined how its national legislation, in this case, the MPA, will prevent pollution of the marine environment. Worth remembering is that the focus of this contribution is on Section 3A (4) of the MPA. This section provides that “Any person convicted of an offence under subsection (1) shall be liable to a fine not exceeding R500 000.00, or to imprisonment for a period not exceeding five years or to such fine as well as such imprisonment”. The presence of a fixed maximum fine that can be paid by the perpetrator is concerning. The way this section is drafted shows that no cognisance was taken on

issues of currency and currency conversions (Rajković, 2020). The strength of countries' currency differs, punishing the perpetrator by way of a fine using the aggrieved party's currency may not be a sufficient measure used to prevent pollution of the marine environment. This is because, in terms of the perpetrator's state, R500 000.00 may not be sufficient to deter the perpetrators from causing pollution in the future because the perpetrator holds a strong currency than that of the aggrieved party. Also, it will be unreasonable to write off the possibility that perpetrators may consider making this fixed amount part of their contingency plan. Amid these difficulties, the legislator in 2019 provided a glimmer of hope when it proposed an amendment to this section in terms of the 2019 Bill. However, this Bill did not alleviate these difficulties because it also comprises a fixed value. The Bill read as follows:

Section 3A of the principal Act is hereby amended by the substitution for subsection (4) of the following subsection: "(4) Any person convicted of an offence under subsection (1) shall be liable to a fine not exceeding [**R500 000**] **R3.2 million**, or to imprisonment for a period not exceeding five years or to such fine as well as such imprisonment.

In this Bill, the legislator commits the same mistake as in the main Act, no cognisance is taken pertaining to the issue of currency and currency conversions. The legislator increases the value of the fine. In terms of the 2021 Bill, the legislator also proposes an increment in respect of the maximum fine to the tune of R10 million. The legislator still commits the same mistake of prescribing a maximum fine. This makes it apparent that the legislator is more concerned about the imposition of a fine even though such a fine has limitations. Thus, this paper argues that it will not be far-fetched to anticipate another proposed Bill in respect of the increment of the prescribed maximum fine. This is because the world is ever-changing, and the legislator is striving to keep up with this change. This augments the need to come up with measures that will put an end to this roller coaster of proposed amendments to the enforcement section in respect of the prescribed maximum fine.

The paper further argues that prescribing a maximum fine is not ideal when dealing with environmental cases such as marine pollution. This is because the MPA uses criminal law to sanction violations. Criminal law is associated with huge costs for prosecution, and it is reactive as opposed to proactive (Murombo, 2019). Moreover, criminal law has a reputation for low risk of crime detection and scarce conviction rates

(Luttenberger, 2017). It also has a reputation for poor investigation skills on the part of investigative officers and the lack of expertise among the prosecutors and the presiding officers in respect of environmental crimes (Centre for Environmental Rights in South Africa, 2015). This lack of expertise together with the paucity of environmental crimes prosecution experts minimises the chances of obtaining a successful prosecution (Murombo, 2019). This is because under criminal law for offenders to be penalised a successful prosecution needs to be attained. To attain a successful prosecution the state needs to prove its case beyond any reasonable doubt, and this makes it more difficult for a successful prosecution to be achieved (Centre for Environmental Rights in South Africa, 2015). Against all these difficulties relating to the nature of criminal law when dealing with environmental crimes, it is more concerning that if a criminal court conducts a successful prosecution, there is a prescribed maximum fine that limits the courts from imposing a sentence that is commensurate to the damage caused by the offender. Given the contribution of marine resources to human life, the economy, and the ecosystem, this limitation does not make any meaningful contribution in the quest of effectively deterring people from engaging in conduct that can cause marine pollution. This is because other marine pollution conduct has the effect of causing irreparable harm. Against this backdrop, it is imperative to ensure that when the courts manage to conduct a successful prosecution, they must be able to impose a sentence that is commensurate to the damage caused. The prescription of a maximum fine does not afford the courts such a privilege. Therefore, this prescription needs to be done away with.

Towards a fair and just sentencing

The enforcement section of the MPA together with the proposed amendments in respect of the Bill limit the courts to freely exercise their powers when imposing a sentence against offenders upon environmental violation. This limitation relates to a maximum value as prescribed by the Act and the proposed Bills in respect of the imposition of a fine upon contravention. This is not a new challenge; the courts have been dealing with this issue for quite a long. This is demonstrated in the writings of Kidd who submitted as follows:

In 1989, a Sappi-owned paper mill in what is now Mpumalanga province at Ngodwana emitted a large quantity of toxic pollutants, which polluted the Elands and Crocodile rivers,

important watercourses in the area, causing significant environmental damage and the death of numerous fish. In a criminal prosecution in the Nelspruit Magistrates' Court, there was a guilty plea, which was taken into account as a mitigating circumstance, as was the fact that the company immediately took remedial steps upon the occurrence of the spill, which was held not to be deliberate. The sentence was a fine of R6 000.' For a company the size of Sappi, the fine was, therefore, clearly just a cost of doing business, since it was a drop in the ocean compared with the scale of the company's financial worth. Even the maximum fine of R50 000 under the Water Act (the prevailing legislation at the time) would hardly have made a dent in the company's profits. (Kidd, 2014)

The excerpt above exposes how the prescription of a maximum value in terms of environmental violations lacks deterrent value due to the types of stakeholders involved in dealings that have the potential to cause environmental harm. Most of the stakeholders generate higher profits in their dealings to the extent that the maximum prescribed value is just a cost of doing business. Therefore, they cannot be deterred by the value of the maximum fine from causing environmental harm in the future. To this end, the paper proposes ideas that can aid the proper enforcement and promote the imposition of fair and just sentences by the courts. These include (a) doing away with fines that set out a maximum value (b) imposing a fine using the currency of the offender and not that of the aggrieved state. In respect of (a), the author provides factors that need to be considered when imposing a fine *viz* (i) the circumstances of the offender, (ii) the type of damage caused by the offender, and (iii) the attitude or the disposition of the offender at the time of the contravention. These ideas and factors are discussed hereunder as follows:

a) *Do away with fines that set out a maximum value.*

It is often said that the power of the State to create punishments is limited by the constitutional principle of proportionality. The principle that 'the punishment must fit the crime' is well established in South Africa, the Constitution itself does not refer to this principle explicitly. Nevertheless, proportionality in sentencing is clearly required by the Constitution... (Dirk Van Zyl, 2018)

The above excerpt captures the paper's argument that section 3A (4) of the MPA, section 4 of the proposed 2019 Bill, and the 2021 Bill sometimes limit the courts to provide a sentence that is proportional to the damage caused, thus, promoting the imposition of a sentence that is fair and just. The paper submits that a maximum fine as stipulated in terms of these sections needs to be done away with. This will allow

the courts to impose penalties that are commensurate with the damage caused by the perpetrators. This is supported by Section 12(1)(e) of the Constitution of the Republic of South Africa, 1996 which implores the sentencing court to “impose punishment that is proportionate to the seriousness of the offence”. Furthermore, scholars such as Von Hirsch (2003) argued the importance of proportionality by stating that the severity of punishment must be proportionate to the crime committed by the offender. All this underscores the need to do away with the maximum value in the Act and the Bill because the way they are drafted undermines the importance of proportionality, deterrence, and commensuration in sentencing.

At the time of the commencement of the MPA marine environment was not yet under immense pressure from marine pollution because the human population growth was still manageable, and the ocean economy was not yet in full swing. Thus, the imposition of a maximum value may have been a deterrent in nature at that time. Unlike in the past, the marine environment is under severe pressure (Ojemaye, 2021). Thus, there is a need to ensure that perpetrators are deterred from causing marine pollution in the future and that punishment is commensurate with the damage caused. A fixed criminal fine cannot achieve this because the ocean generates a lot of money for both natural and juristic persons around the world to the extent that the term “ocean finance” was established (Sumaila *et al*, 2021). Therefore, it is not easy to determine a fine that is a deterrent in nature due to currency conversions, fluctuations, and strength (Rajković, 2020).

It cannot be farfetched that in 1986, R500 000.00 had more value than it currently has. This amount has been set as a maximum fine for the past 2 decades without being revised or amended until the years 2019 and 2021 when Bills to amend it were proposed. Both the 2019 Bill and 2021 Bill proposed an increment to the amount that is set as a maximum fine. This is not helping the situation, it is reiterated here that there are rich people around the world who interact with the ocean and there are companies that make huge profits from ocean activities. To back up this point, reference is made to research that was done on companies that make their profit from the ocean. These companies are dubbed “the Ocean 100”. The research provided the following findings:

The top 100 companies (the “Ocean 100”) generated a total of USD 1.1 trillion in revenues in 2018, this representing 60% of the total revenues of USD 1.9 trillion generated by these ocean industries. The biggest industry in the Ocean 100 was offshore oil and gas, whose TNCs accounted for approximately 65% of the total revenues, followed by shipping (12%), shipbuilding and repair (8%), maritime equipment and construction (5%), seafood production (4%), cruise tourism (3%), and port activities (2%). Only one TNC in the offshore wind industry was big enough to be included in the Ocean 100 list, generating <1% of total revenues of this group. The biggest company in the ocean economy by annual revenues was the oil and gas company Saudi Aramco, and 9 of the 10 largest companies in the ocean economy were in the offshore oil and gas industry. Sixty of the 100 TNCs are publicly listed on stock exchanges (though several are majority state-owned), and these companies generated 63% of the 2018 revenues of the Ocean 100 (Virdin *et al*, 2021).

The figures reflected above should serve as an eye-opener to the legislator. This should bring to light the peril of prescribing a maximum fine. It limits the courts from imposing penalties they deem fair and just given the prevailing circumstance. For example, if the perpetrator causes damage that warrants a fine exceeding the fixed amount, the court will not be able to impose such a fine due to the existing prescribed maximum fine. Therefore, it becomes immaterial whether the court deems it fit that a fine exceeding the prescribed maximum fine will be fair and just under the circumstances. This paper proceeds to demonstrate that other violations may warrant a penalty that exceeds the maximum fine as stipulated in the MPA and the Bills respectively. Fourie, a former Director of Enforcement, Environmental Quality & Protection Branch, Department of Environmental Affairs and Tourism in South Africa, conducted research indicating incidents, where penalties that exceed the maximum fine as prescribed by the MPA and the Bills, were imposed by courts in other countries. These incidents appear as follows:

In December 2005, the United States Environmental Protection Agency (EPA) announced the largest penalty ever imposed for an environmental violation, multinational company DuPont was fined R92.25 million, with an additional R56.25 million to be paid towards environmental research and education projects. DuPont agreed with the EPA to pay these amounts to settle eight violations of toxic substances and hazardous waste legislation, primarily relating to multiple failures to report information to the EPA about a particular synthetic chemical’s substantial risk of injury to human health and the environment. In December 2008, the EPA and the US Justice Department (DoJ) reached an agreement with multinational oil company Exxon Mobil to pay a fine of more than R54 million. Exxon Mobil’s misdeed was to violate an agreement with the EPA reached three years before to

decrease sulphur emissions at four of its refineries (and as part of which Exxon had already paid a R69.3 million fine at the time). In response, Exxon not only paid the R54 million fine, but also came into compliance with EPA standards for sulphur emissions. In February 2009, the EPA and DoJ reached a settlement with BP Products North America Inc to pay a R108 million fine and spend R54 million on a project to reduce air pollution in Texas City... (Fourie, 2009)

The penalties and figures indicated above not only demonstrate the ability of the courts to impose heavy fines, but also confirm the companies' wherewithal to comply with the penalties imposed. These incidents should encourage the need to do away with a maximum fine as stipulated in the Act and the Bills because it is restrictive in nature. Having indicated how the courts in other countries enjoy the freedom to impose fines without restrictions, South Africa also enjoys this freedom on other legislation that did not prescribe the maximum fine. The National Environmental Management Act 107 of 1998 (hereinafter referred to as NEMA) gives the courts room to impose a fine that is commensurate to the damage or harm caused without restrictions. The court imposed a fine of R4 million against a company that conducted mining activities in a wetland and diverted water resources (Diemont, 2012). The company also failed to adequately prevent pollution. On top of this, the company was ordered to pay R1 million each to the affected institutions and rehabilitate the wetland, the rehabilitation costs are estimated to be between R50 Million and R100 Million (Diemont, 2012). The two incidents relate to legislation that did not make a provision for a maximum fine. The paper now considers a marine pollution incident, where there was a maximum fine.

In South Africa, a recent incident of penalty imposed by the court on marine pollution perpetrator amounted to a mere Three Hundred Thousand Rand (R300 000.00). In 2018, the captain of a Ukrainian registered fishing vessel was sentenced to pay a fine to the tune of R300 000.00 or serve 24 months imprisonment. Half of the 24 months imprisonment was suspended for 5 years on condition that the accused is not convicted of contravening certain other environmental law provisions. The accused was found guilty of discharging sewage into South African coastal waters (Nqayi, 2018).

From this incident, it is evident that the prescription of a maximum fine limits the courts' freedom to impose fines they deem fair and just. Therefore, it is befitting to do away with it to provide the courts with the freedom to impose fines that are commensurate to the damage caused and have a deterrent value. This will obviate the propensity of marine environmental damage caused by both natural persons and juristic persons

with lucrative incomes who find a maximum fine imposed by legislation to be non-deterrent. Of importance, when the courts are granted the discretion to apply fines based on the merits of each case and without the limitation of a prescribed maximum value, fairness, commensuration, and deterrence must be used as the standard practice. The courts can be able to achieve this standard practice by taking the undermentioned factors into consideration when imposing a sentence.

i) The circumstances of the offender.

A one size fits all approach is not fit for purpose under this circumstance. The court must conduct thorough research in respect of the person whom it intends to punish. Marine space provides different activities as indicated in 1 above. Therefore, it attracts the attention of both natural persons and juristic persons for the purpose of exploiting marine resources (Ncwadi, 2022). These persons are involved in different dealings that pits two competing interests. On the one hand, their dealings can cause severe or mild damage to the marine environment (Landrigan *et al*, 2020). On the other hand, their dealings when properly executed can benefit society in many respects through ocean economy, employment, seafood, and pharmaceutical activities (Beaumont *et al*, 2019). It is against this backdrop that the courts should endeavour to understand the perpetrators when imposing a sentence or punishment. Furthermore, the courts must not divorce themselves from the dictates of the theories of punishment. The most common theories are retributive, utilitarian, and combined/combination theories of punishment. These theories of punishment seek to justify criminal punishment. The retributive theory seeks to ensure that the perpetrator pays the price that is commensurate with the crime committed (Muthaphuli, 2012). The utilitarian theory posits that the courts should adopt a humane and educational approach to punishing the perpetrators (Metz, 2019). It provides that sometimes it is not necessary to impose a punishment that is cruel and economically counter-productive. Lastly, the combination theory straddles both retributive and utilitarian theories by combining their strengths to form a single theory of punishment (Scheepers, 2017).

Under the circumstances, this paper resonates with the combination theory of punishment. This theory's position will enable the courts to impose a sentence that is commensurate with the damage caused by the offender against the offender directly. Furthermore, it enables the courts to impose a sentence that is deterrent in nature. As

already indicated, the ocean attracts both natural persons and juristic persons for the purpose of exploiting marine resources. It is imperative that the nature of the perpetrators' dealings be scrutinised to determine the likelihood of repetition of the same conduct. Once this is established, the courts will be in a better place to decide on a sentence/punishment. This is to ensure that the courts do not impose punishments that are economically counter-productive since marine activities contribute to the economy (Xasa, 2020).

ii) The type of damage caused by the offender

The type of damage caused by the offender is important because it will enable the courts to determine a punishment that warrants the damage caused. The author believes the combination theory is the best to adopt when dealing with marine pollution offenders. This is because the combination theory treats each case according to its own merits. To properly grasp the gist of this discussion, it is necessary not to lose sight of the context of this paper. The discussion pertains to marine pollution which is an environmental issue. Unlike most street crimes that often occur intentionally, most environmental contraventions occur unintentionally while in pursuit of socially and economically beneficial activities (Faure, 2000). Also, these contraventions are often stochastic (Faure, 2000). It is for these reasons this paper posits that the courts need to impose punishment against the perpetrators after having considered the type of damage caused and the circumstances surrounding the contravention. i.e., the attitude and the disposition of the offender are important when imposing punishment.

iii) The attitude or disposition of the offender at the time of the contravention

[t]he law understands that human beings have free will and thus are able to plan and anticipate the consequences of their conduct. The requirement of an element of fault ensures that criminal law does not inflict punishment upon persons for consequences or circumstances the individual neither planned, wished for, nor anticipated... (Burchel, 2013)

The above utterance underscores the need to check the attitude or disposition of the offender at the time of the contravention. Generally, a person is expected not to do wrongdoings (Snyman, 2002). However, wrongdoings have become part of our lives as human beings. Therefore, when coming to contraventions, the courts must check whether it was intentional or negligent (Kwanje, 2016). With regard to intention, the

courts must also check if the intention was *dolus directus*, *dolus indirectus*, or *dolus eventualis*. The determination of these factors will assist the courts in arriving at a fair and just punishment/sentence.

b) *Upon contravention of the Act, when a fine is imposed, use the currency of the perpetrators and not that of the aggrieved states*

In the event, there is no prescribed maximum value, and the courts decide to impose a fine on the perpetrator, the fine should be imposed using the currency of the perpetrator and not that of the aggrieved state. Using the aggrieved states' currency can be ineffective in deterring future contravention because of the currency conversions and strength (Ndou, 2021). The marine environment is used for different activities including the transportation of goods from different countries around the world (Ncwadi, 2022). These countries differ in currencies and their strength against one another also differs. If the offender's currency is stronger than that of the aggrieved party, the offender is likely not to be deterred from contravening the Act in the future. This is premised on the fact that the imposed fine against offenders will not cause severe damage to their coffers due to the conversion of currencies between and/or amongst the states. The pandemic (Covid 19) has harmed the economy in most parts of the world. This may take several years for other countries to recover from the harm caused by the pandemic, and it is expected that all these countries recover neither at the same time nor at the same pace. Therefore, insisting on the current approach will have an adverse effect on the aggrieved state, especially if the currency conversion of the perpetrator is much stronger than that of the aggrieved state.

CONCLUSION

This paper demonstrated that there is a roller coaster of amendments to Section 3A (4) of the MPA. This roller coaster of amendments is caused by prescribing a maximum fine. The 2019 Bill and the 2021 Bill have properly captured the need to amend section 3A (4) of the MPA, however, the approach they adopted will not bring this roller coaster of amendments to a stop. If anything, the adopted approach continues to limit the courts from imposing a fair and just sentence upon contravention. The MPA uses criminal law to punish offenders. This is despite the difficulty of obtaining a successful prosecution under criminal law owing to issues such as (a) the

burden of proof, (b) the lack of expertise for the prosecution of environmental crimes, and c) other complexities related thereto. The paper also showed that doing away with prescribed maximum fines will afford the courts the freedom to treat each case based on its merits by employing the combined theory of punishment which straddles both retributive and utilitarian theories of punishment. Furthermore, the paper showed that Section 3A (4) of the MPA together with the proposed amendments as stipulated in the Bill are not effective enough to deter offenders from causing marine pollution in the future. The amendments proposed by the Bill are subjected to the same criticism faced by the MPA. This underscores a need to draft a proposed amendment to the Act that will put an end to the roller coaster of amendments in respect of this section while deterring future contravention, protecting the marine environment, and preventing the acceleration of marine pollution. Therefore, the author wishes to submit the proposed amendments as part of the recommendations brought forward by this paper.

RECOMMENDATIONS

The paper recommends an amendment of section 3(2) (b) and section 3A (4) of the MPA respectively. These two sections relate to the imposition of a fine upon contravention of the Act.

Regarding section 3(2) (b) the paper recommends that the wording that speaks to the prescribed maximum fine be deleted. On the part of section 3A (4), the paper recommends that the prescribed maximum fine be deleted and the courts be given the discretion to impose a sentence using the perpetrator's currency after taking into consideration factors such as (a) the circumstances of the offender, (b) the type of damage caused by the offender, and (c) the attitude or disposition of the offender at the time of the contravention. Therefore, section 3 (2) (b) and Section 3A (4) of the MPA are recommended to be amended and read as follows:

[] Words in bold type and in square brackets, indicate omissions
from existing enactments.

_____ Words underlined with a solid line indicate insertions in existing
enactment.

Amendment of section 3 of Act 2 of 1986

1. Section 3 of the Marine Pollution Act, is hereby amended as follows:

Regulations- (2) Regulations made under subsection (1) may- (b) prescribe, for any contravention thereof or failure to comply therewith, penalties **[not exceeding the maximum penalties]** as prescribed by section 3A (4).

Amendment of section 3A (4) of Act 2 of 1986

2. Section 3A of Marine Pollution Act, is hereby amended as follows:

Offences and penalties- (4) any person convicted of an offence under subsection (1) shall be liable to a fine **[not exceeding R500 000]** as imposed by the court, using the offender's currency, after taking into account the following factors:

- (a) The circumstances of the offender;
- (b) The type of damage caused by the offender and
- (c) The attitude or disposition of the offender at the time of the contravention, or to imprisonment for a period not exceeding five years or to such fine as well as such imprisonment.

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E-retailing as innovative entrepreneurship and enhancing employment creation: A case study of PLANET54.COM

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ABSTRACT

This study examines the potential of e-retailing as an innovative tool for entrepreneurship and employment creation in South Africa. The country's high unemployment rate has been exacerbated by the downturn in the economy, the COVID-19 pandemic, and the civil unrest experienced in 2021. Due to e-retailing being a relatively novel concept in South Africa there is a paucity of research in the field, prompting an in-depth study. The study focused on the case study of Planet54.com, an e-retailing company with active e-retailers trading on its online shopping platform. The study assessed the viability and sustainability of e-retailing as an entrepreneurship tool and as a route to the employment market. The research adopted a mixed-method approach, combining quantitative data collection from active e-retailers and qualitative data from managers at Planet54.com. The findings indicate that e-retailing has the potential to reduce unemployment by creating entrepreneurial opportunities and supporting economic growth, thereby alleviating economic inequality and poverty. The study challenges the notion that small and medium enterprises are limited to spaza shops and street vending. It provides recommendations on the effectiveness of the e-retailing strategy employed by Planet54.com highlighting the importance of skills development, digital resources availability, and employment creation. E-retailing and women empowerment should be embedded into the entrepreneurial fabric of society as a source of employment and economic development. This research enriches the understanding of the potential of e-retailing

as an entrepreneurial and employment generation tool, contributing to the broader discourse on the impact of technology in the workplace and skillset requirements for youth in the digitised retail sector.

Keywords: unemployment, e-retailing, entrepreneurship, Planet54.com, re-skilling, up-skilling, innovation.

INTRODUCTION

Unemployment, poverty, inequality and social deprivation have long been South Africa's challenges. With the economy not growing prior to the COVID-19 pandemic and subsequently, the economic situation has deteriorated during and post the pandemic. This in turn aggravated the unemployment dilemma which continued to grow to unprecedented heights. The period also experienced exponential growth of technologies with digitalisation permeating at different levels in the retail sector, which saw the birth of e-retailing as an additive platform in sales and marketing within e-commerce, with many consumers turning to online shopping due to lockdown restrictions. Globally, e-retailing has become increasingly prevalent, with many businesses shifting the focus to online sales. According to a report by eMarketer, global e-commerce sales are projected to reach \$4.9 trillion by 2025 (Merhi, 2021). The report also highlighted the importance of mobile e-commerce, which is becoming the preferred method of online shopping for many consumers. E-retailing is an innovative entrepreneurial tool that enables businesses to reach a wider audience beyond physical locations and sell products to customers around the world. E-retailing also provides employment opportunities through various roles such as website development, digital marketing, logistics, and customer service (Mivehchi, 2019). In South Africa, e-commerce is still in its infancy stages but, has seen significant growth in recent years. According to a report by World Wide Worx, the e-commerce market in South Africa grew by 40% in 2020, with an estimated worth of R30.2 billion (Dakora and Rambe, 2022). The aim of the study was to determine whether e-retailing was an innovative entrepreneurship and employment creation tool. The study looked at the nexus between e-retailing, employment creation and entrepreneurship and how the digital economy could provide a route to the employment market and further contribute to alleviating South Africa's unemployment crisis. The key objectives were:

- to determine whether e-retailing was a viable route to the employment market;

- to assess whether e-retailing was a sustainable digital entrepreneurship opportunity; and
- to provide recommendations of the effectiveness of the e-retailing strategy to planet54.com which had launched the initiative in their business model.

Planet54.com is a subsidiary online trading company within The World Focus Group (TWFG). Further, TWFG is an independent manufacturing and wholesaling organisation that trades in footwear, handbags, apparel, and accessories to its retail customers. The organisation trades in high fashion in a trend-driven market sourcing items for its clients representing global trends. Consequently, the target market is a range of national corporate chain stores in an extremely competitive retail sub-sector of the industry. The company's manufacturing and wholesale divisions are driven by its mission to curate a variety of items for its customer base (TWFG website). Priding itself as an agile organisation TWFG delinked itself from its traditional place in the value chain by adopting a disintermediation model by being bold and going directly to its end-user retail market by embracing e-commerce parallel to its wholesale base. This saw the genesis of its online platform with the establishment of Planet54.com which trades directly with customers offering a national footprint. The online store offers its customer a complete click-and-deliver experience with shipment and order fulfilment managed by a national courier agency.

Customers trade using the Planet54.com platform and the company also has a range of e-retailers who conduct sales using the platform receiving payments and incentives for sales completed. All orders are managed by its Durban-based head office. Trainee e-retailers are trained in the organisation's standard operating procedures which include technical skills, ordering processes, payments, shipments, and online customer service. Each candidate also receives incentives per sale concluded if targets were achieved. Upon completion of the training, the new e-retailers are added on as part of the organisation's cohort of sales generating employees as fully fledged e-retailers.

LITERATURE REVIEW

The nexus between unemployment and the digital era

South Africa is grappling with a mounting unemployment crisis that has far-reaching implications for the economy and society. The country's unemployment rate in the first quarter of 2023 was recorded at 32,9 % and is among the highest in the world (Otu *et*

al., 2023). The Quarterly Labour Force Survey (QLFS) showed that this is an increase of 0,2 of a percentage point compared to the fourth quarter of 2022 (Bassier, Budlender and Goldman, 2022). Particularly, the youth are disproportionately affected, facing significant challenges in finding employment and often becoming economically inactive. This situation not only hampers future growth prospects but also highlights the persistent nature of unemployment, which cannot be self-correcting. Compounding the already dire economic conditions, events such as the COVID-19 pandemic, the July 2021 unrest, and devastating floods have further exacerbated the unemployment situation, leading to business closures and hindered recovery efforts. In the fourth quarter of 2021 alone, the South African economy lost over 270,000 jobs, underscoring the urgency to explore alternative avenues for employment generation. Amidst these challenges, the gig economy presents an opportunity for South African organisations to tap into new employment prospects and in-demand skills. The gig economy, characterised by temporary or freelance work arrangements, can offer flexibility and create entrepreneurial opportunities (Duggan *et al.*, 2022). To foster self-correction within the economy, it becomes crucial to explore potential avenues for employment creation and entrepreneurship.

Simultaneously, the rapid advancement of technology and digitalisation has revolutionised the business landscape and market trends. This shift has given rise to e-commerce and transformed the skillset requirements for entrepreneurs and employability. The remarkable success of online trading and the emergence of social media entrepreneurship in the e-commerce realm has opened new avenues for economic participation. Given the immense growth of internet technologies and the imperative to cultivate entrepreneurship in South Africa, it becomes essential to investigate the role of e-retailing to conceptualise entrepreneurship. To exacerbate the unemployment situation the exponential drift towards internet technology evolution triggered by the fourth industrial revolution is having a profound impact on current skillsets (Thulasy *et al.*). With this rapid change, comes disruption propelled by innovation, technological development, and digitisation. This presents a challenge of skillset mismatch between current skills and new skillset requirements (Kudlyak and Wolcott, 2018). The job market engaging in business and entrepreneurship must be in consonance with this seismic drift. As the business landscape is in a state of constant flux and progression it is integral that companies invest in employee skills'

development. Hence, those actively engaged in entrepreneurship are consistent with imminent changes or are at risk of becoming irrelevant (Bayraktar and Ataç, 2018).

Technological evolution creates greater complexity as new skills' demands are created. In order to address the gap, a diversity of skillsets is required, and employees are required to skill, re-skill and up-skill. Hiremath, Mohapatra and Paila (2021) state that corporate learning and development professionals are now focussing more on re-skilling and up-skilling the global workforce. Up-skilling is about improving one's current skillsets whilst re-skilling of employees entails learning a new skill by equipping them to assume new roles, responsibilities, and positions due to technology and innovation so as to mitigate against employees becoming irrelevant (Ellingrud, Gupta and Salguero, 2020). To add, Bohra, Dafale and Purohit (2019) posit that there is a shift away from specialisation and single skillsets as individuals will require adjacent skills to core tasks giving credence to terms like 'skills adjacency' and 'fungible skills' gaining traction. The current narrative on the impact of technology in the workplace is all about the need for skilling, re-skilling and up-skilling and there is a paucity of research on the specific skills required for unemployed youth to be competent in an increasingly digitised retail sector. This study provides a shift from only speaking about skill set requirements in broad terms to investigating specific skills regarding e-retailing and online shopping in the retail sector.

While scholarly attention in the fields of entrepreneurial management and marketing has increasingly focused on electronic selling, there remains a gap in knowledge regarding its potential as a root for the evolving market of entrepreneurship. This study addresses this gap by exploring the role of e-retailing and re-conceptualising entrepreneurship within the context of the Fourth Industrial Revolution (4IR). Furthermore, this research sheds light on the threat faced by South Africa's digital economy potential due to a shortage of tech skills, as highlighted by Bradon Meszaros, CEO of Digital Resilience (Nickols and Kay 2015). By delving into these areas, this study contributes to the understanding of e-retailing as a driver of entrepreneurship and explore how it can be harnessed to unleash the potential of the digital economy in South Africa.

Understanding the concept of e-retailing

E-retailing signifies a strategic approach that recognises the importance of e-commerce and digital innovations in driving business success. It emphasises the need to adapt, embrace, and leverage digital technologies to effectively navigate the online retailing landscape and capitalise on the opportunities presented by the digital era. According to Infante and Mardikaningsih (2022) the most important feature of the contemporary world is the rapid development of internet technologies as the most effective tool making it possible to do almost anything online. E-retailing, commonly referred to as online retailing, has been a sector that has seen fast growth in recent years. A review of the literature on e-retailing research highlights topics that warrant more study in the present and future.

Vazquez (2021) states that the growth of e-retailing has been significant over the years, with global e-commerce sales projected to reach \$4.9 trillion in 2021. This growth can be attributed to the increasing use of smartphones, the availability of high-speed internet, and the convenience of online shopping. E-retailing also provides customers with access to a wider range of products and services that may not be available in traditional brick-and-mortar stores. However, it presents certain challenges, such as a lack of physical interaction between the customer and the product and requires significant investment in technology infrastructure and marketing efforts to attract and retain customers.

Leveraging e-retailing for entrepreneurship

Could the 4th and 5th industrial revolutions bring about a panacea for SA unemployment? Leveraging e-retailing for entrepreneurship involves harnessing the power of online platforms and digital technologies to create and grow entrepreneurial ventures. It encompasses utilising e-retailing as a strategic tool to establish, expand, and sustain businesses in the digital marketplace.

Corbishley, Mason and Meintjes (2020) are of the view that retailers are not giving the right priority to technological innovations in South Africa. This paper views technological innovations using the lenses of disruptive innovation theory. The concept of disruptive innovation is closely intertwined with e-retailing, as it refers to the revolutionary changes brought about by new technologies and business models that disrupt existing industries and create new market opportunities. E-retailing can be

considered a disruptive innovation in the retail sector. It has fundamentally transformed the way businesses operate and how customers engage in shopping experiences. Traditional brick-and-mortar retailers have been challenged to adapt to the rise of e-retailers, online marketplaces, and direct to consumer models. The act of founding a firm with the intention of making a profit is known as entrepreneurship. The power of entrepreneurship addresses social change in our modern understanding of the discipline (Littlewood and Holt, 2018). Considering that several scholars have discussed mainly the issue of social entrepreneurship in South Africa, the transformation and prosperity of South Africa depend heavily on business, hence entrepreneurship is a need. Not only do profit companies fall under this category, but also social enterprises that integrate social and economic goals and have the latter "baked in" to business models, particularly through Corporate Social Responsibility (CSR) initiatives (Urban and Chantson, 2019). Due to this, the development of views and attitudes about entrepreneurship is likely to be significantly influenced by awareness of and exposure to various facets. Currently, entrepreneurship strategies are ever evolving due to 4IR. The 4IR is shaping the new now and the new way of doing things, hence e-retailing.

METHODOLOGY

This research employed a combined approach utilising both quantitative and qualitative research methodologies. The quantitative research design provided statistical analysis to gather numerical data and generate broad comparisons, while the qualitative research method adopted in-depth interviews in a focus group set up to gather open-ended, conversational data. The study was conducted at Planet54.com an online retail organisation in South Africa. The target population of the study consisted of active e-retailers and the management team at Planet54.com. A convenience sampling technique was employed to select both quantitative and qualitative samples, where units were chosen based on their accessibility to the researcher. The quantitative data sample size included all 103 active e-retailers on the Planet54.com platform, while the qualitative component involved interviews with the 5 members of Planet54.com's management. For the quantitative component, a questionnaire was developed based on relevant literature and pre-tested before being administered online. The Likert scale questionnaire included closed-ended questions which were used to measure the latent constructs. The qualitative component utilised

an interview guide to facilitate the interview process with the management team. The root cause analysis technique was utilised to explore patterns in data to find answers and themes. The thematic analysis looked for common themes emerging from the collected data.

Ethical considerations were made to ensure participants' consent, confidentiality, and protection from harm. The study received ethical clearance from the Durban University of Technology. Data collection involved gathering information on demographics, employment status, challenges in the employment market, entrepreneurship, e-retailing strategies, and challenges in the e-retailing sector. The collected data were analysed according to the study's objectives. This mixed-method research design with its specific sampling methods, research instruments, pilot study, and ethical considerations provided a comprehensive approach to investigating the role of e-retailing for entrepreneurship at Planet54.com.

RELIABILITY

The two most important aspects of precision are reliability and validity. Reliability is computed by taking several measurements on the same subjects. A reliability coefficient of 0.70 or higher is considered as “acceptable” for a newly developed construct. Table 1 indicates the reliability statistics for the different sections of the instrument.

Table 1: Reliability

	Section	Number of Items	Cronbach's Alpha
B	Employment	7	0.743
C	Entrepreneurship	7	0.760
D	E-retailing	7	0.866
E	Training Received - E-retailing	10	0.947
F	Challenges in E-retailing	12	0.897
All statements		43	0.939

The reliability scores for all sections exceed the recommended Cronbach's alpha value. This indicates a degree of acceptable, consistent scoring for these sections of the research.

RESULTS AND ANALYSIS

Statistical Analysis

The quantitative data collected was analysed with SPSS version 28.0 (IBM Corp, Armonk, NY, USA). Categorical data is presented as frequencies and percentages and compared utilising chi-square tests (goodness-of-fit for single variables, and test-of-independence for bivariate data). Descriptive statistics (mean and standard deviation) are used to describe the quantitative data that were collected. A p-value of < 0.05 was regarded as statistically significant. All p-values are chi-square values unless otherwise specified.

The sample was predominantly female which is not surprising as 47% of the economically active population in South Africa are women and e-retailing offers the latitude for more women to become e-retailers given the option to work from home (StatsSA, 2022). Furthermore, the data also depicts that approximately three-quarter of the sample was between the ages of 21 and 40 years. Less than 5% of the respondents had not completed matric with two-thirds of the respondents having a post school qualification. This reflects that the sample was well educated. More than 80% of the respondents had been employed for more than a year, indicating a fair level of expertise in doing their job. There were more African and White respondents, with similar and smaller numbers of Indians and Coloureds. A little less than 90% of the respondents indicated that their main language is English.

Unemployment

The findings strongly support the notion that e-retailing presents a sustainable avenue to address the evolving employment markets in South Africa. Therefore, it is crucial to prioritise and view e-retailing as an integral part of a sustainable future. The study aligns with Bhatt (2020), who suggests that e-retailing offers opportunities for online business ownership, particularly for individuals lacking access to traditional forms of financing and resources (Bhat, Islam and Lone, 2021)

Table 2: Challenges to finding employment

(n = 103)	Frequency	Percent	p-value
No qualifications	7	6.8	< 0.001
Retrenchments due to COVID 19	8	7.8	
Retrenchments due to July unrest	3	2.9	
Lack of appropriate skills	39	37.9	
Lack of opportunities	46	44.7	

The results cited a common reason for considering entrepreneurship was the lack of opportunities, with 46 respondents (44.7%) selecting this option. The second most common reason was a lack of appropriate skills, with 39 respondents (37.9%) choosing this option. A total of 8 respondents (7.8%) indicated that they had been retrenched due to the COVID-19 pandemic, and 3 respondents (2.9%) indicated that they had been retrenched due to the KZN July 2021 unrest. The least common reason selected was having no qualifications, with only 7 respondents (6.8%) choosing this option. The p-value for "No qualifications" is < 0.001, indicating that this reason was significantly less common than the other four reasons listed in the table. The respondents indicated lack of appropriate skills and lack of opportunities were the main challenges to finding employment.

Lack of appropriate skills

The majority of the respondents indicated that a lack of appropriate skills was a significant challenge to finding employment. Mohammad and Vargas (2022) state that a lack of appropriate skills is a common challenge for many people when it comes to finding employment. Employers are often looking for candidates who have the necessary skills and qualifications to perform specific job tasks effectively. If one does not have the required skills it can be difficult to find a job (Jia *et al.*, 2021).

Lack of opportunities

Lack of opportunities is one of the main challenges towards finding employment highlighted by the respondents with 44.7%. Papageorge *et al.* (2021) support that a sluggish economy is one typical factor in limiting chances. Companies may not have the resources to acquire new personnel during economic downturns or may be

reducing employment (Ngoc Su *et al.*, 2021). As a result, finding available opportunities may be challenging for job seekers, particularly in sectors that were being hit hard by the pandemic, natural disasters and civil unrest.

E-retailing alleviating unemployment

This section elaborates on whether e-retailing is a viable route to the employment market. This novel concept of online trading has the potential to create employment opportunities for people who are looking for employment. As e-retailing has grown, more and more businesses are attempting to build an online presence, which has increased the need for specialists in the field. The table below summarises the scoring patterns.

Table 3: E-retailing alleviating unemployment		Count	Mean	Standard Deviation	Median	Percentile 25	Percentile 75	Maximum	Minimum	Binomial Tests
There are enough employment opportunities	B1	103	4.39	1.69	5.00	3.00	6.00	6.00	1.00	< 0.001
E-retailing can reduce unemployment	B2	103	5.30	0.78	5.00	5.00	6.00	6.00	2.00	< 0.001
E-retailing is a sustainable and viable route to employment	B3	103	5.23	0.77	5.00	5.00	6.00	6.00	2.00	< 0.001
E-retailing is a financially rewarding employment option	B4	103	5.17	0.85	5.00	5.00	6.00	6.00	1.00	< 0.001
E-retailing can only work well as side hustle (part time option)	B5	103	5.11	1.15	5.00	5.00	6.00	6.00	1.00	< 0.001
E-retailing can be a permanent employment solution	B6	103	5.03	1.09	5.00	5.00	6.00	6.00	1.00	< 0.001
Training and skills development Initiatives enhance skills in E-retailing contributing to employment opportunities	B7	103	5.26	0.75	5.00	5.00	6.00	6.00	1.00	< 0.001

Table 3 highlights that all statements have a mean score above 5 except B1, which suggests that respondents generally agreed with the statements. The standard deviations are relatively small, which indicates that the scores are clustered around the mean. The median scores are all 5, which implies that most respondents agreed with the statements. The percentile 25 scores are also relatively high, which proposes that a large proportion of respondents agreed with the statements. All statements also have a p-value of <0.001, which indicates that the proportion of respondents who agreed with the statements is significantly different from chance. The analysis revealed that e-retailing has the potential to create job opportunities and support economic growth in South Africa. It provides avenues for entrepreneurship and small business ownership, which contribute to reducing unemployment, economic inequality, and poverty. These findings highlight the importance of e-retailing as an innovative tool for addressing the unemployment crisis in the country. Therefore, it can

be concluded that the majority of respondents believe that e-retailing can contribute to employment opportunities and is a viable and sustainable employment option, particularly with the help of training and skills development initiatives. Stoian Bobalca *et al.* (2021) support that some of the positions that are commonly available in the e-retailing industry include customer service representatives, warehouse and logistics managers, online marketing specialists, web developers, and data analysts. On the other hand, e-retailers have become sophisticated sales assistants and supply chain managers in a ubiquitous environment offering a globular sales closure perspective. However, Lim and Winkenbach (2019: 132) argue that the above mentioned e-retailing roles require a variety of skills and expertise, and individuals with experience in retail, marketing, technology, and logistics are often highly sought after. This brings up the issue of up-skilling and re-skilling.

It is also important to note that e-retailing can offer a flexible working environment, with many companies allowing employees to work remotely or on a flexible schedule (Quinones *et al.*, 2023: 546). This can be particularly beneficial for people who are looking for work-life balance or who have caregiving responsibilities.

Entrepreneurship

An additional goal of this research was to assess whether e-retailing is a sustainable digital entrepreneurship opportunity. For individuals committed to minimising the environmental impact and utilising the advantages of online retailing, e-retailing might be a worthwhile option for sustainable digital entrepreneurship. Table 3 above indicates the overall scores for entrepreneurship dimensions.

According to Table 4 below, all the questions related to e-retailing as an entrepreneurship opportunity have a mean score of 5 or above, indicating that the respondents generally agree with these statements. Question C1, which is a general statement about entrepreneurship opportunities, has a lower mean score (4.90) and a higher standard deviation (1.25) compared to the other questions related to e-retailing. This suggests that there may be more variability in the respondents' views on entrepreneurship opportunities in general. The median and percentile 25 values for all questions related to e-retailing are 5, indicating that at least 50% of the respondents agree or strongly agree with these statements. All the questions related to e-retailing

have a binomial test p-value of less than 0.001, indicating that the proportion of respondents who agree with these statements is significantly higher than the proportion who disagree.

Table 4: E-retailing as an entrepreneurship vehicle

		Count	Mean	Standard Deviation	Median	Percentile 25	Percentile 75	Maximum	Minimum	Binomial Tests
There are enough entrepreneurship opportunities	C1	103	4,90	1,25	5,00	5,00	6,00	6,00	1,00	< 0.001
E-retailing is an entrepreneurship opportunity for the unemployed	C2	103	5,19	0,70	5,00	5,00	6,00	6,00	2,00	< 0.001
E-retailing is a sustainable and viable route to entrepreneurship	C3	103	5,24	0,79	5,00	5,00	6,00	6,00	3,00	< 0.001
E-retailing is a financially rewarding entrepreneurship option	C4	103	5,10	0,85	5,00	5,00	6,00	6,00	1,00	< 0.001
Training and skills development Initiatives enhance skills in entrepreneurship in E-retailing	C5	103	5,25	0,61	5,00	5,00	6,00	6,00	3,00	< 0.001
E-retailing offers an opportunity to be your own boss	C6	103	5,44	0,61	5,00	5,00	6,00	6,00	3,00	< 0.001
I have enough knowledge about setting up an online business	C7	103	5,27	0,76	5,00	5,00	6,00	6,00	2,00	< 0.001

The highest mean score is for question C6, which suggests that the respondents strongly believe that e-retailing offers an opportunity to be your own boss. The lowest mean score is for question C4, which asks about the financial rewards of e-retailing as an entrepreneurship option. Although the mean score is still above 5, it suggests the e-retailing financial rewards need to be sustainable and well established.

Overall, these findings strongly support that e-retailing is a sustainable avenue to curb the drift and shift of employment markets in South Africa. This points out a need to focus and treat e-retailing as part of a sustainable future. Bhatt (2020) supports that opportunities for online business ownership can be found in e-retailing. E-retailing is a

very alluring choice for people who may not have access to conventional kinds of capital or resources to start their own businesses. In addition, e-retailing can be more environmentally friendly than traditional retailing in a number of ways (Sangvikar *et al.*, 2021). As an illustration, it can minimise the demand for physical stores, energy use, shipping costs, and challenges around inventory management.

E-retailing and the need for up-skilling and re-skilling

A further mandate of the research was to provide recommendations on the impact of training and development initiatives contributing to sustainability of Plant54.com's e-retailing strategy. Therefore, the Likert scale was used to assess the significance of re-skilling and up-skilling of employees to create sustainability of employment creation and entrepreneurship in a digital economy. Table 5 below further expands and articulates results on training and development initiatives.

Based on the provided data on Table 5 below, all training programs have been rated highly by employees, with means ranging from 4.83 to 5.06 on a scale of 1 to 6. The standard deviations range from 1.11 to 1.21, indicating relatively low variability in the ratings. The median scores for all training programs are 5, and the 25th percentile scores range from 5 to 6. This suggests that many employees rated the training programs positively. All programs have a minimum score of 1, indicating that at least one employee rated the program very poorly. However, the binomial tests indicate that the probability of obtaining such a low score by chance is less than 0.001 for all programs, which means that the low score is unlikely to be due to chance. Overall, the data suggests that the training programs have been effective and well-received by employees. It is important to note that these ratings reflect only the subjective opinions of employees and do not necessarily reflect the actual effectiveness of the training programs in improving employee performance or the company's bottom line.

Therefore, this study recommends continuous training programs due to the dynamic nature of digital marketplace. Skilling programs equip e-retailers with the necessary knowledge and skills for entering the e-commerce industry, including digital marketing, online store management, customer engagement, logistics, supply chain management, and financial management. Upskilling programs enhance existing skills and competencies to keep pace with technological advancements and market trends. Re-skilling programs target e-retailers transitioning to new roles or adapting to

changes in the e-commerce landscape, enabling them to explore alternative business models or diversify product offerings. These programs empower e-retailers to embrace new opportunities and navigate market disruptions effectively.

Table 5: Training for skilling, Up-skilling and Re-skilling of e-retailers

		Count	Mean	Standard Deviation	Median	Percentile 25	Percentile 75	Maximum	Minimum	Binomial Tests
Employees have been trained on Planet 54com, company policies and procedures	E1	103	4,83	1,16	5,00	5,00	6,00	6,00	1,00	< 0.001
Employees have been trained on supply chain and delivery	E2	103	4,95	1,19	5,00	5,00	6,00	6,00	1,00	< 0.001
Employees have been adequately trained on device usage	E3	103	4,96	1,14	5,00	5,00	6,00	6,00	1,00	< 0.001
Employees have been trained in digital Marketing	E4	103	4,95	1,16	5,00	5,00	6,00	6,00	1,00	< 0.001
Employees have been trained on administration procedures	E5	103	5,00	1,14	5,00	5,00	6,00	6,00	1,00	< 0.001
Employees have been trained on W & R SETA (skills programme) programmes on Supervision and Management Skills	E6	103	4,94	1,21	5,00	5,00	6,00	6,00	1,00	< 0.001
Employees have been trained on financial skills for business management	E7	103	4,91	1,19	5,00	5,00	6,00	6,00	1,00	< 0.001
Employees have trained on product knowledge	E8	103	5,02	1,13	5,00	5,00	6,00	6,00	1,00	< 0.001
Employees have been trained on ecommerce and online shopping	E9	103	5,06	1,15	5,00	5,00	6,00	6,00	1,00	< 0.001
Employees have been trained on how to grow sales	E10	103	5,00	1,11	5,00	5,00	6,00	6,00	1,00	< 0.001

Planet54.com's perceptions of e-retailing and its dynamics

Planet54.com intended to be amongst the first entrants in South Africa responding to global shopping trends. The online platform was a different means to facilitate a purchase or sale transaction which is propelled via the internet. There was a shift away from the purchaser physically interfacing with the seller in a conventional brick and mortar store to a digital transaction. This emerging global trend resulted in the launch of Planet54.com in 2016 when they entered the value fashion e-commerce market. The website was intended to be “the Amazon of Africa” to service all 54 countries on the African continent, hence the name Planet54.com.

The increasing number of jobs created by Planet54.com acknowledges the transformative power of digital retailing to stay competitive in the digital era.

Planet54.com recognised market opportunities and growth potential in e-commerce and be aligned to meet customer expectations and new market trends was needed to be relevant. Planet54.com remains vigilant and adaptable, seeking innovative solutions and strategies to thrive in the dynamic e-commerce landscape. By embracing digital transformation, understanding changing consumer behaviour, adapting to technological advancements, and embracing challenges and disruptions, Planet54.com has positioned itself to navigate the e-commerce landscape successfully.

In addition, the results further present an incisive multi-variant statistical result model that was obtained using structural relationships, applying a combination of factor analysis and multiple regression analysis techniques. The model is explained in the next section.

Structural Equation Model

The path diagram for the modified SEM is shown in Figure 1 below. The model is a multivariate statistical result that was obtained using structural relationships, applying a combination of factor analysis and multiple regression analysis techniques. It is used to analyse the structural relationship between measured variables and latent constructs.

Null hypothesis: There is no correlation between each of the dimensions.

Alternate hypothesis: There is a significant correlation.

In general, if the co-variance between two constructs is significant, then correlations between them should also be significant as correlation is a standardised form of co-variance and both shows the strength and direction of relationship (Table 6).

Table 6: Co-variances: (Group number 1 - Default model)

			Estimate	S.E.	C.R.	P	Label
e11	<-->	e22	.228	.041	5.582	***	par_1
e11	<-->	e33	.116	.041	2.828	.005	par_2
e11	<-->	e44	.318	.074	4.324	***	par_3
e11	<-->	e55	.175	.042	4.160	***	par_4
e22	<-->	e33	.139	.034	4.092	***	par_5
e22	<-->	e44	.173	.055	3.142	.002	par_6
e22	<-->	e55	.117	.032	3.609	***	par_7
e33	<-->	e44	.257	.066	3.909	***	par_8
e33	<-->	e55	.129	.037	3.452	***	par_9
e44	<-->	e55	.173	.061	2.815	.005	par_10

*** p < 0.001

Regression Analysis

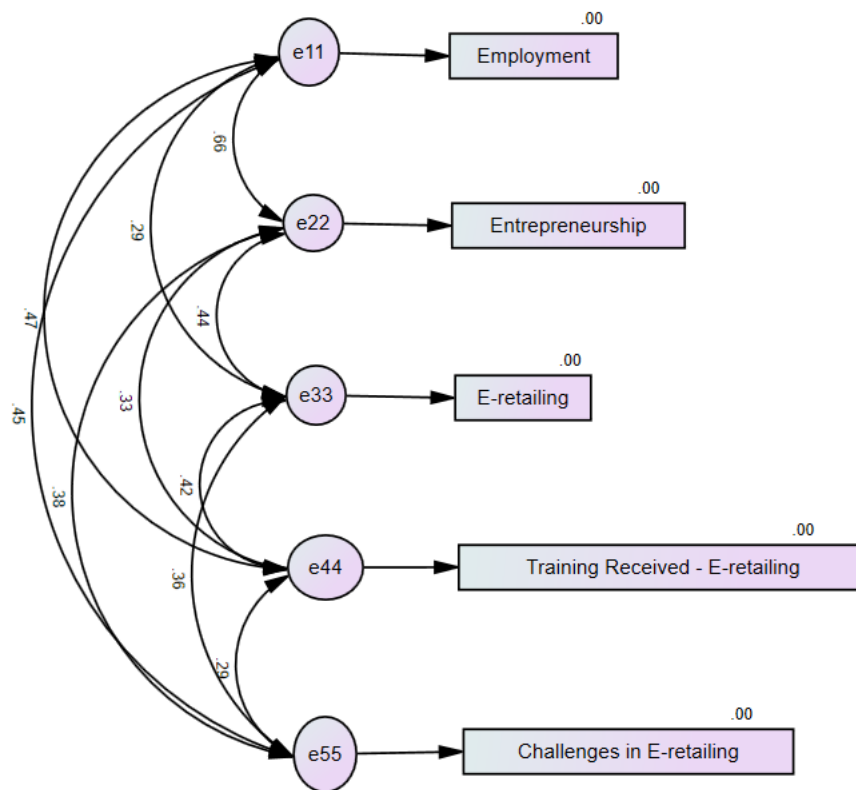
The level of significance relates to the strength of the relationships. The correlations are tested on Table 7 below.

Table 7: Correlations: (Group number 1 - Default model)

	Estimate
e11 <--> e22	.663
e11 <--> e33	.292
e11 <--> e44	.474
e11 <--> e55	.452
e22 <--> e33	.443
e22 <--> e44	.327
e22 <--> e55	.383
e33 <--> e44	.420
e33 <--> e55	.364
e44 <--> e55	.290

From the above multivariate statistical result that was obtained using structural relationships, applying a combination of factor analysis and multiple regression analysis techniques the following model was developed (Figure 1).

Figure 1: The Multivariate Model



All relationships are significant ($p < 0.050$) (Table 5). The results indicate a strong, directly proportional relationship between the latent variables, with each of the r estimates being positive. Some relationships are stronger than others. For instance, the model proves that there is a positive relationship between employment and e-retailing with the r estimate being positive (0.292) (Table 6). This validates that e-retailing has the potential to generate new job possibilities. Website development, digital marketing, logistics, customer support, and data analysis are all common responsibilities in e-commerce enterprises (Mivehchi, 2019). The expansion of e-commerce may result in the development of jobs in several sectors. However, Tokar, Jensen and Williams (2021) opine that e-commerce often necessitates a different skill set than traditional retail. E-commerce jobs frequently demand digital literacy, data analysis skills, online marketing ability, and experience on managing online platforms. This shift in skill needs has an impact on the types of jobs accessible and the abilities required for retail work. It is crucial to emphasise that the relationship between e-commerce and employment is complex and varies among areas and industries. This paper intended to examine e-retailing as an innovative tool to create employment and

entrepreneurship opportunities. Therefore, this model fulfils the notion that e-retailing has a positive influence on employment and entrepreneurship opportunities. To understand the full picture of the relationship between e-retailing and employment, a comprehensive analysis would require taking into account individual circumstances, market dynamics, and the interplay of numerous economic factors is recommended. (This model is supported by the Pearson Correlation coefficients observed using bivariate correlations).

To gain a holistic perspective of e-retailing as a tool to employment creation and entrepreneurship it was critical to get both the e-retailers and Planet.54.com's managers perspectives. Therefore, in-depth interviews were conducted with the organisations managers to complement the quantitative data hence qualitative analysis is done in the next section.

QUALITATIVE ANALYSIS

E-retailing, employment creation and entrepreneurship

It was theoretically proposed that e-retailing, can alleviate unemployment and can be adopted as an entrepreneurial tool. The organisation launched its e-retailing concept to serve as a core function of job creation in the digital space, offering unemployed youth an opportunity to sell goods digitally on behalf of the company and earn an income. The findings reveal that the organisation management was confident that the business model was sustainable regarding stock availability, organisational support, order fulfilment and marketing. The results stated that entrants into the e-retailing space required no start-up costs or collateral to trade, but training is required. Planet54.com's management indicated that e-retailers were adequately trained on device usage, website navigation and supply chain; however, the organisation further indicated that e-retailers were not trained in product knowledge and marketing skills which would be more beneficial for e-retailer practitioners. This is supported by Suneetha *et al.* (2023) that e-retailers need training on various marketing process, delivery process, packaging method, payment logistics and other managerial aspects. Furthermore, the study reveals that e-retailing serves as an aggregator and catalyst to entrepreneurship with the opportunity for e-retailers to evolve from "sell goods on behalf of" to "sell your own goods" with the necessary transfer of skills taking place.

Globally the digital market is already experiencing a metamorphosis from traditional online shopping to creator, influencer and content shopping. The managers indicated that if organisations and their e-retailers lack innovation they can become irrelevant and decline. Manners-Bell and Lyon (2022) articulate that trends and change is the only constant in the digital space as the pace and volume of change is relentless fuelled by the volatility, uncertainty, complexity and ambiguity of the times we live in. Therefore, knowledge of the internet technology is critical due to the speed of technology and innovation. This can be realised by training and development initiatives and enhancing skills sets. It is imperative for young people to embrace technology and innovation as the youths are regarded as the target market for employment positions in e-retailing constituting a large percentage of unemployed persons.

Planet54.com view e-retailing as a viable option for unemployed youth and had succinctly expressed that the e-retailing programme was a route to the labour market due to the low barrier of entry. According to Beng *et al.* (2022) training in communication devices and application are increasingly promoted as a key solution for comprehensive development, poverty eradication and the empowerment of historically disadvantaged groups, women and minorities in the Global South.

However, developing entrepreneurial skills was found to be fundamental, due to the longevity and sustainability of practitioners' receiving a continuous income and becoming economically active. The unemployed person's economic inclusivity will also expand and contribute to the country's tax base and gross domestic profit. To gain access to digital competence and in the economy, the organisation management indicated that facilitation of e-retailing programmes allows for skills transfer and new skills development taking place. This was further solidified by in-house support structures, mentorship and invaluable engagement with experienced practitioners in the businesses which can build confidence amongst entrants. The strongest advantage was being trained by individuals who were intimate with the business and business owners themselves. This sort of interface is bound to offer unemployed youth the confidence to seamlessly flow into the e-retailing space, the job market and the economy.

Challenges experienced in e-retailing

E-retailing, like any other business endeavour, is not without its challenges. Planet54.com's management confirmed the organisation also experienced challenges when it entered the digital space in 2016. The organisation was ahead of the traditional brick and mortar market and experienced issues around lack of customer confidence in the concept (Sharmin, 2019: 90). Furthermore, unemployed youth were also cautious to enter an unfamiliar retail space, this together with device and data costs limited its exponential business growth. The organisation's management also mentioned that when avenues for accessibility into e-retailing was stimulated by arranging funded initiatives it was found that candidates lacked commitment, had a poor work ethic and were not disciplined. This contributed to youth not following through without them understanding the broad-based benefits of the programme. In addition, Wei and Claire (2022) have observed that e-commerce initiatives require minimal capital, a low level of education or training and that it can be done as a side hustle promise to be more successful.

LIMITATIONS

Like any other study, this research is not free from limitations. Firstly, as the study was a case study confined to one company it is therefore, limited in its generalisability. Findings from a single e-retailing company may not be generalisable to other e-retailing companies or industries. The uniqueness of the company's product or service offerings, target market, or business model may limit the extent to which the findings can be extrapolated to other contexts.

The study neglected the customer's perspective and focused primarily on e-retailers and the Planet54.com management. Additionally, the study only looked at a sub-sector of e-retailing, which is the apparel products sector and does not delve into e-retailers who are retailing fast moving consumer goods, hardware, digital products, to mention but a few.

RECOMMENDATIONS

E-retailing is a rapidly growing sector worldwide, and South Africa is no exception. According to this study here are some recommendations for pursuing e-retailing as an employment avenue in South Africa:

Training and development should consider broadening its accredited training programmes and options to include e-retailing skills. To succeed in e-retailing, one needs to have a range of skills, including marketing, sales, digital marketing, and customer service.

Organisations should consider the establishment of an “e-retailing hub” where e-retailers go to a digital retail space where they can engage with the online customer. This will also provide access to the actual product, marketing tools, knowledge of the delays with order fulfilment (delivery) and motivational guidance of a physical support team to engage digitally. This will obviate the situation of the e-retailer confined to a device, being alone, and being devoid of other tools of retail engagement and support.

Research can be done consistently in order to stay up to date with trends considering that e-retailing is a dynamic sector that is constantly evolving. Staying up to date with the latest trends and developments in e-commerce and digital marketing and adapting to strategies accordingly is paramount. If these recommendations are considered, e-retailing can be established as an employment avenue in South Africa and people can potentially build a successful career in this growing industry.

Researching a wider range of e-retailing companies to gain a more comprehensive understanding of entrepreneurial and employment opportunities available should be considered. It is further recommended that there has to be continuous research on the evolving technologies and changing consumer preferences. Research can be done in other sectors, for example, auto-mobile industry, FMCGs, banking sector to mention but a few.

The upended retail landscape influenced by digitalisation and a “new” retail shopper has created a space for the emergence of e-retailers. This job opportunity allows for a more empowered ‘sales assistant’ armed with access to supply-chain processes, ongoing digital contact, and ensuring that customers receive deliveries as specified. The study emphatically concluded that e-retailing is a viable option regarding employment and entrepreneurial opportunities. Organisations need to embrace digital sales and engage in multi-channelling by expanding the trading platforms and contributing towards combating the unemployment crisis.

THEORETICAL IMPLICATIONS

This study makes significant contributions to the body of knowledge. E-retailing offers a new context for entrepreneurship theory and research. It challenges traditional notions of brick-and-mortar businesses and expands the understanding of entrepreneurial opportunities in the digital realm. Theoretical frameworks on entrepreneurial intentions, opportunity recognition, and resource mobilisation can be extended and adapted to the e-retailing context.

PRACTICAL AND POLICY-MAKING IMPLICATIONS

The insights generated in this research should be of great interest to policymakers and entrepreneurship centres, which are the main promoters of the digital entrepreneurship. E-retailing has significant practical and policy implications that can shape business strategies, government policies, and industry practices. These implications include integrating e-retailing into overall business strategies, optimising user experience, and implementing effective digital marketing strategies. Efficient logistics and supply chain management systems are crucial for timely delivery and customer satisfaction. E-retailers should enhance customer relationships through personalised marketing, targeted promotions, and efficient customer service. Consumer protection measures should be established to protect online security and privacy, while transparent pricing and information should be provided.

Digital skills development should be a priority, with workforce training and upskilling programs and resources provided by governments, educational institutions, and industry associations. Entrepreneurship support should be fostered, and infrastructure and connectivity should be prioritised. Online marketplace regulations should be established to ensure fair competition and prevent monopolistic practices. Sustainable practices and packaging should be adopted, and environmental standards and certification programs can be set by governments to encourage eco-friendly operations. By addressing these implications, businesses can optimise their e-retailing strategies and create an enabling environment that promotes fair competition, consumer protection, digital skills development, and sustainable practices in the e-retailing sector.

CONCLUSION

This study concludes that e-retailing can be viewed as a viable option to unemployment challenges experienced in South Africa. It can be noted that e-retailing has the potential to create new job opportunities and promote entrepreneurship in South Africa. However, the study also highlights some challenges associated with e-retailing such as access to affordable internet and skills development. The country, in a progressive manner, can unlock the full potential of this growing sector and help to reduce unemployment levels. The study findings suggest that e-retailing can be an avenue for entrepreneurship aligned to the broader trend of the digital economy, which has created new opportunities for entrepreneurs to start and grow businesses online. This presents e-retailing as a growing feature in the labour market. The study also found that job seekers and budding entrepreneurs require appropriate and adequate training and development to be successful e-retailers. Significantly, the study found that the rapid development of e-retailing has led to a growing gap between the required skill sets of workers and the available labour force. E-retailing requires a unique set of skills, including digital marketing, website design and development, supply chain management, data analytics, and customer service, among others. The lack of skill sets can lead to hindering the growth and development of e-retailing as an employment and entrepreneurial opportunity.

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Critical management failures influencing the performance of construction SMEs in Eastern Cape Province, South Africa

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ABSTRACT

The poor performance of the South African economy has been in the centre of the country's concern. Construction SMEs (small and medium-sized enterprises) are perceived to play a pivotal role in the development of the national economy as these businesses contribute directly to the Gross Domestic Product (GDP). Nonetheless, the failure of the construction SMEs to contribute to the economy leads to slow economic growth which is attributed to construction SMEs' management failures. This study seeks to investigate critical management failures influencing the performance of construction SMEs in the Eastern Cape Province in South Africa. A quantitative research approach was adopted for the study. Data was collected using a self-administered questionnaire from 303 construction SME owners/managers and analysed by means of the Statistical Programme for Social Sciences (SPSS) version 24.0. The study revealed critical management failures influencing the performance of construction SMEs such as poor record keeping, lack of managerial controls, lack of financial management of business funds, lack of internal auditing by construction SMEs, lack of marketing tools, failure to use social media, lack of business networking skills, inability to communicate with construction stakeholders, lack of leadership abilities and failure to set clear strategic goals. The study revealed that there is an urgent need for the development of critical management skills of construction SME

owners/managers in order to improve the performance of construction SME firms. Therefore, the study recommends that business owners must improve their business management skills through enrolment in formal business leadership courses and training that will equip them with key business management skills.

Keywords: construction SMEs, critical management failures, performance, Eastern Cape Province, South Africa

INTRODUCTION

According to de Jongh & Mncayi (2018), the South African economy has, for the past ten years, experienced a subdued economic growth path. Goga, Bosiu & Bell (2019) agree that for many years the South African economy has been dismal, resulting in high levels of unemployment and inequality. SMEs are a hope to the South African economy as the World Bank review on SME firm activities discovered the unwavering promise of the World Bank Group to the development and sustainability of SME firms as a primary purpose in its plan to improve economic growth, job creation and poverty alleviation (Taiwo & Falohun, 2016). Consequently, there is an acknowledgement that construction SMEs and the construction sector in general are ideally designed to stimulate economic growth (Nyakala, Vermeulen & Pretorius, 2022).

Hence, globally, authors agree that the construction sector is an engine for growth and a key driver of economic development in both developed and developing countries (Dithebe, Aigbavboa, Oke & Muyambu, 2018; Tayeh, Alaloul & Muhaisen, 2019). Arthur-Aidoo, Aigbavboa & Thwala (2018) affirm that construction SMEs play an important role in the development of the country's economy, through achieving the needs of infrastructure development. The authors further confirm that the importance of these firms to the country's economic growth has long been recognised (Arthur-Aidoo *et al.*, 2018). Therefore, it can be concluded that the role of construction SMEs in rejuvenating the economy of both developed and developing countries is undisputed. However, this has not been the case with construction SMEs in the Eastern Cape. This could be as a result of some critical management failures, and it is important to identify these failures in order to improve the performance of construction SMEs in the Eastern Cape.

BACKGROUND

The construction sector's failure to make a significant contribution to the local economy leads to slow economic growth in the Eastern Cape Province. This premise is supported by the Department of Economic Development, Environmental Affairs & Tourism (2015) report that slow economic growth in Nelson Mandela Bay is due to the failure of the construction sector to contribute adequately to the local economy. According to the Small Enterprise Development Agency (SEDA) (2019), in the first quarter of 2019 the contribution of construction SMEs to the GDP in Gauteng, KwaZulu-Natal and the Eastern Cape provinces was 35,4 percent, 15,3 percent and 7.1 percent, respectively. Furthermore, recent research by Statistics South Africa (StatsSA) shows a significant decrease in the real GDP of SA over the past few quarters, where in the first quarter of 2020, GDP decreased by two percent and, in the fourth quarter of 2019, GDP decreased by 1.4 percent (StatsSA, 2020).

PROBLEM STATEMENT

There are critical factors affecting SME performance in the Eastern Cape which include lack of finance, managerial skills, and access to markets; along with inadequate and appropriate technology; insufficient education and management training; as well as lack of adequate advice and information (Oyelana & Adu, 2015). A study by Wentzel, Smallwood & Emuze (2016) found that internal factors which lead to construction SME business failure emanate from the lack of management skills, financial knowledge, and insufficient expertise in functional areas such as marketing and human resources. Other internal factors found lacking in construction SMEs include the inability to set strategic goals, reluctance to seek advice and a lack of management commitment (Wentzel *et al.*, 2016).

Therefore, it can be concluded that there are critical management failures that influence the performance of construction SMEs. Hence, this study seeks to investigate critical management failures influencing the performance of construction SMEs. Many studies have focused on internal factors; however, the emphasis has been on large firms in the construction industry (Rahman, Radzi, Saad & Doh, 2020; Adeyemi & Aigbavboa, 2018; Dithebe *et al.*, 2018). Hence, there is a gap in research on internal management factors affecting construction SMEs. The purpose of this

study is to examine the internal environment of SMEs in the construction industry to identify critical management failures affecting the performance of these businesses.

RESEARCH AIM AND OBJECTIVES

This study aims to examine critical management failures influencing the performance of construction SMEs. The study is informed by the following research objectives:

- a) To investigate management failures that influence the performance of construction SMEs.
- b) To recommend strategies that can be applied to ease construction SMEs from the identified management failures.

LITERATURE REVIEW

Definition of Small and Medium Enterprises (SMEs)

In an attempt to define SMEs, it is vitally important to start by detailing the difference between the terms SMME and SME, as these two terms are typically used in SA when referring to small businesses (Moise, Khoase & Ndayizigamiye, 2020). According to Irikefe & Opusunju (2021), the term SMME refers to the broad range of businesses starting from small- and medium-sized established companies, to self-employed owners of micro-enterprises. As explained by Liberto (2020), SMEs are companies that maintain revenues, assets or a number of staff below a certain threshold and countries differ in defining these SMEs.

Construction SMEs

Pheng & Hou (2019) define construction as a structured process of producing and maintaining the built environment which incorporates all planned activities that contribute to the development of a certain kind of object. Moreover, construction is regarded as a complex sector of the economy since it integrates different activities, which include amongst others manufacturing, energy, finance, labour and equipment (Tlapana & Mngeni, 2021).

The Construction Industry Development Board (CIDB) defines a construction SME as a small and medium enterprise that has a limited tendering capacity based on its grading (Kamal & Flanagan, 2014). Aigbavboa & Thwala (2014) contend that construction SMEs have unique factors compared to SMEs in other sectors and these

greatly hinder their effective cash flow, growth, and development, with this view supported by Bikitsha & Amoah (2022). In addition, these factors greatly affect construction industry performance, in particular construction SMEs in South Africa (Adeyemi & Aigbavboa, 2018). Ali (2021) argues that an improvement of construction SME performance through eliminating these factors will have a great impact on the sustainable growth of the country.

Critical business management components

Business management skills

Manjula & Sindhura (2021) maintain business management is a streamlined process that involves planning, organising, setting of human resources, and directing, as well as controlling the business. The authors aver business management can offer construction SMEs certain tools for strategic planning and policy development (Manjula & Sindhura, 2021). Mafundu & Mafini (2019) contend that particularly in the black-owned, construction SME sector, there is an evident lack of practical business management, which is a significant impediment for business performance.

- **Poor record keeping**

According to Yankah, Aigbavboa & Thwala (2018), one of the major causes of business failure of small and medium construction firms includes the non-existence of effective management during the initial stages of the business, which results in poor record keeping. In addition, Lekhanya (2015) states that management incompetence is one of the key contributing factors to the failure of SMEs. In support, Msomi & Olarewaju (2021) state that more training and awareness is required by construction SME owners, including accounting skills, which will assist businesses to keep records of business transactions crucial for banks when financial assistance is required. Thus, it is evident that poor record keeping can be a barrier to the success of a construction SME (Shah *et al.*, 2017).

- **Financial management**

Eke, Aigbavboa & Thwala (2015) believe that the lack of skills to manage cash flow is an impediment to construction SME growth, which often leads to business failure. A study by Msomi & Olarewaju (2021) examined accounting skills and SME sustainability in SA and discovered that SME owners lack financial skills, including

bookkeeping. In the same vein, Pim-Wusu, Aigbavboa & Thwala (2023) find a lack of government support is a barrier for construction SMEs to achieve adaptive capacity. In most cases, new entrepreneurs lack basic business management, which hinders the growth of small construction firms. For example, during the start-up of their business, owners are unable to separate their business and family situations, resulting in business funds being used to pay for private expenses, instead of limiting it to business expenses only (Anzagira, Owusu-Manu & Badu, 2021). Eke *et al.* (2015) agree non-effective financial management during the start-up stages of the business is a major cause of construction SME failure. Therefore, important interventions must be taken to change the mindset of the construction SMEs to see the need to improve their financial and accounting skills.

- Internal auditing

There is consensus amongst authors that, over the years, the management of construction SMEs has deteriorated drastically (Lekan, Clinton & Uduak, 2021; Wentzel *et al.*, 2016; Eke *et al.*, 2015). According to Wentzel *et al.* (2016), this emanates from a lack of business management training and skills, as well as limited family business culture in South Africa. According to Lekan *et al.* (2021), many challenges of construction SMEs, like financial challenges, emanate from internal problems which are linked to a lack of internal auditing by these firms. Hence, the study conducted by Abdulhadi, Ariffin, Leman, Ahmad, Al-Zubaidi & Abdulsamad (2023) identified a lack of internal control as a critical challenge to the performance of construction SMEs in Iraq. Thus, tangible and practical measures such as government support should be put in place to transform business management in the construction SME sector, if performance is to be optimised in these firms (Mafundu & Mafini, 2019).

Marketing management skills

Yankah *et al.* (2018) define marketing in construction management as the combination of all activities undertaken in order to obtain future work. The authors further highlight that marketing is a critical task for construction SMEs and many researchers view marketing as part of strategic management (Yankah *et al.*, 2018). Sithole, Sithole & Chirimuta (2018) maintain that marketing does not only assist businesses to survive but enables them to create market share and profits through the attraction of new customers and retaining existing customers (Sithole *et al.*, 2018). Van Scheers (2018)

agrees that marketing has the potential to predict whether the construction SME will survive in the long-term.

- Marketing tools

Marketing research, according to Nyathi (2022), has always been mostly focused on large firms, with very little on SMEs. This adds to van Scheers (2018), who believes construction SMEs lack marketing tools. Ngibe (2020) agrees SME businesses fail due to a lack of effective marketing tools. This supports Lekhanya (2015), who discovered marketing skills are one of the key internal factors affecting construction SMEs' business performance. Van Scheers (2018) established that since construction SME owners or managers face many factors affecting their businesses, the value of marketing tends to be overshadowed by these factors, resulting in the lack of marketing tools for construction SME businesses.

- Social media

Lack of interest in marketing by SMEs is attributed to budgetary constraints (Nyathi 2022). However, Lekhanya (2013) advocates for business owners or managers to use social media as a low-cost marketing strategy, particularly Facebook and twitter to market their businesses, since social media is growing rapidly in the South African business and social sectors. A study conducted by Malesev & Cherry (2021) examined the impact of digital and social media as key marketing strategies and discovered that should construction SMEs correctly adopt and implement these strategies; it will result in an effective and cost efficient means to gain a competitive edge in the market. However, Rugova & Prenaj (2016) argue the use of social media as a low-cost marketing strategy for construction SMEs has not been explored, particularly in developing countries. In Nigeria, the study by Oyewobi, Adedayo, Olorunyomi & Jimoh (2022) found the use of social media by construction SMEs had a significant influence on the performance of these businesses. For construction SMEs to take advantage of social media, Malesev & Cherry (2021) recommend owners must go through formal training and development in marketing management and integrated marketing communications, with more focus on social media skills and strategies. Hence, the study intends to investigate the use of social media as a marketing strategy by construction SMEs to attain a competitive edge.

Business networking skills

- Business networks

Mole, North & Baldock (2017) claim encouragement and support from business associates or advisers are crucial to improve SME performance and competitiveness. Öberga (2018) states that a business network comprises of the weight and social ties between individuals for the purpose of business exchange. While Hikmah, Ratnawati & Darmanto (2021) are of the view that business networks are key in bringing competitive advantage to a business, the perception is that business networks are a starting point for new and fresh ideas (Öberga, 2018). Therefore, it is of critical importance for construction SMEs to ensure business relationships and networks are maintained and managed properly through proper communications in the business sector. Based on the above, construction SMEs need to adopt business networks.

Cisi & Sansalvadore (2019) find that collaborations within SMEs, through business networking, has generated valuable benefits such as increased production quantities and new market entry. However, it remains a challenge for construction SMEs to maximise the benefits of using business networks, which Michna, Kmiecik & Czerwinska-Lubaszczuk (2020) attribute to a lack of trust and fear of being dominated by big companies from the industry. The authors highlight that the connection between business networking and construction SMEs' performance in the construction sector has not been sufficiently investigated, leaving a gap (Michna *et al.*, 2020). Through business networks, construction SMEs can attain a strategic opportunity to grow their potential for innovation, achieve synergies, reduce costs, and enter new markets, as well as expand new segments, and acquire critical skills for interacting with other firms (Cisi & Sansalvadore, 2019).

Leadership

Madanchian & Taherdoost (2017) maintain leaders are important in every business and play a crucial role that enables the organisation to attain high performance and achieve a competitive edge in the market. Therefore, companies, especially SMEs must pay more attention to the concept of leadership. Mngeni (2015) defines leadership as one's ability to encourage and motivate followers to achieve a vision or set of goals. Kocherbaeva, Samaibekova & Isabaeva (2019) argue that good qualities of a leader are to develop a defined vision, set clear goals and avoid distraction. In the context of construction SMEs, Archer, Verster & Zulch (2010) define leadership as a

trait developed by the individual who has a clear understanding for the construction SME requirements to develop, direct, control, and motivate, while also communicating the vision pertaining to sharing, mentoring, and coaching subordinates and integrated construction decisions. Therefore, leadership cannot be isolated from the performance of any construction SME firm.

- Leadership skills

Mwangi, Sejjaaka, Canney, Maina, Kairo, Rotich, Owino, Nsereko, and Mindra (2013) state good leaders must have specific leadership traits, which include self-motivation, leadership motivation, honesty and integrity, as well as self-assurance. These leadership traits result in the positive efficacy of follower performance which, in turn, produces better organisational performance (Madanchian & Taherdoost, 2017). Sogaxa, Simpeh and Ndiokubwayo (2021) concur previous SME failures are primarily caused by lack of leadership and unsuitable leadership capabilities in the SME sector. While there is enough literature on organisational leadership for SMEs and the construction sector, there is limited literature on organisational leadership in construction SMEs.

- Strategic goals

According to Sarvari, Chan, Alaeos, Olawumi and Aldaud (2021), literature discovered that one of the emphasised aspects of a successful organisation is defined by its ability to meet set strategic goals. In support, Betáková, Okręglicka, Chodasova, Mařovčíková & Gabrhelová (2022) argue that the achievement of strategic goals is crucial for every organisation as it is a main determinant of the divergence between a successful and unsuccessful business. Hence, the failure of construction SMEs, as Wentzel *et al.* (2016) explain, has been accelerated by the lack of entrepreneurial skills, evident from their inability to set strategic goals and inability to plan forward actions. It is therefore important to formalise strategic goals at an organisational level (Masood, Lim & González, 2021). Therefore, if construction SMEs want to maximise business performance they need to adopt this approach.

RESEARCH METHODOLOGY

Research approach

The research methodology adopted in this study is quantitative in nature. A survey is a measurement instrument, in the form of a questionnaire, which is used to collect data on attitudes, feelings, experiences, or opinions of a population, by studying the sample of that population (Hox & Boeije, 2005). The researcher collected the primary data from construction SME owners/managers in the Eastern Cape Province. The sample frame of the main study consists of 303 construction SME owners/ managers. The study utilised simple random sampling (SRS), commonly known as random sampling. A questionnaire that uses a Likert scale as part of the data collection instrument was deemed suitable for this study. The questionnaire was spilt into sections A and B, where section A comprised the demographic information (example in Table 1.1) and section B contained in-depth questions/statements on the study variables. Section A was aimed at understating the population formulation and draw statistical conclusions that could help comprehend and answer the study objectives. A summary of key questions set out in Table 1.2. The survey questionnaire was also sent via email to construction SME owners/managers.

Table 1.1: Illustration of demographic information

Demographic area	Question
Types of ownership	Please indicate the type of ownership. Response alternatives: Sole proprietor, partnership, private company, public company, close corporation, other; please specify
Type of construction business	Please indicate which type of construction business you would classify your business as. Response alternatives: GB = general building, CE = civil engineering, ME = Mechanical engineering, EB = electrical engineering (building), EP = electrical engineering (In), specialist works (SB to SQ), other; please specify
Construction Industry Development Board (CIDB)	What is the Construction Industry Development Board (CIDB) Grading of your business? Response alternatives: Grade 1, grade 2, grade 3, grade 4, grade 5, other; please specify

Table 1.2: Summary of key questions

Research area	Question
Record keeping	Does poor record keeping by construction SMEs affect their opportunities to obtain credit from financial agencies? Response alternatives: strongly agree, agree, neutral, disagree, strongly disagree
Managerial control	Does a lack of managerial controls of daily operation by construction SMEs affect their performance? Response alternatives: strongly agree, agree, neutral, disagree, strongly disagree
Financial management	Does a lack of financial management of business funds by construction SMEs affect their performance? Response alternatives: strongly agree, agree, neutral, disagree, strongly disagree
Internal auditing	Does a lack of internal auditing by construction SMEs affect their performances? Response alternatives: strongly agree, agree, neutral, disagree, strongly disagree
Marketing tools	Does a lack of marketing tools affect the performance of construction SMEs? Response alternatives: strongly agree, agree, neutral, disagree, strongly disagree
Social media	Does construction SMEs failure to use social media as a business marketing strategy affect construction SMEs performance? Response alternatives: strongly agree, agree, neutral, disagree, strongly disagree
Business networks	Does a lack of business networks with formal professionals to source new business ideas affect construction SMEs performance? Response alternatives: strongly agree, agree, neutral, disagree, strongly disagree
Communication	Does the inability to communicate with construction stakeholders affect construction SMEs contribution to economic growth? Response alternatives: strongly agree, agree, neutral, disagree, strongly disagree
Leadership skills	Does a lack of leadership abilities affect the performance of construction SMEs? Response alternatives: strongly agree, agree, neutral, disagree, strongly disagree

Strategic goals	Does a failure to set clear strategic goals for growth affect the performance of construction SMEs? Response alternatives: strongly agree, agree, neutral, disagree, strongly disagree

FINDINGS AND DISCUSSION

Demographic data

Information obtained regarding construction SMEs' working class and CIDB grading of the business is outlined below:

Type of ownership

The survey respondents were asked to indicate the type of ownership under which their business operated. The results show a moderate number (37 percent) of construction SMEs operating as general building, with 35.3 percent operating in civil engineering, while 10.6 percent operate in electrical engineering and 8.3 percent in mechanical engineering. Furthermore, 7.9 percent operate as electrical engineering (building), with 0.7 percent operating in other classes and only 0.3% construction SMEs indicated operating under specialised works (SB to SQ).

Therefore, the majority classes that represented construction SMEs in this study were general building and civil engineering. This proves the lesser representation of construction SMEs in other classes of construction.

Construction Industry Development Board (CIDB) grading

The respondents were asked to disclose their current grading in the CIDB. The results reveal just more than a quarter (27.7 percent) of construction SMEs are registered under CIDB grading 3, whereas 24.4 percent are registered as grade 2, with 21.5 percent under grading 1, and 17.8 percent are grade 4. Only 4.3 percent of construction SMEs are registered under CIDB grading 5, while four percent are registered under other.

Thus, the largest grade represented by construction SMEs in this study was grade 3, closely followed by grade 2, and grade 1. These findings are contrary to the findings by Adendorff, Appels & Botha (2011), who indicated grade one contractors in the Eastern Cape make up 91.8 percent of the total number of registered contractors in

the province. This shows that the number of grade 2 and 3 construction SMEs in the Eastern Cape has grown over the years.

Critical management failures influencing the performance of construction SMEs

The main purpose of this section is to determine critical management failures that influence the performance of construction SMEs. The critical management failures are divided into four themes, namely, business management skills, marketing skills, business networking skills and leadership skills which are discussed below:

Business management skills

a) Poor record keeping

The survey respondents were asked to state the likelihood of poor record keeping by construction SMEs influencing their performance. The findings reveal a moderate number (41.6 percent) of respondents strongly agreed that poor record keeping by construction SMEs affects their opportunities to obtain credit from financial agencies, while 40.6 percent agreed with this, 8.6 percent of the respondents remained neutral with the statement, 4.6 percent disagreed, and 4.6 percent strongly disagreed with this statement. These findings are supported by the Chi-square test results ($X^2 = 226.257$; $df = 4$; $P < 0,001$) for the variable, showing lack of construction SMEs to keep critical records of their business affects their opportunities to obtain credit, which influences their performance. This implies the result for this variable was statistically significant. These findings confirm those of Lekhanya (2015), who indicated construction SME failure is due to poor record keeping, attributed to management incompetence.

b) Lack of managerial controls

The survey respondents were asked to state how likely it is that a lack of managerial controls of the daily construction SME operations influences their performance. The results show a considerable number (42.6 percent) of respondents strongly agreed that a lack of managerial controls of daily construction SME operations affects their performance, while 40.3 percent agreed, 8.3 percent of respondents remained neutral, 5 percent disagreed and only 4 percent disagreed. A Chi-square test was conducted for this variable and the results ($X^2 = 233.617$; $df = 4$; $P < 0,001$) show the lack of managerial controls of daily construction SME operations affects their performance.

This implies the result for this variable was statistically significant. These findings are supported by Eke *et al.* (2015) who indicated that one of the major causes of business failure of small and medium construction firms includes the non-existence of effective management for daily operations during the initial stages of the business.

c) Lack of financial management of business funds

The survey respondents were asked to state how likely it is that the lack of financial management of business funds influences the performance of construction SMEs. The results reveal a significant number (41.3 percent) of respondents agreed and 40.9 percent strongly agreed that lack of financial management of business funds affects the performance of construction SMEs, while 8.9 percent of the respondents remained neutral, 5.3 percent disagreed and only 3.6 percent strongly disagreed with the statement. These findings are supported by the Chi-square test results ($X^2 = 233.617$; $df = 4$; $P < 0,001$) for this variable, showing that A lack of financial management OF business funds influences construction SMEs' performance. This implies the result for this variable was statistically significant. These findings concur with Anzagira *et al.* (2021), who indicated during the start-up of small construction firms, that owners are unable to separate between their business and family situations, which results in business funds being used to pay for private expenses, instead of limiting it to payment of business expenses only.

d) Lack of internal auditing

The survey respondents were asked to state how likely it is that the lack of internal auditing by construction SMEs influences their performance. The results show an overwhelming majority (83.2 percent) of respondents agreed that a lack of internal auditing by construction SMEs affects their performance, 6.9 percent remained neutral, while 5.3 percent disagreed and only 4.6 percent strongly disagreed with the statement. A Chi-square test was conducted, and the results show that ($X^2 = 235.729$; $df = 4$; $P < 0,001$) for this variable, showing the performance of construction SMEs is affected by the lack of internal auditing. This implies the result for this variable was statistically significant. These findings confirm those of Lekan (2021) who discovered that construction SMEs' problems like financial challenges are caused by a lack of internal auditing.

Marketing skills

a) Lack of marketing tools

The survey respondents were asked to state how likely it is that a lack of marketing tools influences the performance of construction SMEs. The results show a majority (45.9 percent) of respondents strongly agreed and 36.3 percent agreed that a lack of marketing tools affects the performance of construction SMEs, while 8.3 percent were neutral, 5 percent strongly disagreed and only 4.6 percent disagreed with this statement. A Chi-square test was conducted and the results ($X^2 = 232.759$; $df = 4$; $P < 0.001$) for this variable show construction SMEs are affected by a lack of marketing tools in their businesses. This implies that the result for this variable was statistically significant. These findings are supported by Cromhout & Duffett (2022), who found that the use of marketing tools, such as social media, by construction SMEs has not been explored, particularly in developing countries, which negatively influences the growth of these firms.

b) Failure to use social media

The survey respondents were asked to state how likely it is that construction SMEs' failure to use social media as a business marketing strategy influences the performance of construction SMEs. The results reveal a vast majority (85.2 percent) of respondents agreed that construction SMEs' failure to use social media as a business marketing strategy affects their performance, with 50.5 percent that agreed and 34.7 percent that strongly agreed, while 5.9 percent of the respondents remained neutral, 5 percent disagreed and only 4 percent strongly disagreed with this statement. These findings are supported by the Chi-square test results ($X^2 = 276.653$; $df = 4$; $P < 0.001$) for this variable, which show construction SMEs' performance is affected by their failure to use social media as a business marketing strategy. This implies the result for this variable was statistically significant. These findings are supported by the literature, as Rugova & Prenaj (2016) claim the use of social media as a low-cost marketing strategy for construction SMEs has not been explored, particularly in developing countries. Hence, Lekhanya (2013) encourages business owners/managers to use social media platforms like Facebook and twitter to promote their businesses.

Business networking skills

a) Lack of business networking skills

According to Cisi & Sansalvadore (2019), business networks are a strategic vehicle that offers businesses an opportunity to increase their potential for innovation, expand to other markets and improve efficiency. The survey respondents were asked to state how likely it is that a lack of business networks with formal professionals to source new business ideas influences the performance of construction SMEs. The results reveal an overwhelming majority (89.4 percent) of respondents agreed that a lack of business networks with formal professionals to source new business ideas affects construction SMEs' performance, with 50.8 percent that agreed and 38.6 percent that strongly agreed, while 4.3 percent of the respondents remained neutral, 3.6 percent strongly disagreed and only 2.6 percent disagreed with this statement. The findings are supported by the Chi-square test results ($X^2 = 320.086$; $df = 4$; $P < 0.001$) for this variable, which show the performance of construction SMEs is influenced by the lack of business networks with formal professionals to source new business ideas. This implies the result for this variable was statistically significant. These findings are confirmed by the literature, where Michna *et al.* (2020) found that a challenge remains for construction SMEs to maximise the benefits of using business networks, due to a lack of trust and fear of being dominated by big companies from the industry.

b) Inability to communicate with construction stakeholders

The survey respondents were asked to state how likely it is that the inability to communicate with construction stakeholders influences the performance of construction SMEs. The findings show an overwhelming majority (87.8 percent) of respondents agreed that an inability to communicate with construction stakeholders affects construction SMEs' performance, with 49.8 percent that agreed and 38 percent that strongly agreed, while 5.9 percent of respondents remained neutral, 3.6 percent strongly disagreed and only 2.6 percent disagreed with this statement. A Chi-square test was conducted to confirm these findings and the results ($X^2 = 299.888$; $df = 4$; $P < 0.001$) for this variable show the performance of construction SMEs is affected by the inability to communicate with construction stakeholders. This implies the result for this variable was statistically significant. These findings are supported by the literature with Cisi & Sansalvadore's (2019) study which discovered that collaboration between SMEs and key stakeholders has generated value and increased production.

Leadership

a) Lack of leadership abilities

The survey respondents were asked to state how likely it is that lack of leadership abilities influences the performance of construction SMEs. The results reveal an overwhelming majority (88.4 percent) of respondents agreed that a lack of leadership abilities affects the performance of construction SMEs, where 45.5 percent strongly agreed and 42.9 percent agreed, while 5 percent remained neutral, 3.6 percent strongly disagreed and only 3 percent disagreed with this statement. These findings are supported by a Chi-square test conducted to determine whether lack of leadership abilities affects the performance of construction SMEs. The results show that ($X^2 = 297.182$; $df = 4$; $P < 0.001$) for this variable, reflecting that a lack of leadership abilities by construction SMEs affects their performance. This implies the results for this variable were statistically significant. These findings are supported by a study conducted by Sogaxa *et al.* (2021), who discovered that a previous failure of construction SMEs is primarily caused by a lack of leadership and unsuitable leadership capabilities in the SME sector. Madanchian & Taherdoost (2017) argue there is enough evidence to link the performance of SMEs to the leadership style of the leader. Hence, Kocherbaeva *et al.* (2019) advocate that construction SMEs must prioritise the development of leadership skills of employees who have an ability to fill influential positions in the business or organisation.

b) Failure to set clear strategic goals for growth

The survey respondents were asked to state the likelihood that a failure to set clear strategic goals for growth influences the performance of construction SMEs. The results show an overwhelming majority (87.8 percent) of respondents agreed that a failure to set clear strategic goals for growth affects the performance of construction SMEs, with 49.8 percent that agreed, and 38 percent strongly agreed, 5 percent remained neutral, while 4.3 percent strongly disagreed and only 3 percent disagreed with this statement. A Chi-square test was conducted and the results ($X^2 = 297.182$; $df = 4$; $P < 0.001$) for this variable show that a failure to set clear strategic goals by construction SMEs for growth purposes affects their performance. This implies the results for this variable are statistically significant. Wentzel *et al.* (2016) support these findings, as their study discovered the failure of construction SMEs has been

accelerated by a lack of entrepreneurial skills, which was proved by their inability to set strategic goals and an inability to plan forward actions.

CONCLUSION AND RECOMMENDATIONS

The study sought to identify critical management failures affecting the performance of construction SMEs in the Eastern Cape Province. The empirical findings revealed the performance of construction SMEs is heavily influenced by key management failures. The critical management failures were divided into four themes, namely, business management skills, marketing skills, business networking skills and leadership skills. Consequently, critical management failures linked to business management skills identified by the study include poor record keeping, lack of managerial controls, lack of financial management of business funds and a lack of internal auditing by construction SMEs. While critical management failures linked to marketing skills include lack of marketing tools and failure to use social media as a marketing strategy. The critical management failures linked to business networking are a lack of business networking skills and inability to communicate with construction stakeholders. Lastly, critical management failures linked to leadership skills are a lack of leadership abilities and failure to set clear strategic goals for growth. The study findings showed that these critical management failures by construction SMEs are not only the root cause of lack of business performance but also of business failures within the construction industry. Therefore, a culture of entrepreneurial leadership needs to be cultivated within construction SMEs through empowerment of their business management skills.

The study recommends for construction SME owners/managers to identify gaps within their business management and find relevant education and training that will equip them to close such gaps.

Construction SME businesses need to partner with local Technical and Vocational Education and Training colleges to formulate short and cost-effective programs that will increase business management skills of the owners/managers. Construction SMEs must be intentional in creating a culture of business growth and development through education and training. This can be achieved through enrolling in formal institutions, which will equip construction SMEs owners/managers with key business management skills and sharpen their entrepreneurial skills to drive and manage business growth effectively and efficiently. Construction SME owners must go through

formal training and development in marketing management and integrated marketing communications to increase their marketing skills. Moreover, construction SMEs must adopt social media as a low-cost marketing strategy which will enable them to have their businesses recognised by potential customers or clients. Construction SMEs, particularly at a young age, need to be mentored to keep business and personal finances separate. Business funds must be channelled purely for running business operations, in particular the fulfilment of project requirements, which include procurement of required skills, equipment, and materials. This will help in ensuring construction SMEs are able to complete projects within the required costs, time, and quality. Thus, enabling the business to achieve maximum profits and improved business performance. In promoting successful business incubator programmes, government must entrust the CIDB with the responsibility of facilitating the empowerment of construction SMEs, where larger firms are encouraged to mentor small firms to promote skills transfer. Large firms willing to coach and mentor small firms should be given incentives to encourage continued participation in the programme.

LIMITATIONS OF THE STUDY

The study sample was limited only to owners and managers of construction SMEs in the Eastern Cape Province. Although the study covered only the Eastern Cape Province, the study findings could still be used by governments, policy makers and SMEs of other provinces in South Africa; however, proper care should be applied in using the findings.

AREAS FOR FURTHER RESEARCH

There is still a huge research gap in this field. Further research is required on business diversification strategies that could be used by construction SMEs. This will not only ensure growth but also business continuity and maximise performance of these firms.

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Barriers to implementing recognition of prior learning for sector education and training authority-accredited providers in Gauteng

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ABSTRACT

Recognition of Prior Learning (RPL) is a key component in implementing programmes for adult learners within the occupational education and training sector, by permitting relevant accumulated experience of employed adult learners to be formally acknowledged and credited. SETA-Accredited skills development providers are mandated to implement RPL as one of the key pillars of the National Qualifications Framework embedded in credit-bearing occupational programmes. A review of literature in the field suggests the prevalence of barriers with RPL implementation across the globe. However, the causes of barriers along with the effects on providers needs to be investigated within the local context. A qualitative phenomenological approach was selected to draw data from the direct-working experience of providers in the field. This experience-driven exploration occurred with a sample of six SETA-Accredited adult education and training providers who were active implementers of RPL, based in the province of Gauteng in South Africa.

The investigation revealed that challenges are prevalent in the implementation of RPL for accredited programmes within the occupational education and training sector for providers, some of which were sector specific. A total of five major themes of barriers began to emerge from semi-structured interviews aimed at presenting participants with an opportunity to reflect on their experiences of implementing the concept of RPL. The barrier themes uncovered revolve around contestation with instruments, scarcity of competent specialist practitioners, internal management discrepancies, costing structures, meagre capacity building and awareness, which altogether, exerted an inhibiting influence on the ability of providers to effectively

implement, finance, resource and sustain RPL interventions. Recommendations are framed by the adaptation of theories such as Knowles' andragogical assumptions and learner contract; Kolb's experiential learning styles and the application of constructivism which provide a basis to mitigate each of the barrier themes uncovered.

Keywords: Recognition of Prior Learning (RPL), Sector Education and Training Authority, barriers in RPL, SETA-accredited provider, occupational education and training

BACKGROUND AND INTRODUCTION

Adults are constantly learning, everywhere and throughout the course of their lives (Harris and Wihak, 2017). However, learning which occurred outside of the formal education and training system was historically not well documented, understood or valued (International Labour Office, 2018) until the advent of Recognition of Prior Learning (RPL). RPL has been evolving since the 1980s and has remained a mainstay in adult education, in particular; within the occupational education and training landscape (PSETA, 2017), where its value proposition is most prominent with adults who have accumulated years of experience in their vocations but without any formal occupational qualifications (Hlongwane, 2018). RPL offers a unique opportunity for prior learning and experience to be recognised and credited against as either entry or credit accumulation towards a formal occupational qualification (Maurer, 2019).

The South African National Skills Development Plan ending in 2030 provides realisation to the great task which lies ahead, where strategic partners and agencies such as Sector Education and Training Authorities (SETAs) have vital roles to play in skills development within economic sectors, not least through the successful implementation of RPL interventions (SAQA, 2019) to swiftly target skills shortages and augment scarce and critical skills (Republic of South Africa Government Gazette, 2018). In implementing skills development initiatives across South Africa, SETAs are consequently dependent on accredited education and training providers to deliver on interventions, including that of RPL, in an operative manner.

Providers are expected to apply RPL through a balanced combination of appropriately designed RPL tools, assessments, policies, processes, support

structures, resources, and practitioners (PSETA, 2017). However, blockages or barriers which stand in the way of seamless implementation are becoming ever more commonplace (DHET, 2013). Despite the high expectation from RPL and its alluring multi-faceted return (International Labour Office, 2018), countries across the globe within Europe, the Americas, Asia, including Africa continue to grapple with a myriad of challenges in establishing a sustainable national RPL system that is accessible and widely implementable (Aggarwal, 2015; International Labour Office, 2018). In other words, barriers to the implementation of RPL continue to co-exist on a global and localised scale (Rothboeck, Comyn and Banerjee, 2018; Thobejane, 2016).

The suggestion of potential barriers to RPL permits further probing and investigation within the local occupational education and training landscape. Furthermore, these barriers need to be understood directly from the implementing provider's perspective who is accredited and tasked to make selection and assessment decisions using the RPL mechanism and is a vital cog in the wheel of RPL delivery in the sector. If any barriers with implementing RPL from the provider's outlook are not closely understood, the sector could run the risk of worsened consequences down the line. These consequences could lead to failures in meeting sector RPL skills development targets and in upholding core underlying principles of the NQF; which are access, mobility, redress, promotion, and development (SAQA, 2019).

RESEARCH QUESTION AND OBJECTIVES

The research question is stated as:

What are the barriers experienced in the implementation of RPL for SETA-accredited adult education providers in Gauteng?

The above research question is further sub-divided into three researchable objectives:

Research objective 1: To discover causes of barriers to RPL as experienced by SETA-accredited adult education providers in Gauteng.

Research objective 2: To determine the extent to which discovered barriers affect the implementation of RPL.

Research objective 3: To propose appropriate strategies aimed at addressing barriers.

The research objectives will be presented in turn and briefly discussed during the

results section of this paper.

REVIEW OF LITERATURE

Adult learning theory

Andragogy has been hailed for providing adult education with its own unique badge of identity (Merriam, Caffarella and Baumgartner, 2007). The Americanised version was popularised by Malcolm Shepherd Knowles in the late 1960s (Beeson, 2018). Knowles sought to differentiate the field of adult education through andragogy, in that traditional teaching and learning practices aimed at children were inadequate and needed to consider key differences when working with adult learners (Knowles, 1980).

Knowles made a series of assumptions about adult learners which form the bedrock of andragogy (Tennant, 2006). The initial characteristic of interest is found embedded in Knowles's second andragogical assumption, which posits that adults accumulate a wealth of individual experience which serves as a rich resource for learning (Beeson, 2018; Knowles, 1980). An inherent attribute of adult learning theory is centred on the fact that adults use prior experience to build new learning. Prior experience far outweighs the learning gained purely through instruction (Decker, Lourenco, Doll and Hartley, 2015) – this advent or correlation of experience to learning can be seen as building blocks for RPL practice (Aggarwal, 2015).

Mothokoa and Maritz (2018) point out that experience may come from a myriad of different life situations. It is within such experience that a breeding ground for recognition through RPL is created. Knowles acknowledges the importance of “recognising” experience when he stated that the heterogeneous life experiences of adults hold important implications for adult teaching and learning practice (Knowles, 1980). It is important for providers of RPL to keep this focus on experience at the very heart of all they do during an intervention. To be able to appropriately qualify and map the experience of adults to establish academic outcomes is at the core of RPL (Aggarwal, 2015). This embodies much of what Knowles proclaimed when he saw experience as a rich resource to be harnessed and explored by the adult education provider (Beeson, 2018).

A secondary but no less meaningful characteristic of Knowles's contribution to this study is found in the learning contract which was made famous during a publication in

the year 1986. The learning contract emanates from Knowles's first andragogical assumption which speaks to the inherent self-directedness of the typical adult learner (Knowles, 1980). Knowles believed that adults were not just self-directing, rather active-lifelong learners who were able to effectively plan, manage and direct their own learning efforts (Harrop, Casey and Shelton, 2018). The learning contract gives life to the above notion and is a tool to administer a learning event by actively partnering with learners throughout each phase (Knowles, 1986). The contract is negotiated between an education provider and learner to collectively diagnose learning needs, specify goals, objectives, strategies, and resources along with co-evaluating teaching and learning efforts (Tennant, 2006). The learning contract is thus a methodology which proposes the use of a contract that is concluded between learner and provider, aiming to co-navigate the learning journey together (Knowles, 1986). Partnering, negotiating, and co-navigating with adult learners throughout the teaching and learning journey enhances opportunities for learners to appraise their knowledge; reflect on competencies/experiences and link such with specific programme outcomes or curriculum (Kaplan and Renard, 2015), all of which typify the practice of RPL.

The learning contract could be modified for use in RPL by allowing for the self-directing adult learner to take the lead on their journey in the process. The journey of which requires a significant amount of reflection, introspection, unearthing competencies, and self-appraisal (International Labour Office, 2018). Knowles's learning contract theory clearly sets down the blueprint for the intervention (Knowles, 1986); from planning, learner-profiling, goal setting, individual gap training matrixes, joint assessment development and mutual evaluation processes (Tennant, 2006). The application of the learning contract to the RPL process could offer useful benefits in; improving the overall design of bespoke assessment instruments, enhancing communication, providing a means for holistic learner-profiling, increasing collaboration/support between RPL practitioner and candidate along with negating prejudice and/or subjectivity which may surface during the RPL process (Snyman and van den Berg, 2018).

Experiential learning theory

Although experiential learning has gained widespread attention over the last decade (Marin, 2015), the experiential learning process and multi-linear model developed by

David Allen Kolb in 1984 is of particular interest and relevance to this study. Kolb's theories on experiential learning have been framed on the work of renowned contributors such as Dewey, Lewin, and Piaget (Li, Öchsner and Hall, 2019). Kolb's experiential learning cycle remains the most widely influential and cited model, or "clearest expression" of experiential learning theory (Morris, 2019). It is within Kolb's model that a significant contribution and value is brought to the practice of RPL and in assessing/removing associated barriers.

The fundamental aspect to consider in the discussion of Kolb's learning styles' is that Kolb acknowledges each learner or individual as having their own behaviour, preferences, and styles of learning (Ata and Cevik, 2018). Each person learns differently from one another, has unique individual processing capabilities and requisite learning requirements (Bergil, 2017). Making learners aware of their learning styles and how to accommodate this in the learning environment accrues significant accomplishment in meeting learning outcomes (Gogus and Ertek, 2016). This is a particularly important trait when applied to the context of RPL; where learners need to be profiled and understood prior to the start of an assessment; to qualify and map their experiences against fixed programme criteria and outcomes (Hlongwane, 2018).

The contribution of Kolb's experiential learning theory and corresponding learning styles hold important connotations to RPL. At the fore, it achieves an emphasis on the role of experience to the adult learner (Kolb and Kolb, 2013). It additionally permits the formation of a deeper, more holistic understanding of the candidate profile in the RPL intervention. This is achieved by allowing providers to classify candidates according to defined learning styles and forms an appreciation of the diversity amongst adult learners who enter the RPL process. The styles of learners could be utilised to inform the design and development of bespoke RPL assessment tools which satisfy both learner-centricity and programme criteria. Harris and Wihak (2017) refer to this as actively engaging with knowledge differences and styles amongst RPL learners, rather than glossing over them as if they do not exist. Snyman and van den Berg (2018) further stress the underlying importance of profiling candidates prior to any RPL intervention; Kolb's learning styles provide a framework for effective learner classification.

Constructivism

Gravett (2005) provides useful applications for constructivism, namely, the linking of learning to experience; enhanced negotiation; collaboration; information-sharing; active-engagement; problem solving and an appreciation for situated-knowledge creation. Mattar (2018) locates the applications proposed by Gravett (2005) within the domain of active and experiential learning. An adaptation of the applications of active and experiential learning would encourage RPL providers to reflect on their experience, engage in policy, challenge false-assumptions, promote critical thinking, enhance collaboration, share-information (discourse) and problem solve for the common benefit (Gravett, 2005). Thus, applying constructivism through active and experiential learning techniques will help when dealing with barriers to RPL practice amongst providers.

Barriers to RPL implementation

Even though RPL has been ingrained in modern day educational discourse, we continue to grapple with implementation at various levels across the globe (Aggarwal, 2015). Barriers are prevalent with recognition efforts at all levels but affect the informal economy which characterises many developing nations (Srivastava and Jena, 2015). Providers themselves are often cited as acting as “gatekeepers” of what they would subjectively consider legitimate knowledge for recognition purposes. Gonzales and Tabarak-ul-Islam (2016) warn that providers of RPL may not view experiential learning as fully appropriate or relevant to their discipline and subject areas. This adds to misconception, subjectivity, and stigma around the concept (Thobejane, 2016).

It can be argued that the apparent successes which South Africa has made in RPL comes from the firm establishment of the NQF and its integration into various national policies (International Labour Office, 2018). To this end, the three sub-frameworks of the NQF embody and purport the issue of RPL for access, articulation, progression, and full development of learners (Aggarwal, 2015). Nonetheless, the fundamental question remains; does the above mean that there are no salient, hidden, or unknown barriers to the implementation of RPL in the occupational education and training sector in South Africa?

The following pieces of South African literature point us toward responding to the above question. Harris and Wihak (2017) argue that implementation of RPL in South Africa has proved challenging for both policy makers and practitioners alike. This view

is supported by Rossouw, Mann, van Huyssteen and van Ryneveld. (2016), who collectively indicate that RPL has been more of a contested and complex issue than was initially anticipated by policy makers. Ibid go on to allude to the fact that South Africa took lessons from other countries such as England, Scotland, Australia, and New Zealand during policy development and there were factors to consider that were unique to the South African context when it came down to actual implementation on the ground.

Mantashe and Nkonki (2019) shed light on the issue of policy, where policy may become a constraining factor which is not well advocated or understood. In this regard, implementers become overly restricted, bound, and tentative with RPL execution with a fear of working outside of legislation. Thobejane (2016) indicates that barriers to RPL implementation in a study conducted amongst Further Education and Training providers in South Africa needs to be looked at from within the providers themselves. She concedes that RPL existed purely in theory with little implementation or understanding amongst participants. Ibid goes onto assert that staff awareness, resources, misunderstanding (stigma), dwindling management support, inadequately understood and developed policy along with a lack of training collectively fuelled challenges with RPL.

Views such as the above have prompted South African authors such as Cooper, Ralphs and Harris (2017) to persist in begging the question; why has RPL proved so difficult for providers? This is not a misdirected or isolated question. It was a topic which has received attention by the Department of Higher Education and Training, where in 2013, it had launched a ministerial task team to investigate issues of RPL (DHET, 2013). In delivering the 2013 final report, ibid alluded to the fact that RPL was entrenched in the NQF yet had not begun to realise its early potential or promise. The slogan most associated with RPL; “from floor sweeper to engineer” was an inspirational quote to some but to others showed a lack of understanding of the complexities associated with the concept (DHET, 2013). RPL is seen as a national imperative, with an inherent ability to fast-track closure of the country’s skills gap but has not yet grown to its potential (Snyman and van den Berg, 2018). Some of the cited barriers in South Africa include (PSETA, 2017):

- Unclear and misinterpreted principles;

- Inconsistent assessment practice;
- Lack of provider preparedness;
- Deficiencies in policy development and discourse;
- Absence of candidate support;
- Bureaucratic procedures that are cumbersome/time consuming;
- A mismatch of candidates' experiential knowledge to prescribed academic outcomes (With resultant disparities in assessment tools and learner profiling);
- Labour and paper intensive nature, which is perceived as expensive, and
- The dearth of general support.

The DHET task team alluded to above, published an expanded report of barriers to RPL in South Africa. Additional barriers and in those directed to SETA(s), providers and the occupational education and training sector are condensed below (DHET, 2013):

- Deficiency of coordination and management of RPL amongst providers, authorities and employers;
- General lack of advocacy leading to misunderstandings and stigma;
- A dire-need for provider support in RPL;
- Low or absent provision of RPL practitioner support, career-pathing and development, with a further need to professionalise the space;
- Funding model ambiguities;
- Debates on the contested relationships between academic/disciplinary/formal/curricular knowledge as contrasted to experiential knowledge;
- Numerous laden policies, operating procedures and compliance, contributing to increased complexity;
- Paucity of provider capacity and technical know-how, such as in the development of equivalence matrices, complex mapping, learner profiling, assessment methods, and specialised RPL support materials;
- Quality assurance ambiguities due to model disparities amongst Quality Assurance Partners;
- Lacklustre monitoring, evaluation, sluggish continual improvement of practice; and

- Sparse research to explore challenges and improve practice.

Indications from both the global and local context indicate that barriers toward RPL is a reality (Aggarwal, 2015). In as much as these barriers are stated outright in some instances, other barriers seem hidden and embedded in the views of certain literature or cases. Challenges, nonetheless, are something which needs to be closely investigated, monitored, and systematically diminished to ensure parity with the goals envisaged for the concept in South Africa (DHET, 2013) and its importance to labour skills development and progression initiatives at employers.

RESEARCH METHODOLOGY

Gobo (2018) expresses that qualitative research is an approach aimed at gaining a deep understanding of specific phenomena with a smaller sample, as opposed to a surface level description of a large sample. The study herein was based on a qualitative approach aligned to its aim of garnering a more profound understanding of challenges faced by participants when implementing RPL in the real-world context. The qualitative approach emphasises gathering data on naturally occurring phenomena and expressing such data in the form of words and expressions (Leedy and Ormrod, 2013) to form themes.

Methods under qualitative research approaches are categorised by McMillan and Schumacher (2014) as either focusing on the experience of participants or on society and culture. Since this study intended to obtain a profound consideration of the barriers which plague participating providers in their daily execution of RPL coupled with the fact that such barriers may be situated in the “lived” working experience and context of participants, the design adopted was that of phenomenology. A phenomenological method is justified because it seeks to explore the “life world” of participants, to deeply understand their “lived” experience with a particular focus on their milieu (Umanailo, 2019). Vagle (2018) suggests that phenomenological designs are useful in helping us see and understand things in new ways, to reveal things that have become so “normal” that we do not even notice or attribute much attention to.

Context is the setting or surrounding where the research will take place (McMillan and Schumacher, 2014). The context of this study was the occupational education and training (SETA) landscape in Gauteng. Target respondents consisted of SETA-accredited adult education providers who had at least 5 years of RPL implementation

experience in the sector. A further noteworthy point is that although the population of providers considered for the study was geographically located in Gauteng, they would be found applying their trade nationally. In other words, these providers implemented RPL for workplace-based learning programmes on NQF levels 1 to 5 across the country, with a diverse range of adult learners and conditions. Therefore their experiences and to a larger extent any challenges they had with implementing RPL were nationally informed and multidimensional.

The providers were all registered companies differing in size, operational structure, staff complement and with a range of programmes in sectors including services, retail, commerce, education, and manufacturing. However, all providers were homogenous in the sense that they held primary accreditation with the same quality assurance functionary (SETA), under delegation from the Quality Council for Trades and Occupations (QCTO).

A purposive sampling method was employed where the researcher selected members of the population which befit the purpose of the study (Bhardwaj, 2020). Gobo (2018) supports this position by defining purposive sampling as choosing instances from the population that are information rich in relation to the research question(s). Related to this study, six (6) providers from the population who had indicated challenges with RPL were preferentially sought out as potential candidates to explore the issue. The experience of such candidates was key to provide information toward addressing the research question and objectives. Studying information-rich cases in this manner yields greater insight as opposed to empirical generalisations (Benoot, Hannes and Bilsen, 2016). Challenges with RPL needed to be gathered from the direct, lived working-experiences of providers in their daily execution of the concept. The phenomenological method presented this study with a unique opportunity to get closer to the direct experience of providers and in so doing, discover any challenges which could arise (McMillan and Schumacher, 2014).

Qualitative, phenomenological type researchers typically rely on a wide assortment of data collection techniques and instruments such as interviews, focus groups or document analysis (Palinkas, Horwitz, Green, Wisdom, Duan and Hoagwood, 2015). Relevant to this undertaking, data was collected via a semi-structured interview with participants. A phenomenological, semi-structured interview was selected because it generates a rich, comprehensive description of participants' experiences about

phenomena by posing open-ended questions concerning feelings, perceptions, and understandings (Alirezaei and Roudsari, 2020).

Questions posed by the researcher were open-ended and organised around globally reported barriers. The semi-structured interview questions were sent to participants ahead of the interview slot, which assisted them with preparations and permitted for participant reflection on questions. The interview questions were dialogic in nature and remained open enough for participants to discuss and state other types of unique barriers that may not have been uncovered by the questions posed. Furthermore, all questions were designed around the interpretivist paradigm by constantly prompting participants to reflect on their own direct experiences (Pham, 2018; Rehman and Alharthi, 2016).

The complete process of data-collection was facilitated electronically. Initially, participants received disclosure and permission letters via email. Once consent was obtained, an interview schedule and questions were submitted to all participants ahead of the interview date. Virtual interviews occurred per schedule using online videoconferencing software known as Microsoft Teams. The individual interview slots were set at 1.5 hours, although provision was built in for sessions that went over this time allotment by factoring ample buffer time between sessions.

The interviewer asked questions from the interview schedule and recorded responses on a paper-based recording tool (transcript) which was specifically designed to capture responses. Any follow up questions were also documented on this recording tool. Microsoft Teams software functionality further permitted for the live recording of sessions. The researcher proceeded to record sessions with due permission from the participants. This allowed the researcher to replay recordings and compare the audio with the transcript for enhanced accuracy during capturing of responses. After the transcript was quality checked by the researcher against the audio, it was scanned and emailed to individual participants for member-checking. Within the email, participants were alerted to the fact that they could replay their sessions and compare it with the transcript to detect any disparities or incongruences. This could then have been reported to the researcher prior to the commencement of data analysis.

Examination of the raw data was facilitated via a phenomenological analysis. A phenomenological analysis is where the true essence of a phenomenon is uncovered

by identifying significant themes (Alirezaei and Roudsari, 2020). The analysis was thus undertaken by identifying significant or repeated phrases from the collective transcripts per each interview question and grouping significant or repeated phrases into major themes. These themes started to give rise to patterns or trends with how participants responded as a collective. Subsequently, five high-level or major themes of barriers had begun to emerge from the data collected.

RESULTS AND DISCUSSION

The analysis of data reveals that participant experiences with RPL implementation in the occupational education and training sector was characterised by the presence of blockages or barriers. In addition, findings reveal that such barriers exert significant influence on the ability of provider participants to effectively fulfil their roles in implementing RPL. Key findings are summarised and discussed per research objective in the subsequent sections.

Research objective 1: To discover causes of barriers to RPL as experienced by SETA-accredited adult education providers in Gauteng

The data collected from participants contained a unifying theme that barriers to RPL were indeed a reality for implementing providers in the sector. All barriers were grouped under five major themes viz. highly contested, complicated, and technical nature of RPL; scarcity of skilled RPL practitioners; ineffective internal management of RPL; financial constraints in implementing RPL; and meagre RPL awareness, capacity building and advocacy amongst stakeholders. Each of these five major barrier themes are presented below.

Barrier theme 1: The highly contested, complicated, and technical nature of RPL

The first theme exposed as a barrier was attributable to the sheer complexity and highly debated nature concerning RPL in the sector, the following excerpts are selected to illustrate this theme:

P1: "We have difficulties in planning and implementation, how we map learner experience and implement the programme becomes the core issue. Most RPL candidates are not on the same page as our practitioners, and this causes disparity and conflict. Learners feel that we may not always understand their experiences and competencies".

P2: *“RPL becomes very contentious and sometimes bewildering”.*

P4: *“Not all practitioners are RPL experts per se, they try to assist where they can but ultimately our experiences with RPL are that it is extremely technical in nature, and we often find ourselves searching for answers”.*

Technicality becomes a major hurdle for the implementing participant provider and fuelled misconceptions from the lack of understanding. RPL was perceived as a difficult and often cumbersome educational process for respondents. The technical nature of RPL coupled with debates around its implementation made developing specialised RPL tools quite difficult for the participants, leaving most participants rather bewildered when it came to implementation.

Complication and confusion with RPL are not anomalous with literature in the field. Harris, Wihak and Van Kleef (2014) denote that a lack of systematic implementation at the national level in countries across the globe have led to notable concerns and confusion with RPL. DHET sheds light to the often overlooked yet sheer logistical complexity found in developing and sustaining RPL in the occupational education and training sector, especially when providers must deal with multiple SETAs, workplaces, and awarding bodies (DHET, 2013). This is seen as creating a multi-layered complexity for RPL amongst providers.

It is well documented that RPL requires careful planning, implementation, and availability of specialised tools (International Labour Office, 2018). RPL role-players are commonly cited as feeling lost or bewildered with the concept (Thobejane, 2016). Strategies to diagnose and/or quantify learning needs and gaps are thus critical to the endeavour (Dykes, 2009). Tools have become increasingly technical because they need to quantify experience for a wide array of candidates (Snyman and Van den Berg, 2018). The inner workings of RPL as a specialised educational practice requires continuous attention (Cooper *et al.*, 2017).

Complexity with measuring prior learning is becoming an ever-increasing phenomenon (Aarkrog and Wahlgren, 2015). Such complexity is further exacerbated with negative or incorrect perceptions of RPL amongst employers or learners, leading to a stigma with RPL qualifications (PSETA, 2017). Whilst most stakeholders buy into RPL interventions, others are apprehensive over the quality or worth of RPL qualifications, this presents a challenge when the age-old question over the veracity

of RPL is put into the fray (Aggarwal, 2015).

Barrier theme 2: Scarcity of skilled RPL practitioners

The technical nature of RPL led to a second theme which was the scarcity of accessing competent RPL practitioners in the sector. This barrier constrained providers and was increasing the costs associated with conducting RPL:

P2: "RPL is still a foreign concept, and this reflects in the work of practitioners, most are not well endowed with RPL, and this reflects poorly on our output".

P6: "Few assessors/moderators or facilitators are comfortable with RPL, they have heard of it, but don't know how to actually implement".

Thobejane (2016) found that much in RPL is not known to practitioners and that their intentions do not always translate into practice. Andersen (2016) emphasises that skills must be recognised, no matter where, when, or how they were acquired, it requires proficiencies by the practitioners on untraditional, non-formal learning areas. The practitioners must not only be familiar with the content of what is being taught, but also with wider trends in the occupation. This is a particular technical requirement in the occupational education and training sector, where the nature of the relationship between the practitioner and learner is quite different from the traditional, formal education system. The assessors, while maintaining quality and accuracy in the assessment, must provide clear information about the process as a whole and guide candidates with collecting relevant evidence for purposes of recognition (Aggarwal, 2015). Thus, RPL is commonly met with insufficient numbers of competent staff available for guidance and support services (International Labour Office, 2018). The scarcity of practitioner availability also gave rise to increasing costs for conducting RPL, which is discussed under the fourth barrier theme.

Barrier theme 3: Ineffective internal management of RPL

The third theme revolved around sub-standard management of RPL from within provider participant organisations themselves. Participants felt that their internal management did not understand the concept or its nuances in operation and were lacklustre around implementation. The following responses allude to management oversight within providers:

P1: *“Management knows the challenge with RPL, they are aware of our grapples and struggles, thus they are not interested to implement RPL. They see it as nice to have but not a core focus”.*

P3: *“Our management accepts RPL learners and then hands them over to us without any consideration of the task we face as practitioners to see these learners through”.*

The lack of leadership and management commitment to RPL may have a negative impact on providers, as practitioners would be frustrated with no clear direction and internal backing (Thobejane, 2016). The inherent foundation of any educational programme offering is strong governance and management (Palmer, 2020). In this instance, blockages with management can affect implementation for providers on several fronts, from resource allocation through to support deficiencies and complexities in sustaining systems for RPL development and enhancement (International Labour Office, 2018).

Barrier theme 4: Financial constraints in implementing RPL

The penultimate theme was associated with financial constraints. This was a two-pronged theme which was attributable to rising costs of RPL combined with ineffective funding models:

P2: *“Everyone thinks that RPL is a quick-fix solution, but our experiences show that it is often more intricate, time consuming and expensive than traditional programme delivery”.*

P6: *“The nuts and bolts of RPL [are] very technical, examples are profiling of the candidate which takes considerable effort and resources by specialist RPL practitioners which is not always recognised or costed for”.*

P4: *“External parties do not appreciate the vast cost implications. We often must do gap training where the candidate may not have experience to cover all the outcomes, however the funding is very little. RPL is not a fast-track process, it takes lots of time and money”.*

During a follow-up question, the above participant (P4) added to their response:

P4: *"We are paid very little in the way of SETA grants for RPL, this needs to be revised with an understanding of the nuances of working with RPL in the occupational education and training sector".*

Expense is commonly cited as a growing concern in RPL, one which is ever-increasing (Andersen, 2016). Complicated, paper-intensive, and time-consuming processes that providers bring onto themselves, or which are imposed by awarding bodies continue to plague the implementation of RPL (PSETA, 2017). Implementation in the occupational education and training space is thus viewed as cumbersome and far too expensive (DHET, 2013) for practicality.

Aggarwal (2015) asserts that inadequate or poorly developed funding models add to the blockages in RPL implementation. RPL is costly and a bespoke funding model for RPL activities is a cited gap (Thobejane, 2016). The International Labour Office (2018) agrees with this sentiment by stating that rising costs, insufficient funds for supporting RPL and improper financial models are to blame for much of the plight being faced. Costing for RPL needs to be harmonised across private providers; similarly, RPL services in the public sector also need to be consistently priced and funded (PSETA, 2017).

Barrier theme 5: Meagre RPL awareness, capacity building and advocacy amongst stakeholders

The final theme uncovered was the lack of awareness, devoid capacity building and general poor advocacy amongst stakeholders in the RPL implementation pipeline. The following interview excerpts lay evidence to the realities on the ground:

P4: *"Employers and learning and development professionals usually have an HR background- this is far from understanding the distinctions of adult learning and RPL- which is technical, and this leads to confusion. They often give us RPL candidates that are not ready for RPL and who do not meet criteria. Confusion, confusion, and more confusion. Something needs to be done to get everyone on the same page when it comes down to RPL. There is almost no collaboration like there used to be".*

P1: *“There is little in the way of sessions for RPL, sessions where we can learn from others, share our experiences, and form common understandings. What I mean is real and solid information sharing and not just once-off sessions, where we can be taken through the different aspects of RPL. This will not only build our practice but encourage us to share with other providers in the sector”.*

The occupational education and training sector is made up of various stakeholders such as employers, authorities and providers, each exerting an effect on one another during the RPL process. This barrier entails that confusion framed the experiences of participants in the study. Such confusion was not limited to participant providers only but reverberated across to other stakeholders such as employers and authorities. Respondents felt ill-equipped and with little support or awareness. Aggarwal (2015) posits that inconsistencies and lack of understanding of RPL presents the bulk of challenges with the concept. This is further echoed by the International Labour Office (2018), where lack of awareness and knowledge on RPL has led to incorrect assumptions, beliefs, and notions on how RPL works and what is considered best practice. This may have had a rippling effect on all stakeholders.

Like any educational concept, it takes time for stakeholders to fully accept it (PSETA, 2017). This is further seen as holding true when it comes to RPL. Moreover, the majority are unaware or misinformed on RPL, its processes and methodologies (Aggarwal, 2015); this adds to growing calls for augmented support, cohesion, and participation at all levels (DHET, 2013). Andersen (2016) argues that one of the major barriers to RPL is a lack of understanding and awareness of the topic. In this regard, Aggarwal (2015) stresses the importance of ensuring active participation by all stakeholders, especially employers and learners, in the planning, implementation and evaluation of RPL, so that discourse is attained from the ground up. Ibid goes on to indicate that RPL has become ever-complex with myriad acronyms, expectations, and policies. The consensus is that systems for policy discourse and training of providers or practitioners is not adequate (Thobejane, 2016). Greater levels of formalised training and discourse on the topic is thus a vital building block to a lucid national RPL system in the occupational education and training sector (DHET, 2013).

The five major themes of barriers with RPL implementation for the participating

providers seem congruent with literature where it is noted that RPL has not reached anywhere close to its true implementation potential (Cooper *et al.*, 2017). It is emphasised that RPL has been waning from its early potential and promise (DHET, 2013). Despite high expectation from RPL, many countries are experiencing a slow implementation, and difficulty in upscaling from project-based implementation to establishing a sustainable national system that is widely accessible (Aggarwal, 2015). The above themes signify that there is significant work which needs to be done to address the challenges experienced by the participants on the ground. The next objective deals with the extent to which barriers are impacting RPL providers.

Research objective 2: To determine the extent to which discovered barriers affect the implementation of RPL

Barriers in RPL greatly affected the ability of providers to operate effectively when participants reflected on their own practice. The degree of effect varied amongst participants from minor challenges through to wanting to be completely divorced from the concept altogether. Incidentally, a major proportion of respondents indicated that they preferred to not be involved with RPL and favoured teaching and learning in the traditional manner. This paints an uninviting picture and illustrates that barriers are affecting respondents negatively. These results are not anomalous, considering the context that RPL implementation has been widely criticised as having failed to deliver on promises in South Africa (PSETA, 2017; DHET, 2013); is severely constrained amongst implementing providers (Thobejane, 2016) and; there is growing tension between the intent of RPL and limitations experienced on the ground (Cooper *et al.*, 2017).

During interviews, respondents were asked to reflect on barriers and rate their severity on a scale of low, medium to critical. Barrier themes 1; 4 and 5 (The highly contested, complicated, and technical nature of RPL; financial constraints in implementing RPL; and meagre RPL awareness, capacity building and advocacy amongst stakeholders, respectively) were rated as 'critical', with the remaining two themes (barrier 2: scarcity of skilled RPL practitioners of RPL and barrier 3: ineffective internal management) being ranked as medium effectors. This entails that the majority of the five barrier themes cited in the interviews are perceived to have reached a critical point already. Hence, there needs to be pressing interventions to lessen the impact of challenges experienced (DHET, 2013).

The barriers with the highest criticality embodied issues of misunderstanding, subjectivity, and confusion in the sector. Considering that the sector has several participants (Aggarwal, 2015), each must understand RPL and their role in the process for optimal implementation (International Labour Office, 2018). In addition, the lack of RPL tools/assessment due to increasing technical requirements, policy coherence amongst the different awarding bodies (DHET, 2013) along with inefficiencies and non-standardisation in practice gave rise to on-going debates on the quality and effectiveness of RPL. Other issues signalled with high severity are the lack of training and support along with funding and project ambiguities. The rising cost implications of RPL also featured with high criticality.

Medium rated barriers were poor management of RPL coupled with the widely cited lack of expert practitioners (Andersen, 2016). Respondents further specified that whilst competition and saturation of RPL providers are increasing, this remained moderately concerning. Upon analysing the severity of barriers, one can surmise that there is a constant interplay between all barriers, whilst each barrier can be argued as distinctive, the prevalence of one type of barrier may act to worsen the effects of other types of barriers, making them mutually inclusive.

In probing deeper to understand the effect and extent to which barriers were affecting participant providers, an interview question sought to reveal root causes to the barriers in RPL implementation. An interesting finding is that root cause(s) can be classified as both textural and structural as they have permutations within the providers (internally), as well as externally (attributed to the wider operating environment). The indications from the interview responses enabled the development of a cause-and-effect diagram (Figure 1) to depict how varied root causes were.

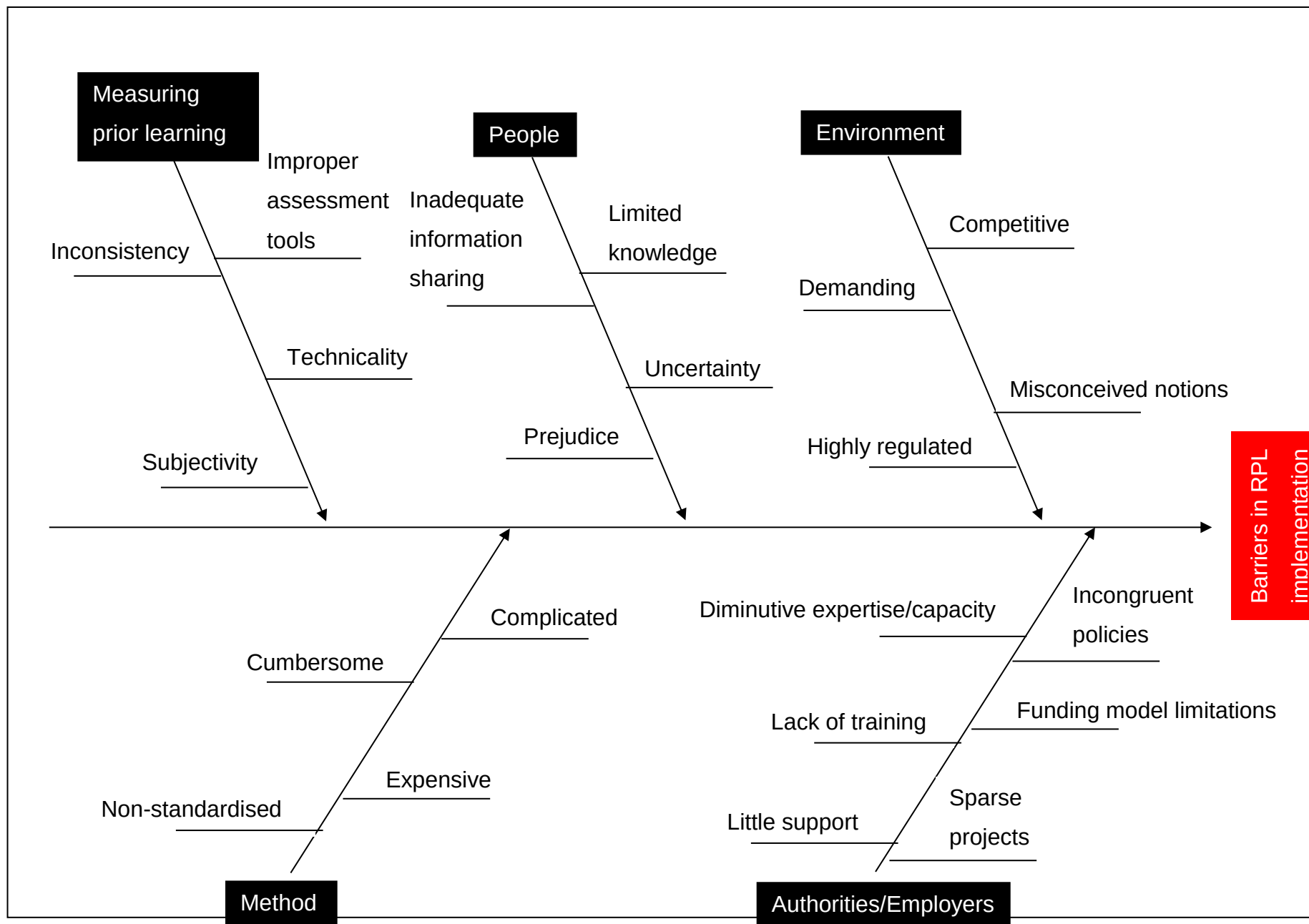


Figure 1: Root causes which give rise to barriers with RPL

Research objective 3: To propose appropriate strategies aimed at addressing barriers

The final research objective seeks to propose recommendations to improve the practice of RPL implementation in the occupational education and training landscape, from the perspective of the implementing provider. Participants highlighted strategies that encompassed greater levels of information-sharing, unification, and simplification of processes along with funding realignment and prioritisation in the sector.

Based on the findings, the following recommendations are put forward, framed on the underpinning theories reviewed:

- Learners should be profiled at the start of the RPL intervention and throughout the course of the undertaking (Snyman and van den Berg, 2017). This should be achieved using an established experiential learning model such as Kolb's learning styles (Kolb and Kolb, 2013). The matching of learners to styles gives greater focus back to the learner (learner-centeredness), permits for bespoke development of tools and assessments which are based on a learner's proficiency and acts to reduce the effects of subjectivity, prejudice, and technicality as barriers.
- Planning and implementation of RPL interventions should be undertaken using an adaptation of Knowles's learning contract (Knowles, 1986). This entails that any RPL tools, resources, and methods must be defined and negotiated between provider and learner in advance (Tennant, 2006). This contract could then form part of the blueprint for the RPL intervention and will aid to eliminate challenges found in over-complexity and uncertainty for role-players involved.
- SETA(s) and/or quality councils should encourage regular information sharing sessions between RPL providers. In this sense, providers should be encouraged to participate in a dialogic constructivist paradigm (Gravett, 2005), by sharing knowledge, collaborating, challenging assumptions, and constructing new realities through reflection on collective experience. The constitution of such sessions could also be extended to internal SETA staff members, practitioners, employers, and other relevant stakeholders. This could potentially bridge gaps prevalent in misinformation, uncertainty and will increase expertise in practice.

- SETA(s) and/or quality councils should offer formalised workshops and/or training dedicated to RPL education. These should target employers, practitioners (to alleviate shortages and capacity in the sector) and providers. Workshops/training should be continuous and linked to performance contracts and plans (International Labour Office, 2018). The advantages of focused training initiatives will act to alleviate several barriers such as lack of awareness, complexity, and internal management failures (Gravett, 2005).
- Authorities and/or quality councils should continually simplify and further standardise RPL policy, procedures, practices, and standards across sectors. Providers should not have to subscribe to copious requirements, some of which could be in contradiction with others. A common and shared understanding and practice is required in the sector to alleviate non-standardisation, confusion, and incongruences (Aggarwal, 2015).
- Processes and methods should be reviewed and updated to alleviate growing concerns over financial and resource constraints. RPL processes should cater for effectiveness and efficiency, thereby removing cumbersome, duplicated and evidence-laden steps where such could have been avoided or streamlined. Where possible, integrated systems and e-RPL (Heinonen and Tuomainen, 2020) should be explored with a shared and clear understanding/expectation amongst employers, providers, and authorities.
- Authorities should investigate and formalise plans that shift the focus away from “comply-or-else” approaches, to creating conversations and partnerships with providers. These partnerships should position each stakeholder in the RPL process as equally significant and must exude a joint willingness to proactively identify barriers in the process in order to eliminate them for the common benefit. It has been argued that RPL requires a strong collaborative approach and constant rapport between all parties to see maximum value potential (Aggarwal, 2015). The high regulatory environment and lack of support will be minimised with the reforming of robust partnerships.
- Suitable models for funding of RPL interventions should be developed or revised where necessary to cater for the nuances of RPL. These models must make provision for learner profiling, gap training, tool development and

specialist support required during RPL. Funding models should be researched, evidence-based, properly trialled and piloted along with being continuously revised to ensure sustainability, incentivisation, cost-benefit and fairness.

- SETA(s) and industry boards should be bent on developing RPL committees, advisory structures, and knowledge banks. These will aid with cited gaps in advocacy of RPL in the sector and quell any misconceptions or misinformation. Committees may also be mandated to look into other types of barriers in RPL or proposals to enhance the practice of RPL within the sector.
- A strengthening of projects targeting RPL should occur in the performance plans and strategic plans of SETA(s)/quality councils where applicable. These projects should not only be limited to RPL implementation but should pilot new research or recommendations in associated areas such as streamlining processes, e-assessment tools (International Labour Office, 2018), RPL funding models and practitioner capacity development.

CONCLUSION

Whereas this study unearthed and explored barriers in the implementation of RPL from the direct perspective of the SETA-Accredited adult education provider participant, such barriers need not be permanent. The challenges echoed in the study from the views of participants will require a concerted and meaningful effort from all involved in the RPL pipeline to systematically reduce and/or eliminate. Studies such as these shed light on areas often overlooked and give impetus to correcting and improving the practice of RPL from the occupational education and training sector, fuelled from the reservoir of working-experiences of those implementing the concept on the ground.

Adult learning, experiential and constructivism theories enabled us to view the barriers in a more cohesive manner by affording the study with a situated-constructivist lens for analysis i.e., viewing the barriers through the experience-driven context of the participant. Furthermore, underpinning theories found particular uses in the proposal of strategies aimed at alleviating discovered barriers through the adoption of experiential learning, andragogy, and applications of constructivism, in a bid to augment practice for implementers of RPL.

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An evaluation of the effectiveness of the current South African legislative framework on trafficking in persons: A comparative analysis

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ABSTRACT

The recent Laser Pulse report posits that trafficking in persons should be considered as part of manifold overlapping systems of violence and social phenomena that enable and underpin human trafficking in South Africa. In terms of this report, the mere nature of concealment and dissidence associated with trafficking in persons has contributed to South Africa not only being classified as a source for trafficking in persons but also as a country of transit and destination of trafficking in persons. The aforesaid probes the question as to whether the current legislative framework to combat trafficking in persons requires amendment or whether there is a need for more effective enforcement.

This article critically evaluates the Prevention and Combatting of Trafficking in Persons (PACOTIP) Act 7 of 2013 as well as the National Policy Framework (NPF) on the prevention and combatting of trafficking in persons. The article specifically evaluates whether, by applying the same punishment to all forms of human trafficking, there is a need for law reform by providing different forms of sanctions that speak to the severity of the actual form of human trafficking. The study thus analyses local and international literature and the current legislative framework on human trafficking in South Africa. The South African legislative framework in combatting trafficking in persons is juxtaposed with the United States of America as well as Namibia's human trafficking legislation, which are globally viewed as progressive legislative systems. The study

thus comprises a desktop analysis that encompasses a comparative analysis. Both the qualitative research methodology and documentary analysis allowed for the evaluation of primary and secondary sources in identifying any shortcomings in the current legislative framework to combat trafficking in persons. From the research findings recommendations are made to strengthen the current South African legislative framework, *inter alia* by addressing issues such as the need to understand the adverse nature of each form of human trafficking, and to prescribe appropriate sanctions considering the gravity of the transgression.

Keywords: combat, human trafficking, legislative framework

INTRODUCTION

The level of punishment imposed on the commission of an offense should and must reveal the seriousness of the offense in question. In this regard, the punishment must equal the wrongdoing. The South African legislative framework on human trafficking imposes a life prison sentence for the commission of human trafficking and a sanction not exceeding R100 million.¹ In urging the aforementioned punishment, the South African legislative framework addresses the human trafficking problem as a whole and rejects individual attention to the various forms of human trafficking offenses despite being identified and defined in terms of the Prevention and Combating of Trafficking in Persons (PACOTIP) Act 7 of 2013. In this regard, section 1 of the Act defines different forms of trafficking in persons such as trafficking in forced labour, sexual exploitation, for the removal of body parts, and human servitude.² Moreover, the Act defines another form of human trafficking under section 5 of the Act described as debt bondage.³

Although the Act has confirmed the existence of various forms of human trafficking offenses, it may have fallen short in illustrating an understanding of the nature and seriousness of each form of human trafficking as it applies the same level of punishment to all types of trafficking in terms of section 13 of the PACOTIP Act. A generalised approach is thus applied in prosecuting all forms of human trafficking. It

¹ Prevention and Combating of Trafficking in Persons Act 7 of 2013 (hereinafter referred to as "the PACOTIP Act") Section 13(b) of the PACOTIP Act states that "A person convicted of an offence referred to in section 4(2) is liable to a fine not exceeding R100 million or imprisonment, including imprisonment for life, or such imprisonment without the option of a fine or both".

² S 1 of PACOTIP Act.

³ Slavery Abolition Act 3 & 4 Will.4 c.73 of 1883.

thus questions whether the investigation into human trafficking is performed with sufficient knowledge and understanding of the nature and gravity of each form of trafficking. The article commences with a historical overview of the current legislative framework in paragraph two followed by an analysis of the PACOTIP Act in paragraph three. Paragraphs four and five provide a comparative analysis of the legislative frameworks in combatting the trafficking in persons in America and Namibia. Ultimately some shortcomings are highlighted in paragraph six followed by recommendations for law reform.

THE HISTORICAL CONTEXT OF THE SOUTH AFRICAN LEGISLATIVE FRAMEWORK ON HUMAN TRAFFICKING

Human trafficking in the form of forced labour, slavery, and human servitude was once legalised in South Africa.⁴ The promulgation of the Slavery Abolition Act of 1833⁵ was the first step towards recognising the inhumanity of human trafficking. This Act abolished slavery within South Africa but did not prescribe punishment to perpetrators of slavery, which may inadvertently have contradicted the purpose and mandate of the Act. Moreover, the Act prioritised the compensation of slaveholders which may have led to the failure to recognise the rights of the victims of slavery. In this regard, it may be argued that the Slavery Abolition Act of 1833 did little in terms of abolishing human trafficking in the form of slavery in South Africa. The Slavery Abolition Act of 1833, therefore, had shortcomings that rendered the legislative framework on human trafficking ineffective. As a result of the aforesaid, the Slavery Abolition Act of 1833 was repealed and replaced by the Slave Trade Act Chapter 113 of 1824, which not only abolished slavery but offered punishment for the commission of slavery within South Africa.⁶

The allocation of punishment to the practice of slavery by the Slave Trade Act of 1824 was a significant advancement from the Slavery Abolition Act of 1833. As the understanding of the diverse nature of human trafficking began to broaden, human trafficking laws began to be sourced from Acts such as the Children's Act of 2005, the Intimidation Act of 1982, and common law offenses such as kidnapping, slavery, and

⁴ Facing History & Ourselves "Confronting Apartheid/ Before Apartheid" (undated) <https://www.facinghistory.org/confronting-apartheid/chapter-1/introduction> (accessed 2021- 10-25).

⁵ See fn 4 above.

⁶ Section III of the Slave Trade Act 1824.

assault.⁷ These laws, however, were not adequate to traverse the complex nature of human trafficking as they were fragmented and did not criminalise human trafficking but only prosecute human trafficking offenders. These laws were thus limited as only certain victims of human trafficking were protected.⁸ To this end section 141 (1) (b) and (c) of the Children's Act of 2005⁹ stipulates that no person may offer a child for slavery, debt bondage, servitude, forced or compulsory labour, or provision of services.¹⁰ Moreover, section 141 (1) (b) and (c) of the said Act prohibits sexual exploitation and trafficking of children.¹¹ In as much as the Children's Act was applied to fight human trafficking, the Act did not prescribe sanctions for the commission of human trafficking. Thus, the Act was only limited in terms of protecting children to the exclusion of other victims of trafficking in persons. A lack of legislation to adequately deal with human trafficking, however, resulted in some provisions of the Children's Act having to be applied to address offenses of minors involved in human trafficking.¹² Subsequently, knowledge of and insight into human trafficking has received more attention from the legislature as trafficking in persons was incorporated in terms of several pieces of legislation.¹³ Ultimately the PACOTIP Act was promulgated in 2013. The provisions of the PACOTIP Act are expanded on hereunder.

THE PROMULGATION OF THE PACOTIP ACT

South Africa ratified the first global instrument to make trafficking in persons a crime which is the Protocol to Prevent, Suppress and Punish Trafficking in Persons, Especially Women and Children 15 of 2000 (Palermo Protocol) in 2004.¹⁴ As a result, the government is obliged to comply with the provisions of the Protocol. In terms of article 5,

Each State Party shall adopt such legislative and other measures as may be necessary to establish as criminal offences the conduct set forth in

⁷ Motseki & Mofokeng "Stakeholders as a Catalyst to Human Trafficking: A Case Study Of Three Selected Areas Of Gauteng Province, South Africa" 2020 obiter 4.

⁸ See fn 7 above.

⁹ See fn 7 above.

¹⁰ S 141 (1) (a) of the Children's Act 38 of 2005.

¹¹ S 141 (1) (a) and (b) of Act 38 of 2005.

¹² Motseki and Mofokeng Obiter 4.

¹³ See fn 12 above.

¹⁴ Republic of South Africa "The 10th session of the Working Group on Trafficking in Persons" (10 September 2020) https://www.unodc.org/documents/treaties/WG_TIP/WEBSITE/STATEMENTS/SOUTH_AFRICA.pdf (accessed 2022-10-25).

article 3 of this Protocol, when committed intentionally and (2) Each State Party shall also adopt such legislative and other measures as may be necessary to establish as criminal offences.

The promulgation of the PACOTIP Act represented an improvement in human trafficking laws within South Africa as a broader understanding of anti-human trafficking laws began to become crucial. The PACOTIP Act particularly touches on the different forms of human trafficking, a component that was not included in previous legislative frameworks. The specific section in the PACOTIP Act that linked the different forms of human trafficking is section 1. The section defines forced labour as services of a victim obtained through coercion or threats of harm, without the consent of that person.¹⁵ Section 1 of the PACOTIP Act also defines trafficking for sexual exploitation as the commission of any sexual offense and defines slavery as reducing a person by any means to a state of submitting to the control of another person, as if that other person owned that person.¹⁶ At the same time, section 5 of the PACOTIP Act defines debt bondage as where a person commits himself to enter into a debt arrangement.¹⁷ The PACOTIP Act also identifies organ trafficking. According to section 1 of the PACOTIP Act, organ trafficking is “the trade-in of any body part in contravention of any law”.¹⁸ This form of human trafficking was also not addressed in previous legislation on human trafficking. Accordingly, one should acknowledge that the PACOTIP Act has made significant strides in combatting human trafficking as it has managed to identify the different forms of human trafficking offenses.

In terms of the PACOTIP Act provision is also made for a sanction for the commission of human trafficking, a component that was lacking in the Slavery Abolition Act of 1833 and the Slave Trade Act of 1824. In an attempt to deter human trafficking within South Africa, the PACOTIP Act set out a strong message against human trafficking by imposing life imprisonment or a fine not exceeding one hundred million rands for the commission of any form of human trafficking.¹⁹ In as much as the PACOTIP Act is most certainly the most progressive legislation promulgated to combat human

¹⁵ S 1 of Act 7 of 2013.

¹⁶ See fn 14 above.

¹⁷ S 5 of Act 7 of 2013.

¹⁸ See fn 14 above.

¹⁹ S 13 (a) of Act 7 of 2013.

trafficking in South Africa, it is questionable whether the provisions of the Act are correctly and effectively understood and implemented. In this regard, the National Prevention Framework (NPF) on the prevention and combatting of trafficking in persons embraces the components of the PACOTIP Act and provides guidelines on the effective enforcement of the PACOTIP Act.

The NPF firstly outlines the anti-trafficking strategic measures that South Africa should comply with, in order to reduce human trafficking in South Africa, inter alia by building pertinent anti-trafficking institutional structures and overseeing associated duties. The sentencing guidelines may, however, be ineffective as it does not recognise the various forms of human trafficking as identified in terms of the PACOTIP Act. Section 1 of the PACOTIP Act explicitly states that there are various types of human trafficking, implying that each type has a unique nature. Because of this, it is suggested that different penalties, for the various types of human trafficking, should be established.

However, in South Africa, all types of offenses involving human trafficking are subject to the same level of punishment. At the same time, the various forms of trafficking as defined by section 1 of the PACOTIP Act vary in terms of inter alia the nature of the offence, and the gravity of the offence. It may thus be argued that an impression is created that all types of human trafficking are of the same nature and gravity. Section 13(a) of the PACOTIP Act also does not reflect the heinousness of each type of human trafficking violation. This questions whether the lack of distinct penalty provision in terms of the PACOTIP Act is effective in combatting trafficking in persons or whether there is a need for law reform. In addition to the aforesaid, the disjuncture between distinct human trafficking offences and a general sanction may lead to uncertainty, especially in terms of law enforcement. This ambiguity may in turn impact the effective implementation of the PACOTIP Act.

Although the PACOTIP Act and the NPF have filled in the gaps left by earlier legislative frameworks, further research is necessary to determine whether the PACOTIP Act and NPF are effective when it comes to prescribing punishments and penalties for human trafficking. International legal instruments, such as the Trafficking Victims Protection Act (TVPA) of 2000, may be used as a guideline in this regard. The TVPA prescribes specific sanctions that speak to the seriousness of each form of human trafficking offence.

THE EFFECTIVENESS OF THE PACOTIP ACT

The South African anti-trafficking legislation, according to Bello and Olutola, is explicit yet insufficient to address the complexity of trafficking and its interconnections with a range of collateral criminal acts.²⁰ In this regard, Farrel and Kane for example found that there are occasions where victims of trafficking for sexual exploitation have been arrested for prostitution and not recognised as victims of sexual exploitation.²¹ Patel supports this observation by claiming that the controversial discussion surrounding the decriminalisation of sex work overlaps with that of sex trafficking.²² He further argues that the similarity between sex work and sex trafficking makes the PACOTIP Act difficult to enforce.²³ As a result, it can be argued that failing to address the complexities of human trafficking creates difficulties in identifying human trafficking cases and has an impact on investigations. In this regard, judges may encounter problems when trying to interpret the menace of human trafficking during court trials. Buthelezi emphasises that because the legislative frameworks on human trafficking do not explicitly and comprehensively address trafficking trends and differentiate between different sanctions depending on the distinct offence, stakeholders who work with victims, such as law enforcement and courts, may not adequately comprehend and be aware of trafficking trends.²⁴

It is debatable whether the failure of legislative frameworks to address human trafficking has contributed to a lack of knowledge and understanding of the crime, which may have an unintended consequence for law enforcement. Bello and Olutola emphasised that insufficient information and inadequate comprehension of the crime may significantly add to the poor and inefficient response to human trafficking.²⁵ While acknowledging the presence of human trafficking in South Africa, the authors also noted that many role players and frontline workers may lack adequate awareness and comprehension of the specific crime and the distinct type thereof.²⁶ As the PACOTIP

²⁰ Bello and Olutola "Effective Response to Human Trafficking in Africa: Law as a Toothless Bulldog" 2022 *obiter* 7.

²¹ See fn 20 above.

²² Jaynisha Patel: Strengthening the Enforcement of Policy to combat Human Trafficking: A network Approach for improving collaboration (Masters Dissertation University of Cape Town) 2020 27

²³ See fn 22 above.

²⁴ See fn 22 above.

²⁵ Bello and Olutola (2022) *Obiter* 9.

²⁶ See fn 20 above.

Act and the NPF, in particular, do not explicitly distinguish between human trafficking, smuggling, and illegal immigrants, on the one hand, and prostitution, and sex work, on the other, it causes ambiguity. As a result, Bello and Olutola argue that it becomes challenging for law enforcement officials to assist victims or detain offenders for the correct offence.²⁷ Incorporating the guidelines contained in the TVPA as far as giving specific insight into each form of human trafficking, may thus also lead to a better comprehension of human trafficking in order to strengthen the PACOTIP Act.

THE UNITED STATES OF AMERICA (USA) IN COMBATING HUMAN TRAFFICKING

As awareness of human trafficking increased, the USA government realised that purposive legislation was required to address how traffickers operate and that it was important to use the legal resources necessary to combat human trafficking in all of its manifestations.²⁸ The TVPA requires that the Secretary of State submit a list of countries that require special scrutiny to Congress and to provide an Interim Assessment of the progress made in combating trafficking in persons (TIP) by the countries on that list.²⁹ As a result, the USA is progressive in terms of promulgating legislation to combat human trafficking and thus an ideal country to learn from. Like South Africa, the USA legislative framework on human trafficking has evolved. An example in this regard is the Mann Act of 1910, a federal law that criminalised the transportation of “any woman or girl for the purpose of prostitution or debauchery, or for any other immoral purpose”.³⁰ Numerous detractors pointed out that this Act carried racial overtones and ended up rendering many forms of consensual sexual conduct illegal.³¹ Mollema argues that slavery in all its forms has afflicted the USA since the Mann Act was passed.³² She further notes that the umbrella term “human trafficking” has been broadened to include all types of coercive behaviour.³³ This development

²⁷ See fn 20 above.

²⁸ U.S Department of State “2020 Trafficking in Persons Report” (June 2020) <https://www.state.gov/reports/2020-trafficking-in-persons-report/> (accessed 2022-03-28).

²⁹ See fn 28 above.

³⁰ See fn 32 below.

³¹ See fn 32 below.

³² Mollema, N (2013) Combating human trafficking in South Africa: a comparative legal study, University of South Africa, Pretoria, <http://hdl.handle.net/10500/10189>.

³³ See fn 32 above.

called for the promulgation of comprehensive legislation to effectively address human trafficking. It was in this regard that the TVPA of 2000 was promulgated.

The TVPA does not only monitor human trafficking within the USA but it also monitors human trafficking on a broader scale internationally.³⁴ The fact that the term “human trafficking” was broadened to include all types of coercive behaviour and that the USA was propelled to draft more comprehensive legislation in this regard portrays USA’s awareness of the complexity of human trafficking. As a result of the aforesaid, the US Department of Homeland Security (DHS) opened 1024 inquiries into human trafficking cases in 2019, and 947 inquiries in 2020.³⁵ The Department of Justice (DOJ) also launched a total of 343 federal human trafficking cases in 2019, and 337 in 2020 to ensure that the implementation of the TVPA succeeds.³⁶ In addition, the DOJ secured 475 convictions in 2019 and 309 in 2020.³⁷

By enhancing and updating trafficking laws, the TVPA seeks not only to improve domestic enforcement practices but also to influence other nations through legislative leadership and to harmonise trafficking laws worldwide.³⁸ In this regard, South Africa may be able to adopt some of the TVPA’s measures to strengthen its legislative framework on human trafficking as the measures have clearly had a domestic impact in combating human trafficking in the USA.

LESSONS TO BE LEARNED FROM THE USA

Section 108 of the TVPA provides minimum standards for the elimination of trafficking applicable to the government of a country of origin, transit, or destination for a significant number of victims of severe forms of trafficking are the following:

- 1 The government of the country is enjoined to prohibit severe forms of trafficking in persons and to punish acts of such trafficking.³⁹
- 2 For the knowing commission of any act of sex trafficking involving force, fraud, coercion, or in which the victim of sex trafficking is a child incapable of giving consent, causes a death, the government of the country should prescribe

³⁴ See fn 28 above.

³⁵ See fn 32 above.

³⁶ See fn 32 above.

³⁷ See fn 32 above.

³⁸ See fn 32 above.

³⁹ S 108 (1) of the Trafficking Victims Protection Act 2000.

punishment commensurate with that for grave crimes, such as forcible sexual assault.⁴⁰

- 3 For the knowing commission of any act of a severe form of trafficking in persons, the government of the country should prescribe punishment that is sufficiently stringent to deter and that adequately reflects the heinous nature of the offense.⁴¹
- 4 The government of the country should make serious and sustained efforts to eliminate severe forms of trafficking in persons.⁴²

Section 4(1) of the PACOTIP Act, provides that

any person who delivers, recruits, transports, transfers, harbours, sells, exchanges, leases or receives another person within or across the borders of the Republic, by means of, for example, kidnapping aimed at either the person or an immediate family member of that person or any other person in close relationship to that person, for the purpose of any form or manner of exploitation, is guilty of the offense of trafficking in persons”.

Section 13 of the PACOTIP Act also penalizes all forms of human trafficking. The PACOTIP Act, therefore, complies with section 108 (1) of the TVPA by prohibiting all forms of human trafficking.

On the other hand, South Africa fails to meet the second minimum standard outlined in the TVPA. The second minimum standard states that “for the knowing commission of any act of sex trafficking involving force, fraud, coercion, or in which the victim of sex trafficking is a child incapable of giving consent, causes a death, the government of the country should prescribe punishment commensurate with that for grave crimes, such as forcible sexual assault”.⁴³ This standard, therefore, requires that the penalties imposed by the PACOTIP Act be commensurate to the punishment imposed on rape offenders by the Criminal Law Amendment Act. The 2020 Global Trafficking in Persons Report clearly indicated that, in the case of sex trafficking, the prescribed

⁴⁰ S 108 (2) of Act 2000.

⁴¹ S 108 (3) of Act 2000.

⁴² S 108 (4) of Act 2000.

⁴³ See fn 40 above.

punishment is not commensurate with those for other serious crimes such as rape. As a result, the sanction imposed in terms of section 13 of the PACOTIP Act does not meet the TVPA's second minimum standard. In addition, in terms of section 51(1) of the Criminal Law Amendment Act, the prescribed punishment imposed in terms of a conviction of rape is life imprisonment. The Criminal Law Amendment Act does not substitute life imprisonment for a fine when it comes to rape punishment. This renders the PACOTIP Act's penalties incompatible with the Criminal Law Amendment Act and the TVPA Act's second minimum standard.

Accordingly, there is a difference in the punishment imposed on sex trafficking and rape offenders, as sex trafficking offenders are given the option of a fine in lieu of life imprisonment, whereas rape offenders are only given life imprisonment. This disparity implies, to some extent, that sex trafficking does not constitute some components of rape, which contrasts with the second minimum standard imposed by the TVPA. This discrepancy highlights the fact that South Africa's legislative framework on human trafficking, in particular the sanction thereof, does not align with global standards.

The third minimum standard of the TVPA includes a more specific guideline for how penalties and sanctions should be imposed on human trafficking offenders. The third minimum standard is set out in section 108 (3) of the TVPA. It states that "for the knowing commission of any act of a severe form of trafficking in persons, the government of the country should prescribe punishment that is sufficiently stringent to deter and that adequately reflects the heinous nature of the offense".⁴⁴ The third minimum standard implies that the severity of punishment for various forms of human trafficking in South Africa should differ in order to reflect the nature of each form of human trafficking within the country. At the same time, the third minimum standard contradicts the manner in which sanctions and penalties are imposed in terms of section 13 of the PACOTIP Act, which imposes life imprisonment or a hundred million rand fine for the commission of any form of human trafficking within South Africa. As a result, South Africa also does not meet the third minimum standard outlined in the TVPA.

Yesufu further posits that human trafficking involves a series of offenses bundled together rather than a single crime. It is thus viewed as a criminal process rather than

⁴⁴ See fn 41 above.

a criminal occurrence.⁴⁵ This implies that human trafficking crimes differ in nature. Hence the third minimum standard of the TVPA seeks to promote awareness around the differences in the nature of human trafficking crimes by promoting the imposition of different sanctions and penalties for different human trafficking crimes. As a result, although section 1 of the PACOTIP Act clearly describes each form of human trafficking, section 13 of the same Act fails to provide appropriate sanctions and penalties for the various forms of human trafficking crimes. Furthermore, while the sanctions and penalties imposed by section 13 of the PACOTIP Act are stringent in order to deter human trafficking in general in South Africa, the sanctions do not reveal the heinous nature of each form of human trafficking because the same punishment is prescribed for all human trafficking crimes. The PACOTIP Act, therefore, does not make provision for the diversity of human trafficking crimes in the sanctions it prescribes. Unfortunately, this one-size-fits-all approach infers that all human trafficking crimes are of the same nature. This lack of preciseness may be indicative of a lack of understanding regarding the crime of human trafficking in South Africa.

The fourth minimum standard outlined in section 108 (4) of the TVPA requires a thorough understanding of the crime of human trafficking towards eradicating severe forms of human trafficking. It states that “the government of the country should make serious and sustained efforts to eliminate severe forms of trafficking in persons”.⁴⁶ The use of the term "severe forms of human trafficking" indicates that different forms of human trafficking warrant different sanctions and penalties, and in order to eliminate the severe forms of human trafficking in accordance with the fourth minimum standard, a clear distinction must be drawn between the severe forms of human trafficking and other related forms of human trafficking. It is also important to note that the use of the term "severe forms of human trafficking" in the TVPA, implies that the forms of human trafficking constitute different natures and warrant different sanctions and penalties, which sanction should show the gravity of each form of human trafficking. As a result, the minimum standards for the abolition of human trafficking in terms of the TVPA highlight some shortcomings in South Africa's legislative framework on human trafficking.

NAMIBIA IN COMBATING HUMAN TRAFFICKING

⁴⁵ Yesufu, S (2020) Human Trafficking: A South Africa Perspective.

⁴⁶ See fn 42 above.

Considering a country within the borders of Africa, Namibia is the only country that fully meets the minimum standards on the elimination of trafficking in persons set out in the TVPA⁴⁷ making it an ideal country to reflect on in the fight against human trafficking. According to the global Trafficking in Persons report, Namibia has made some progress in addressing human trafficking after promulgating the Prevention and Combatting of Trafficking in Persons Act of 2018.⁴⁸ Since then, the government has consistently maintained anti-trafficking law enforcement measures suggesting that the government of Namibia has made efforts to ensure human trafficking is eradicated in Namibia.⁴⁹ This approach has possibly helped Namibia in meeting the minimum standards for the elimination of trafficking in persons as set out in the TVPA.

One of the efforts that have been adopted by the Namibian government to combat trafficking in persons is through the launching of training manuals.⁵⁰ The purpose of the training manuals is to help increase knowledge among law enforcement officials on identifying trafficking in persons cases, protecting victims of trafficking in persons, and prosecuting perpetrators.⁵¹ The US State Department on Combatting Trafficking in Persons funded this initiative and as a result Namibia launched awareness campaigns which proved efficient in raising awareness of human trafficking to the general public.⁵²

To have a better understanding of human trafficking, its causes, consequences, including elements that differentiate trafficking in persons from other crimes the Namibian government launched a workshop on the crime in 2016.⁵³ This was to promote co-ordination amongst all the stakeholders⁵⁴ to effectively combat human trafficking and as a result Namibia may have an idea of the complexities of human trafficking because of these educational initiatives mentioned above to enable a clearer understanding of human trafficking. This paper mentioned that South Africa has a limited understanding of human trafficking hence launching workshops and

⁴⁷ Global Trafficking in Persons Report 2021.

⁴⁸ See fn 47 above.

⁴⁹ See fn 47 above.

⁵⁰ UN Migration "Namibia Ready to Combat Trafficking in Persons" (1 April 2019) <https://www.iom.int/news/namibia-ready-combat-trafficking-persons> (accessed 2023-11-24).

⁵¹ See fn 50 above.

⁵² See fn 50 above.

⁵³ UN Migration "IOM, Namibia Launch Initiative to Combat Human Trafficking" <https://www.iom.int/news/iom-namibia-launch-initiative-combat-human-trafficking> (12 April 2016) (accessed 2023-11-29).

⁵⁴ See fn 53 above.

awareness campaigns on the crime may help birth an adequate understanding of human trafficking for effective combat against the crime.

To prepare itself for the fight against human trafficking Namibia adopted regional training programs that include training of key service providers in combating human trafficking such as the criminal justice practitioners in 2015.⁵⁵ In this regard it may be argued that Namibia took the necessary steps to wage war against the menace of human trafficking within its territory. The effectiveness of these initiatives by Namibia are evident in that Namibia has maintained a status of meeting all the minimum standards on the elimination of trafficking in persons provided in the TVPA.⁵⁶

According to the global trafficking in persons report, the Namibian legislative framework on human trafficking has proven effective in the redress of human trafficking.⁵⁷ This was of particular significance during the recent COVID-19 pandemic where the Namibian government maintained overall protection efforts. These efforts have led to 19 trafficking victims being identified in 2019 and 30 victims in 2020.⁵⁸ In 2019, just after the coming into operation of the Prevention and Combatting of Trafficking in Persons Act in Namibia, the government prosecuted 15 defendants, and in 2020 it prosecuted 18 defendants and convicted 1 trafficker.⁵⁹ In 2020 19 victims were identified and a similar number of victims assisted law enforcement officers during the reporting period.⁶⁰ Moreover, authorities did not base access to victim services on cooperation with law enforcement. Further, the government allowed victims to testify in separate courtrooms where such rooms were available.⁶¹ It may be argued that the success in combating human trafficking is partly due to the Namibian government's level of compliance with the Namibian trafficking legislation.

One particular aspect of the legislative system in Namibian relates to the manner in which foreign victims of human trafficking are assisted. In South Africa victims of trafficking were only provided initial assistance. Foreign victims were also unable to

⁵⁵ Vhumbunu CH "Combating Human Trafficking in the Southern African Development Community: Strategies, Challenges, and Opportunities" 2020 2 obiter 193.

⁵⁶ Global Trafficking in Persons Report 2022.

⁵⁷ See fn 47 above.

⁵⁸ See fn 47 above.

⁵⁹ See fn 47 above.

⁶⁰ See fn 47 above.

⁶¹ See fn 47 above.

find employment even if they cooperated with law enforcement. To add to the difficulty, their trials could become prolonged over many years.⁶² In contrast, foreign victims of human trafficking in Namibia had access to the same assistance and shelters as local victims, and they could apply for temporary residency visas while judicial processes were being finalised.⁶³ South Africa may thus learn from Namibia to ensure that every victim of human trafficking is treated fairly regardless of nationality.

The sanction imposed on trafficking in persons also differs from South Africa. The Namibian legislation on human trafficking imposes a maximum of 30 years imprisonment and a fine not exceeding N\$1 million on first-time offenders of human trafficking and a maximum of 50 years imprisonment and a fine not exceeding N\$2 million on second-time offenders of human trafficking.⁶⁴ It is therefore evident that the anti-trafficking measures in Namibia have made a difference in the success rate of combatting human trafficking.

In as much as Namibia meets the minimum standards on the elimination of trafficking in persons, it has also fallen short in that despite the implementation of the National Referral Mechanism (NRM), Standard Operating Procedures (SOPs) and the Combating of Trafficking in Persons Act of 2018 that guide the identification of, and provide protective services to, human trafficking victims, the efforts Inter-Ministerial Committee on Trafficking in Persons working in collaboration with Namibian Police Force (NamPol), the Office of the Prosecutor General, immigration officials, and other stakeholders appear inadequate as human trafficking remains widespread in Namibia, especially children exploited in forced labour and sex trafficking mostly among the vulnerable San and Zemba ethnic groups.⁶⁵

The most prevalent form of human trafficking in Namibia is labour trafficking and trafficking pattern tends to be from rural areas to rural areas.⁶⁶ In this regard cases of Namibian children being exploited as farm laborers or as cattle herders in rural areas of Namibia are well documented.⁶⁷

⁶² See fn 47 above.

⁶³ Global Trafficking in Persons Report 2021 408.

⁶⁴ S 8 (2) (a) – (b) of the Prevention and Combatting of Trafficking in Persons Act 1 of 2018 of Namibia.

⁶⁵ Vhumbunu CH obiter 195.

⁶⁶ Iroanya *et al.* “Human Trafficking and illicit financial flows in Africa” 2019 25 obiter 48.

⁶⁷ See fn 66 above.

It is evident that in as much as Namibia is a step ahead from an African context in addressing human trafficking, it is not exempt from the continued existence of human trafficking as it still has ongoing cases of human trafficking as mentioned above. However there are surely some lessons to learn from Namibia as mentioned in the next section of this study.

RECOMMENDATIONS BASED ON THE OUTCOMES OF THE STUDY

Separation of the forms of trafficking in persons

As in the USA it may be worth considering allocating appropriate sanctions to each form of human trafficking. In this way differentiated punishment formulas will demonstrate the diverse nature of human trafficking crimes. The aforesaid may also do away with the simplistic approach adopted by law enforcement by fully comprehending the nature and gravity of the specific human trafficking offenses.

Allocation of separate sanctions to the different forms of trafficking in persons

Distinguishing between the different forms of human trafficking offenses in South Africa would enable South Africa to meet the third minimum standard on trafficking in persons as set out in the TVPA which implies that punishment for human trafficking offenses should reflect the heinous nature of each human trafficking offense.

Training South African Police Service (SAPS) officials at all levels

The fact that South Africa does not address human trafficking with precision indicates a lack of knowledge about the crime of human trafficking in terms of law enforcement. Local police stations remain the first point of contact with many victims, their families, and even offenders, hence the need to train officials to fully understand the nature of the crime. Training in terms of distinguishing between missing person cases and suspected cases of human trafficking is paramount. A solid working alliance between regional law enforcement and special units is therefore essential.

Protection of the rights of foreign victims of trafficking in persons

According to the findings of this study, victims of foreign human trafficking are denied assistance and face discrimination in South Africa due to their illegal status as undocumented immigrants. By contrast, Namibian trafficking in persons victims was not hindered or deprived of several forms of assistance. Namibia and the USA have

demonstrated how victims can be given care and consideration in this regard. Similarly, foreign trafficking in persons victims in Namibia have access to the same shelters and services as domestic victims, while foreign trafficking in persons victims in the USA were given the same aid as domestic victims and were accorded special status as crime victims rather than illegal aliens. As a result, when it comes to helping victims of international human trafficking, the South African government should give consideration to the example set by Namibia and the USA.

CONCLUSION

The purpose of this study was to evaluate the suitability and effectiveness of South Africa's legal system for combating human trafficking. A thorough historical description of the penalties for and prevention methods used in South Africa, Namibia, and the USA was given. When the laws of the chosen countries were compared, certain patterns emerged with regard to stopping trafficking, bringing offenders to justice, and protecting victims. In this regard, it has been determined that the South African legislative framework on human trafficking is more efficient than the Namibian legislative framework on human trafficking in that South Africa has ratified more international instruments than Namibia. However, Namibia is far ahead of South Africa in terms of effectively addressing human trafficking. All the above points to the fact that adequate legislation on human trafficking must be accompanied by corresponding actions if human trafficking is to be addressed effectively and efficiently.

The study acknowledged that while common-law and statutes forbidding crimes can be used to challenge several trafficking issues, these measures often prove insufficient to deal with the complexities of the crime and provide only a fragmented approach to combating it.

In this regard, it was demonstrated that the punishment prescribed for human trafficking offenders by common law and statutes proved insufficient and disproportionate to the offenses of human trafficking. The research has uncovered that South Africa's sentencing provisions need to be amended to adequately reflect the heinous nature of each type of human trafficking offense.

The research also established that the TVPA's minimum standards for the elimination of human trafficking provide guidelines for developing effective strategies to combat trafficking. An examination of the minimum standards for the abolition of human

trafficking reveals that the main solution lies in differentiating the various forms of human trafficking through the application of separate sanctions and penalties for each type of human trafficking offense. As indicated above, South Africa has not done this. One of the minimum standards for the elimination of human trafficking requires the identification of the most severe forms of human trafficking. However, this cannot be accomplished unless the sanctions and penalties for human trafficking differentiate between the various types of human trafficking. In light of the above observations, parliament should prioritise the differentiation of punishments for human trafficking offenders.

A clearer understanding of each human trafficking offense should certainly lead to punishments that are proportionate to each form of human trafficking. In so doing legislative provisions will fall in line with the third minimum standard of the TVPA which requires that the punishment for each human trafficking offense should reflect the heinous nature of the crime. Moreover, a proportionate punishment for each human trafficking offense will also render the South African legislative framework compliant with the fourth minimum standard on the elimination of trafficking in persons. The fourth minimum standard requires that countries should come up with sustained efforts to eliminate severe forms of trafficking in persons. In this regard it is the writer's argued view that proportionate sanctions allocated to each human trafficking offense will shed light on the most severe forms of human trafficking offenses so that sustained efforts may be adopted to eliminate them. Allocating a proportionate punishment to each human trafficking offense should make it easier for frontline officials such as SAPS to understand the severity of each human trafficking offense ahead of the investigations into each criminal offence. In light of the above, it is therefore safe to conclude that the current legislative framework for combatting human trafficking proves inadequate to tackle human trafficking effectively as it fails to present a proper perspective of each form of human trafficking offense. To answer the problem, the findings and recommendations presented by this study should be valuable.

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Micro textile entrepreneurship: An evolution from B2C to B2B

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ABSTRACT

The paper explores the transition of micro textile entrepreneurship from B2C to B2B in post-apartheid South Africa. The new democratic dispensation ushered in socio-political and economic transformation that opened access to global markets. This resulted in the prostration of local manufacturers to compete. The textile industry experienced an inflow of cheap products that local manufacturers could not compete against. This culminated into an escalation of job losses with skilled labour turning into micro textile manufacturers as a means of self-employment. The resultant saw mushrooming of formal and informal micro textiles industry. With the latter finding itself competing with the formal industry to sell clothing in a demand driven formal environment. The main objective of this research is to investigate the exclusionary measures experienced by micro textiles' manufacturers in the retail space. Corporate retailers have engineered an exclusive mechanism into their market, regardless of business size, manufacturers have to pay an exorbitant upfront "slotting fee" to enter into the formal retail market. The study delved into finding plausible solutions to the complexities amongst the links in the supply value chain as one sector in the chain feeds into the next. The exploratory research was conducted using Porter's 5 forces business framework on how micro textiles can improve their business models and remain competitive. A mixed methods approach was followed employing a purposive data collection technique for qualitative data and random stratified technique for quantitative data was used. The study reveals that a lack of economies of scale, limited negotiation skills, absence of business processes and varied individual skill and talent served as barriers to entry into corporate retail. Consequently, the W&R SETA and

allied SETAs should engage in an integrative manner to change the narrative for micro-textiles to a strategy which is empowering and competitive. Government entities are expected to establish enabling incubator hubs where micro manufacturers could be assisted on automation and digitalisation to meet corporate retailer standards.

Keywords: micro textiles manufacturers, economic exclusion, innovative entrepreneurship.

JEL Classification: M21, M30, M38, O31, O33

INTRODUCTION AND BACKGROUND

South Africa has experienced political, social, and economic changes as it entered the global arena following the end of apartheid and the upliftment of sanctions in 1992 (South African Government, 2020; Motshwanedi, *et al.*, 2018; Nursey-Bray & Ahluwalia, 1994). The opening of markets to international trade post-apartheid resulted in the government encountering many challenges ahead. The government faced double-digit unemployment figures, fluctuating currency due to international markets, and competition from an influx of imports from Asian countries (Mbatha, 2021; Mahambehala, 2019; Vlok, 2014). As job losses escalated, most of the skilled labour turned into micro-entrepreneurs. These saw the mushrooming of micro textile enterprises due to low barriers to entry into this industry. The sector is female dominated by operators who are without tertiary qualifications or managerial skills. They rely mostly on native skills, manual operations, and conventional tools to cater to customer needs and requirements (Liimatainen, 2019).

Research conducted by Kumar, *et al.* (2008) and Booyens (2011), unfolds a revelation whereby formal and informal micro-businesses mobilise a significant portion of economic development. Additionally, in developed countries where the level of education is high, and rate of inflation low, financial intermediaries play a significant role in financially supporting and nurturing innovative entrepreneurship. Discovery further unveils that innovative business hubs for entrepreneurs are vital for competitiveness of the economy and establishing new jobs (Kritikos, 2014). However, a picture painted by Liimatainen (2002) and Kumar *et al.* (2008) of developing countries, portrays a grim picture to that of developed economies in addressing formal and informal micro businesses. Informal enterprises from several parts of sub-Saharan African (SSA) countries receive little benefit from their governments' support, denying

them a vital economic developmental growth role to play (Daramola & Etim, 2020). For the purposes of this paper, the definition of an informal micro-enterprise is defined as a private enterprise employing less than 6 employees.

These organisations are not registered with the tax authorities for tax purposes, and are without complete formal accounting (Williams, *et al.*, 2016; de Wet, 2019). In as much as the study treats the textile and clothing sector as one sector, in principle they are two different sectors. The clothing industry is mostly practiced in developing countries as it offers entry-level jobs for unskilled labour and that relatively modern technology can be adopted at comparatively low investment costs. Whereas the textile sector is more capital-intensive and automated consisting of spinning, weaving, and/or knitting and finishing (Morris, *et al.*, 2004). The grim picture portrayed by developing countries of lack of growth has resulted in an exclusionary measure of micro textiles sector in South Africa. It is because of this reason that the study was conceptualised. The main objective being to investigate the exclusionary measures experienced by micro textiles manufacturers in the retail space and come up with remedies suitable for micro textile. Current corporate retailers have engineered an exclusive mechanism into the market, making it impossible to enter the market. A business practice has been enforced whereby manufactures, regardless of business size, have to pay an exorbitant upfront “slotting fee” in order for their products to be placed on retail shelves.

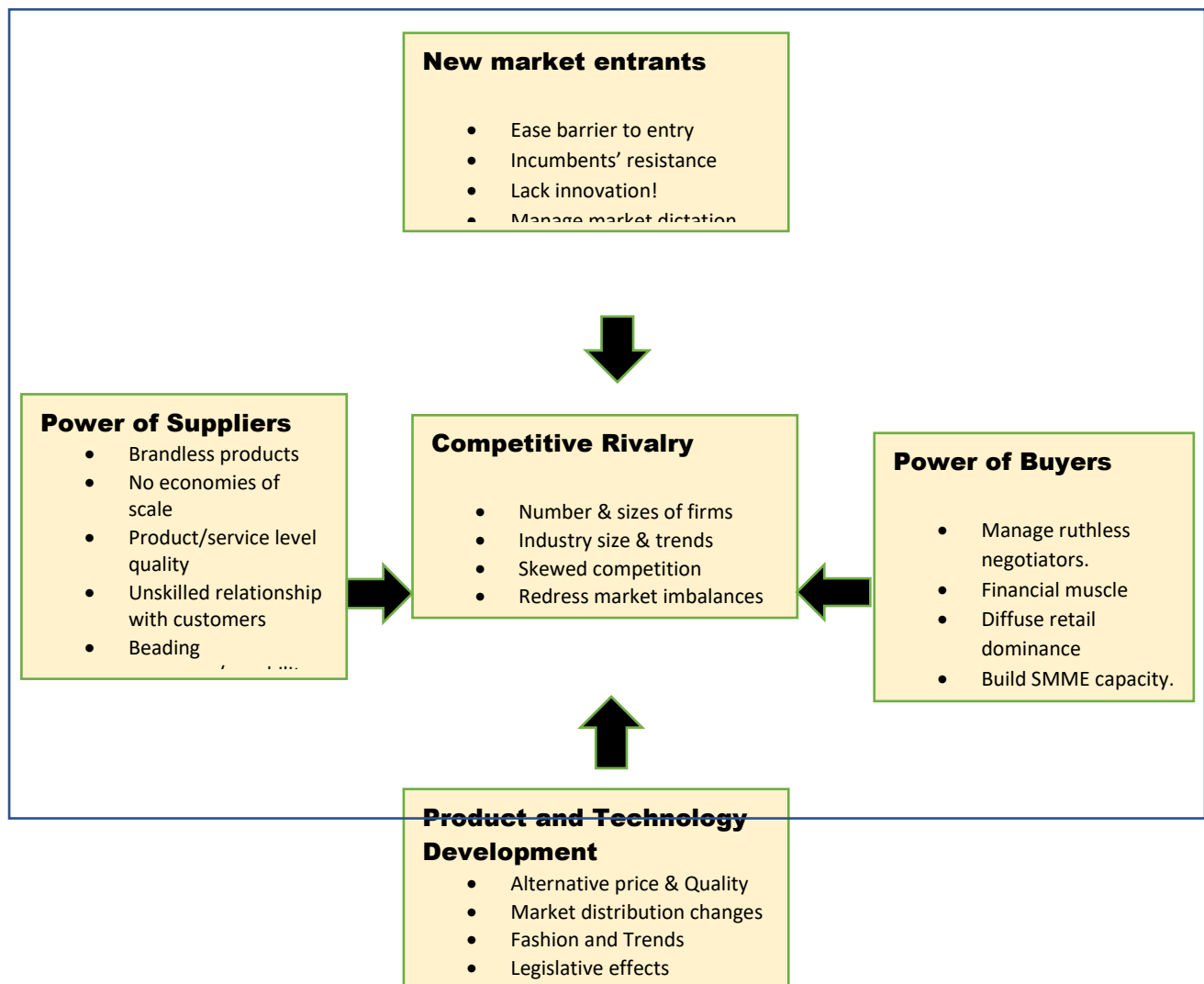
MATERIALS AND METHODS

Theoretical framework

History displays the textile and clothing industries as one of the fastest-growing industries. It is considered as a starter sector on the road to industrialisation, due to easy access to entry into the market (Khajuria & Singh 2018). Small and micro businesses find themselves having to compete with industrial corporates in the formal sector. Fogle (2021) presents valuable insights into the strong features of small businesses by suggesting that small businesses are agile, have the ability to personalise customer experiences, and give excellent customer service. However, in positioning a business, Taleb, *et al.* (2021) advocates for a holistic way of looking at the industry by making use of Porters’ 5 forces business framework. This tool has proved a valuable framework for competitive positioning in a market environment used to analyse drivers of profitability and competition (Taleb, *et al.*, 2021). Michael E.

Porter, an economist, researcher, author, and Harvard Business School professor, first designed the framework in 1979. It was designed to look at the industry's economy as a whole by understanding the competitive forces and their underlying causes (Martin, 2023). Figure 1 describes Porters' 5 forces of competitive position.

Figure 1: Porters 5 forces of competitive position



Source: Adapted from Porter's Five Forces Manuel 2015. A Firm's Micro-Environment

- **The centre of the framework looks at competitive rivalry:** The centre, or the hub, of Porter's Five forces is where the market rivalry is immense in the formal organised market at a macro level. The micro-level is relegated to contesting within their micro domain. There is limited or no virtual business-to-businesses

(B2B) level engagement between the macro and micro textile entities. Rivalry affects how firms compete against each other to gain customers, establish favourable supplier relationship, and defend against new firms entering the industry (Manuel, 2015). In the micro textile industry, competition in this space is extremely fierce; there is immense jostling for market share of a defined target market.

- **The Threat of New Entrants:** This refers to the threat that new competitors pose to current or existing players within an industry. A profitable industry always attracts competitors looking for profits. According to Islami, *et al.* (2022), the threat of new entrants is one of the forces that shape the competitive structure of an industry. Porter's threat of 'new entrants' definition revolutionised the way people look at competition in an industry (Dan, 2013). Barriers to entry in the micro textile space are low. Individuals engage in the micro textile space at different entry points and practice at different tiers (Machela, 2023). The tiers can be categorised into three groups, namely Tier 1, Tier II, and Tier III. Tier I businesses include advanced sewers that are registered and licensed to export textiles from the country. They can easily be excluded from a micro textile status due to the market they serve and the number of garments they produce (Yu, 2022).

Tier II are micro textiles that are advanced in skill and design. They can either work alone or employ up to three employees. These businesses are on the verge of registration or not registered, depending on operational personnel. Tier III is an entry-level stage in terms of skill and type of function performed. Practitioners rely on tailor and seamstress functions. Functions performed include but are not limited to, alterations on existing clothing designs, sewing, and manufacturing clothing. The operators in this tier go about performing and ensuring their clients have correct garment measurements and sizes (The Evans Group, 2021).

- **Buyer Power (differently put the bargaining power of customers):** This force examines the power of the consumer and its effect on quality and pricing. Consumers have power when they are fewer in number but there are plentiful sellers and it's easy for consumers to switch. If a firm provides a unique good or service, it will have the power to charge its customers premium prices, because those customers have no choice but to buy from the firm if they need that product (Martin, 2023; Manuel, 2015).
- In the case of micro-textiles, their customers are individual consumers as they trade at the end-user business-to-customer level. However, the ideal desired buyers are the conglomerates in the retail space. Transaction at this business-to-business level can contribute to real development and economic freedom in

the lifetime of micro textiles. Lamentably, one finds their condition exclusionary. This is affirmed by Rey & Whinston (2011) citing that, when retailers have exclusive bargaining power, equilibria in most cases will lead to the exclusion of a retailer from carrying the manufacturer's products. These systematic exclusionary conditions are mostly set by retailers, requiring manufacturers to pay an upfront "slotting fee" (Rey & Whinston, 2011). In contextualising the gate-keeping mechanisms employed, permitting only financially stronger retailers' access to entry into the markets perpetuates a hegemonic role played in the economy by larger retailers.

- **The bargaining power of suppliers (Supplier Power):** This refers to the balance of power in the relationship between firms and their suppliers in an industry. Suppliers can have the upper hand in a relationship if they offer specialised products or have an ability to charge higher prices or get better terms when negotiating with customers (Cook, 2022). This tilts and makes a mockery of Porters due to the power of the supplier theory, as micro-textile suppliers are powerless due to the forceful bargaining power of the buyer.
- **The threat of substitutes:** This refers to the availability of other products within the market that customers can purchase from outside an industry (AccountingTools, 2022). It is considered a threat as regular customers can migrate to new brands, which could result in loss of revenue. This has given rise to a need for brand and relationship management, where micro-entrepreneurs have to start giving much-needed attention to clients to avoid rival competitors' opportunity of 'stealing' clients. Substitutes bring a threat to the competitive structure of the industry because they offer a reasonably close replica and benefit at a competitive price even though the South African market is known to be brand-conscious and brand loyal (Wetpaint, 2023). The micro textile customers can be loyal to their retail brands provided that quality and affordability are satisfactory (Healthy Human, Healthy Human.). These micro textiles can offer a competitive price due to the lack of import duties and taxes that need to be paid on top of the quoted price (Romatex Editor, 2023).

According to Romatex Editor (2023), a local textile supplier is more understanding of the local market. They can understand nuances within the economy and logistical challenges within the sector. In addition, certain elements of their products can be tailor-made to suit customer needs and provide one with an order that fits the budget (Romatex Editor, 2023). In South Africa, micro textile and clothing enterprises have advanced initiatives in a manner that attracts customers, fulfilling shareholder expectations and withstanding competition (Fourie, 2018). New micro textile entrants into this sector often cannot compete with the corporate retailers hence trading in survival mode. Ironically, the garments offered by micro-textiles are of quality and can

be niche market driven, finding shelf space in larger retailers as originals and being mass produced.

Micro-textiles and market entry challenges

In scrutinising challenges faced by micro textile entrants who are manufacturers in the retail space, an exclusion criterion is discovered. The South African corporate conglomerates require all manufacturers regardless of size and financial muscle to pay an upfront amount for participation in the formal retail space. This “slotting fee” is often disguised as a “Trade Agreement”, which in all intents and purposes is “hegemonic”, “unequal” and a barrier to gaining access to the market. These fees are set at an exorbitant rate for micro textiles to afford, hence the power of retailers (who play the role of buyers) exclude and push small manufacturers out of the trading space constituting a systematic exclusion (Rey & Whinston, 2011). Rey and Whinston (2011) argue that the upfront slotting payments prevent small manufacturers (who have no bargaining power) from obtaining adequate distribution (i.e. their products being stocked by all retailers). Vessella (2014) is of the view that shelf space is highly coveted by manufacturers. It is from this premise that retailers charge an exorbitant fee regardless of company size to get products stocked on shelves (Vessella, 2014).

However, the market fee puts up an exclusivist signpost and fortifies the barriers of entry squeezing out the micro textiles or relegating them to a limited and defined market arena. It is from this unprincipled foundation that the study seeks to find solutions that are biased towards micro businesses so that these micro manufacturers can find themselves participating fully in the economic growth of the country. The main objective of the study was to assess the resource capability of micro textile enterprises in manufacturing quality and cost-effective brands that can be absorbed into the retail commercial space. The research questions included:

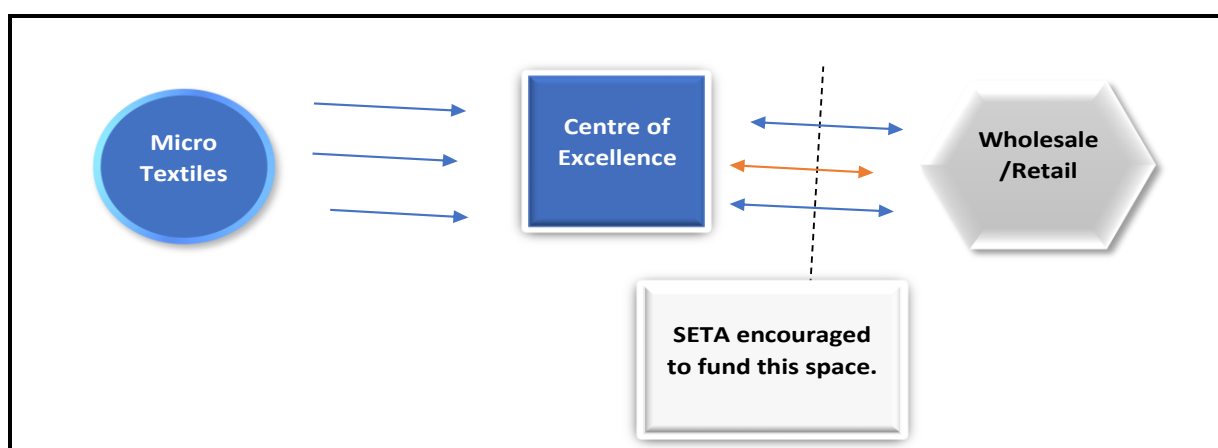
- Do micro textile enterprises have the expertise and capability to manufacture quality standards as set by retail requirements?
- Can micro textile management efficiently and effectively manage conglomerate demands?
- How can the use of technology assist micro textile enterprises to achieve desired output?

Economic exclusion

In defining economic exclusion, Gorkey (2019) outlines economic exclusion as barriers that limit or block one from accessing or participating within the economic activity of the nation, it not only excludes enterprises from economic trade, labour, education, consumption but from psychological well-being. Informal enterprises from several parts of sub-Saharan African (SSA) experience economic exclusion from their own governments. Countries not receiving any benefit from their governments in support are denied a key fundamental developmental role to play in the economic space (Daramola & Etim , 2020). It has at times been noted that it is easy for a financial institution to grant personal loans as opposed to business loans. Taking into consideration personal loans are deem expensive and unprotected. Economic exclusion for micro textiles has not changed in South Africa. The majority of informal textile enterprises contribute minimally to economic activity. The benefit extracted by business owners is them harvesting a minimal wage. A further discovery by Pandula (2015) reveals that micro manufactures have been systematically excluded from operating in the main textile stream manufacturing business. They are made to pay an upfront “slotting fee” to participate in the formal retail space.

The fee is exorbitant and unaffordable for micro textiles, yet the quality of garments they manufacture, are of acceptable quality to be in the formal retail space. Therefore, micro textiles struggle to gain access to this retail landscape due to limited financial resources. Kumo (2012) attributes the low performance of South Africa’s textile market to this exclusion from competing, poor infrastructure, and unfavourable governance. Exclusion of SMME’s hampers them from growth and product upscaling. The current operational environment discourages investment into appropriate technological infrastructure. The clothing sector is currently making use of Computer Aided Design (CAD) to develop designs, make patterns, grade pattern, mark production and lay planning. Technological innovation can assist the sector grow and speed production. Training and development of these entrepreneurs will allow businesses to integrate backward and forward in the supply chain within an enabling environment, this can be an enabler for success in the industry. Figure 2 displays SETA operational space.

Figure 2: SETA operational space



Source: Modified based on (Gereffi and Memedovic 2003; Asia-Pacific Economic Cooperation, 2017)

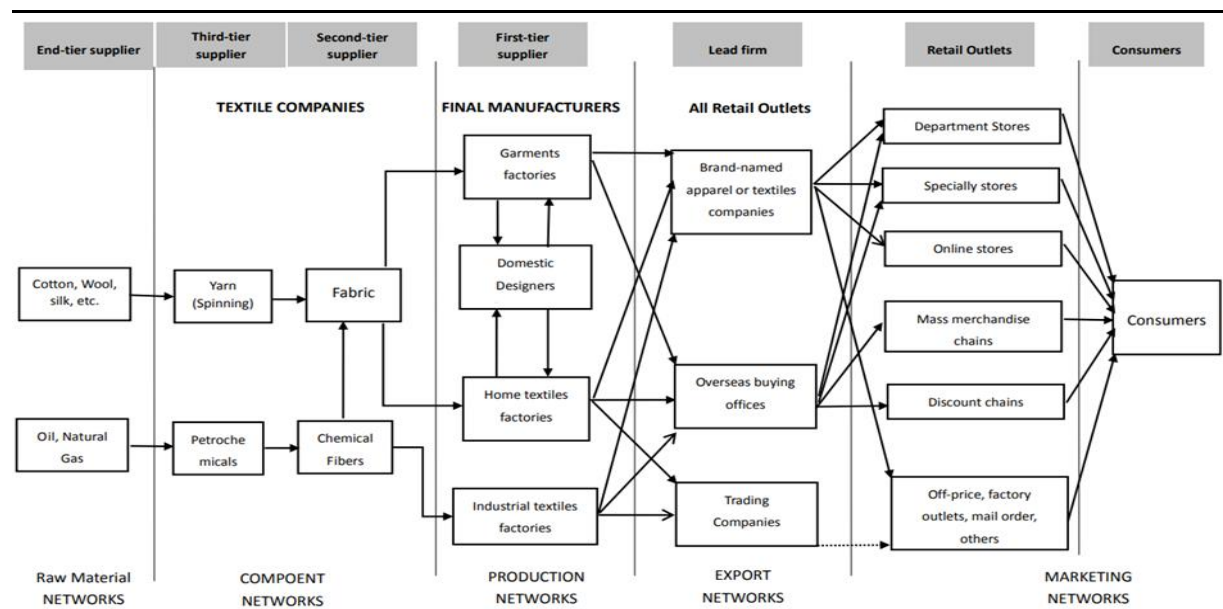
The suggested design of the South African model in Figure 1 takes its ethos from the Chinese global textile and apparel supply chain ecosystem in Figure 2. A suggested modification to the current exclusionary state to fit the South African micro textile industry's perspective is the main instigator for the study. The design of the retail textile supply chain should be inclusive for micro textile practitioners to manufacture and supply various retail store like departmental stores, online stores and specialised stores where possible. The exclusion has caused several problems and failures of implementation for competitive forces stemming from modern education especially when it comes to formal and informal micro businesses in South Africa. Lokhande, (2011), argues that SMMEs in South Africa are suffering from the situation of financial exclusion and lack of convenient access to credit. The non-availability of raw materials or increase in the price of raw materials without a corresponding increase in sale price of the products, makes it difficult to compete (Yadav & Vikas Tripathi, 2018)

▪ **Replicating the Chinese Textile Market Model as a viable alternative**

An explicit outline in Figure 3 below displays the supply chain of the Chinese textile market, which is the biggest in the world. The entire supply chain encompasses a seven-layer production sequence from end-manufacture to end-consumer. It includes the production or supplying of wool, spinning it into fabric and supplying the fabric to different industries. Within the supply chain various symbiotic distribution channels emanate distribution via industrial factories, distribution via domestic factories, and lastly, distribution via micro textiles also called home factories. The Chinese market is

inclusively designed to incorporate both industrial and home factories to manufacture garments for band-name companies, which ultimately sell to retail outlets and further for public consumption. The advantage for the model is that it developed micro textiles or family factories to achieve the desired set quality standard. The model acts as a buffer for participating micro textiles to produce quality garments to the standards set by brand-name companies. It is from this premise the researchers recommend a similar model design for the South African market. The benefit of such a model is the downstream employment opportunities for family factories to develop, feed into the value chain, and expand economic activities.

Figure 3: The Chinese textile value chain



Source: (Asia-Pacific Economic Cooperation, 2017)

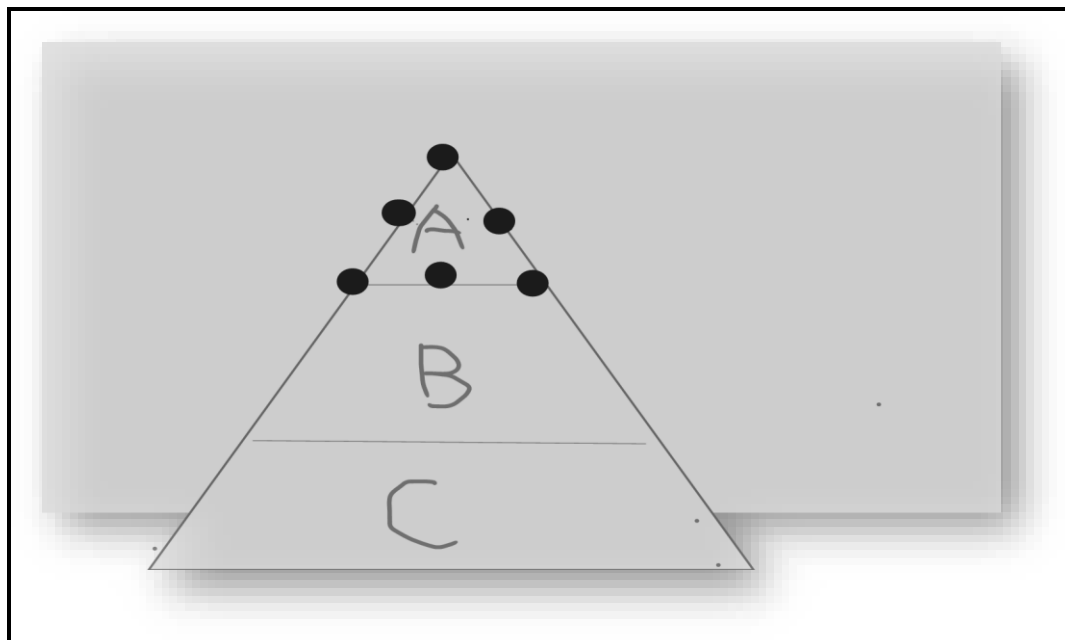
▪ **Government as an enabler for the development of Micro Textiles**

Engaging in a forward-thinking integration with the Sector Education and Training Authorities (SETA), is a skills development arm of the South African government as the Skills Development Act of 1998. There is a SETA for each industrial sector and building capacity amongst micro textiles which can be leveraged from funding from these entities. This can assist by changing the narrative from the current scenario, where micro textiles have been burdened with an enforced demand management business strategy. The business strategy forces micro textile manufactures to use “Focus strategy” (marketing and selling products to a niche market) in a highly

complicated, small, slow, and fragmented market marked “A” shown in Figure 4 below. The figure displays the three generic strategies and the markets they serve.



Figure 4: Market dictation



Source: Researchers Findings

Both market “B” and “C” are uncharted territory for the textile industry. The majority of the retailers operate in the area marked “A” and are represent by a highly priced niche market. Section “B” represents a medium-sized market, operating in a differentiation sect. The market sect is bigger than that of “A” but smaller than that of “C”. Due to economies of scale and demand there are very few micro textiles if any operating at differentiation and cost leadership strategy.

Innovative entrepreneurship

According to Caiazza *et al.* (2022) an innovative entrepreneurship approach is a key driver for economic development. It has been recommended by the Asia-Pacific Economic Cooperation (2017) for its member economies, which include China, Indonesia, Mexico, and Vietnam. This recommendation helped the member countries find solutions to the exclusion of micro textiles from participating in Global Value Chains in the textile and apparel industry. For this development to succeed a supportive ecosystem for emerging markets against established competition becomes a critical cornerstone for survival. The retail sector requires economies of scale to penetrate the mass market as they can manufacture quality garments. Economies of scale can be achieved by involving government organisations to fund the education and training of micro textiles in setting up as individualised, automated, and digitised micro-factories (Sourcing at Magic, 2018). By gaining exposure to digitisation an Innovation in Textiles (2017) suggests customers can send their design to the manufacturer (micro textile) via a computer application and the customer will be able to wear a customised, designed, perfectly fitting shirt the next day. Through these automated micro-factories, it has proven to be cheaper and more sustainable to produce textiles in high-cost countries (Automation Region, 2021).

- **The potential of 4IR technologies in uplifting micro textiles**

Digital Apparel Micro Factories create garments for a demand-driven environment in extremely short periods of time. The use of Computer-aided design (CAD) gives a designer and producer powerful “concept-to-creation” capabilities on the type of garment they desire (SOURCING At MAGIC, 2018). Micro textiles find themselves in a demand-driven approach, tailoring production according to manufacturer’s skill and expertise. The use of software packages like CAD can optimise and streamline the designer’s workflow, increase productivity, and improve the quality and level of detail in the design (Chai, 2020). However, setting up Digital Apparel Micro Factories with quality controls can assist retail organisations to expand the pool where they procure garments hence, increasing economic participation (Textile Value Chain, 2020). To increase economic participation, micro textiles need a demand-push value chain environment. This implies the value chain for manufacturers should be designed to

push demanded goods into the market for customers to seek goods from the retailer (Textile Value Chain, 2020).

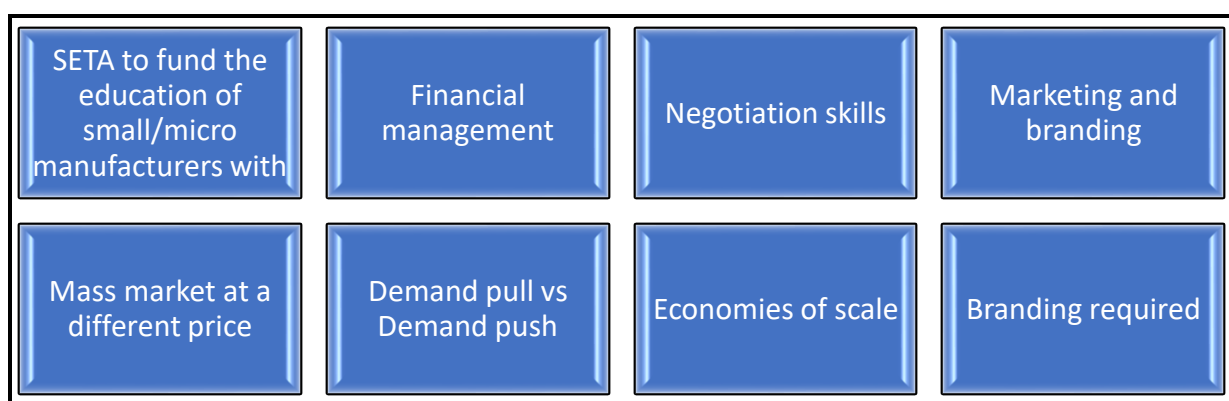
The setting up of Line quality control systems can be put in place by the industry as standards for micro textiles to be able to adhere to quality garments. The Council of Fashion Designers of America (CFDA) a fashion incubator in the United States of America, provides a creative professional environment to foster promising fashion talent, and help selected designers grow and sustain their businesses (CFDA Foundation, 2016). CFDA offers low-cost design studio space, business mentoring, educational seminars, and networking opportunities, the program provides opportunities for participants to reach their full potential and become an integral part of the New York Fashion community (Dugal, 2022). Equipping the industry to digitalise and by adopting Industry 4.0 (also known as 4th Industrial Revolution) principles is an empowering activation plan for demand-push manufacturing. It means micro textiles can manufacture using Computer-Aided Design (CAD) technology to transform the industry by delivering production in real-time. Giving designers and producers powerful capabilities on the type of garment they desire. In this way, Brands and manufacturers can respond to demand versus producing to supply (Gerber Technology, 2018).

- **The W & R SETA changing the narrative.**

Proactive forward-thinking initiatives by the Wholesale and Retail SETA can reconfigure the power relations that exist between micro and macro textiles in a highly contested market. Micro-textiles lack the capacity and competency; this is further extenuated by the burden of limited financial resources to unlock the barriers of entry into established markets. The key to unlocking the closed cartel of those who are privileged with access to the market is for the W & R SETA to consider funding training and development programmes outside the confined retail sector and look backward to enhance the skills of producers of garments as they are inextricably linked to the value chain of the retail sector. SETAs must collaborate outside their siloed domain and consider collaborative partnerships in this case with the Wholesale and Retail SETA collaborating with the Fibre. Processing and Manufacturing (FP & M) SETA to change the narrative enhancing inclusivity in participation in the economy. Training and development can significantly contribute to organisational maturity and growth of micro textiles as they migrate from B2C to B2B. As per Churchill & Lewis's (1983) Growth phase, model organisational development is propelled by Triple C factors. Triple C

factors include *control* of resources and administration, *coordination* between horizontal and vertical retailers, and organisational *collaboration* working together to grow the entire micro textile sector.

Figure 5: SETA Flow Chart



Source: Researchers Findings

Furthermore, production in low-cost countries usually requires a lot of labour and a lot of energy. At the same time, new sustainability requirements are placed on the industry, which means that the focus is on new technology. Automated manufacturing processes can have major environmental benefits and leverage the entry of micro-textiles to play a more significant role in the economy. A focused training and development agenda can build capacity and competency amongst the handicapped micro sector, which lacks business management skills, negotiation skills, supply-chain understanding and basic financial skills. Enhanced business acumen can offer a better expertise on how to traverse the landscape of an insular competitive market environment.

- **Porter 5 forces theory advanced by training development.**

Training development can empower new entrants with tools, techniques, and capacity to better navigate as new entrants. It can further alter the infant suppliers' power in their vertical entrance into the corporate domain with more effective transaction and negotiation skills to be more buoyant in competitive rivalry. Training in digital skills can enhance aggressiveness and relevance with regard to product development, quality product, and efficiency in the supply chain.

Methods

This study used a mixed methods research approach. Comparing the qualitative and quantitative approaches separately, the technique yielded a less precise grasp of the research problem. Primary data gathering, relevant to the micro textile industry in the Durban district, was combined with a comprehensive examination of the literature to form the approach. Three hundred and eighty-five (385) respondents made up the quantitative sample to gather information via a stratified random sample method. A stratified purposive data collection technique was employed to gather the qualitative data, and a sample size of fifty (50) participants was intended, or continued until data saturation was reached (Hennink & Kaiser, 2022; Dworkin, 2012). The external validity principle was applied when gathering data using surveys. Based on a five-point Likert scale framework, respondents filled out a standardised questionnaire. Quantitative data was analysed using the Statistical Package for the Social Sciences (SPSS) software. The interview schedule was followed when conducting the questions and answers. Qualitative data was transcribed using the NVIVO software, which coded it into themes for simple analysis. Data was coded without the use of predefined categories or hypotheses, utilising inductive analysis.

PRESENTATION OF QUANTITATIVE RESULTS

Of the 384 sampled respondents, 378 responses indicated results were valid, with Table 1 showing that only 6 respondents produced an invalid illegible reading. A 98% response rate from respondents who participated in the research. The accumulated data is expected to assist with prescribed policies and laws required for the manufacturing of products that can assist with competitiveness.

Table 1: Policies and laws governing micro textiles and enabling factors.

Statistics			
		Follow prescribed policies or laws	Items that can assist organisation with competitiveness
N	Valid	378	378
	Missing	6	6

Source: Researchers' Findings

- **Policies and laws governing micro textiles and enabling factors.**

In Table 2 below, of the 98% respondents, only 75% produced goods that were compliant as per prescripts set out by laws and policies. The table gives a clear picture that 75% of micro textile enterprises have the expertise and capability to meet quality standards set by retail requirements. In application of the generalisability criterion, an indication is that a quarter of the industry will need training if they were to meet the requirements of corporate retailers.

Table 2: Adherence to prescribed laws and policies.

Follow prescribed policies or laws					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	285	74.2	75.4	75.4
	No	93	24.2	24.6	100.0
	Total	378	98.4	100.0	
Missing	System	6	1.6		
Total		384	100.0		

Source: Researchers Findings

- **External Investment in Infrastructure as an Enabling factor in Competitiveness**

Table 3 below displays organisational competitiveness. The table shows that only 13.5% have the ability to source or procure external investment into their business. This suggests that micro textiles' competence in accessing financial resources is limited. They lack value proposition selling skills that can assist them to access funds that can assist them to be financially competitive. A generalisation application criterion deducts that 85.5% of micro textiles do not have the skills and the ability to draw or attract investment into their respective businesses. The ability to attract investors should however not be mistaken for a straightforward exercise. For a company to invest in any entity there is an in-depth analysis requirement by the investor (OS-System, 2022). Generally, a feasible business model presented to an investor with a viable value proposition and showing leadership skills is likely to win one to invest. Harper-James (2022) posits that entrepreneurs and start-ups are to be on the lookout for venture capital opportunities. A generalisation is that micro textiles have to diligently work on making their businesses viable for investments that may yield substantial returns.

Table 3: Enabling factors assisting competitiveness.

Aspects that can assist organisation with competitiveness					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Attain external financial investment	51	13.3	13.5	13.5
	The ability to extend infrastructure to compete	68	17.7	18.0	31.5
	To be price or cost competitive	70	18.2	18.5	50.0
	To be able to gain and retain customers for a successful growth	140	36.5	37.0	87.0
	The ability to sell clothing 1 st time to meet customer demands and requirements (price, quality and quantity)	49	12.8	13.0	100.0
	Total	378	98.4	100.0	
Missing	System	6	1.6		
Total		384	100.0		

Source: Researchers Findings

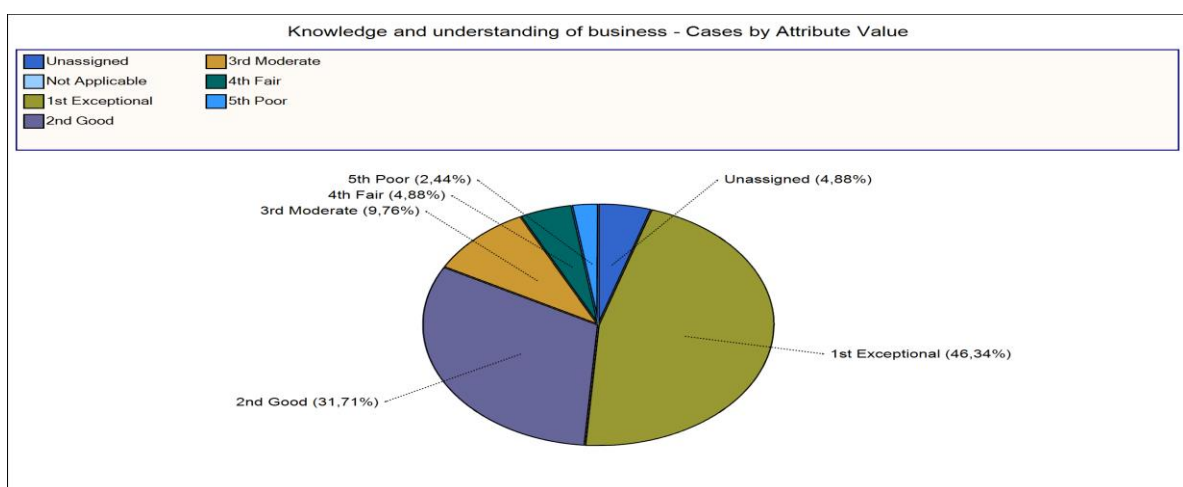
Table 3 further highlights the need for external financial investment as a crucial element for organisations to extend infrastructure to enhance business operations and be competitive (Carter, 2022). Lamentably, only 18% of the micro textiles believe that they have the network, potential investors, and ability to source funding for extended infrastructure. Appropriate infrastructure and equipment can contribute to efficiencies in output, produce quality products, and grow economies of scale. This critical aspect should not be taken lightly if municipalities are to grow local economies.

PRESENTATION OF QUALITATIVE RESULTS

This section of the research presents the results of the qualitative data i.e. data collected by means of open ended questions using the interviewer administered instrument to assist with a view to understand the conceptualisation of generic management strategies in micro textiles (Yin, 2014) and (Makanyeza, 2014). Out of the 50 targeted respondents, a total of 9 respondents refused to participate or agreed to participate but could not finish the interview, giving the response rate to an overall

82% or 41 admissible questionnaires. Presented data showed 46.34% attained an exceptional status indicating they had good understanding and knowledge of the business they are in. 31.71% also responded by indicating that they have good understanding attaining a good status. Furthermore, 9.76% of those who indicated they have a moderate knowledge and understanding of the business and were 9.76% attained a third spot. The 4th spot at 4.88% was assigned to those who have a fair knowledge and understanding of the business. At 2.44% is the 5th group who do not know the business and do not understand it.

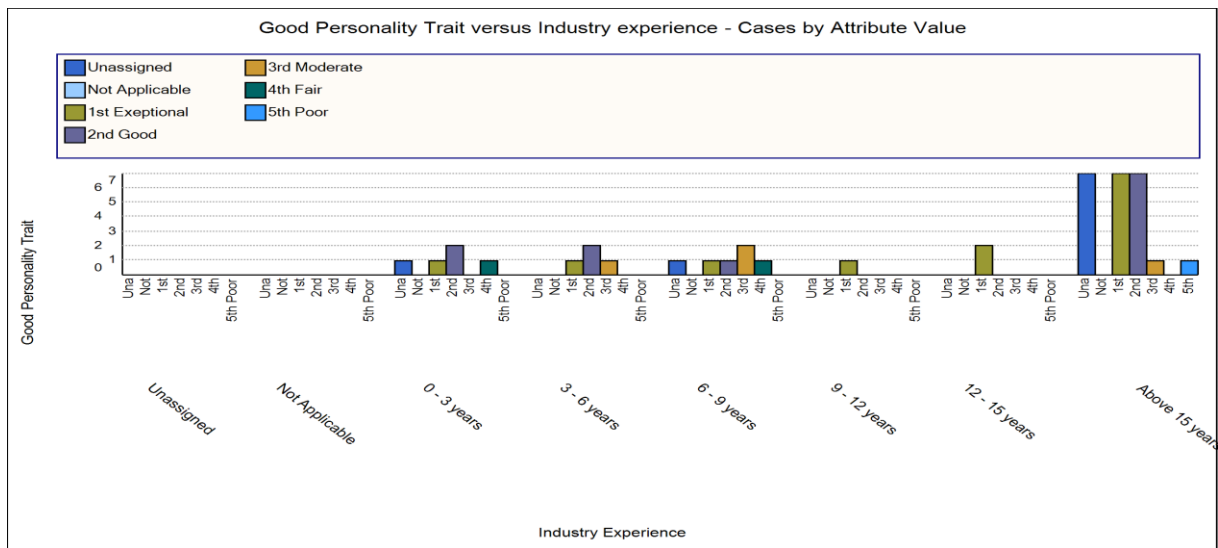
Chart 1



Source: Researchers Findings

The study shows that respondents with industry experience of 15 years and above dominate with goodness and exception when it comes to personality traits. A Likert scale of 1 to 7 has been used to measure respondents' opinions on personality. Participants with more than 15 years of industry experience were assigned a score of 7 on the Likert scale. Those with 12 to 15 years of industry experience were assigned an exceptional personality score of 2 on the Likert scale. While a sect of those with 9 to 12 years of industry experience was assigned a personality score of 1 on the Likert scale. A sect with 6 to 9 years of industry experience dominated by moderate personality score of 2 on the Likert scale. Those within the 3 to 6 years of industry experience are dominated by good personality score of 2 on the Likert scale. Similar to those of 0 to 3 industry experience, they are also dominated by a good personality score on the Likert scale.

Chart 2



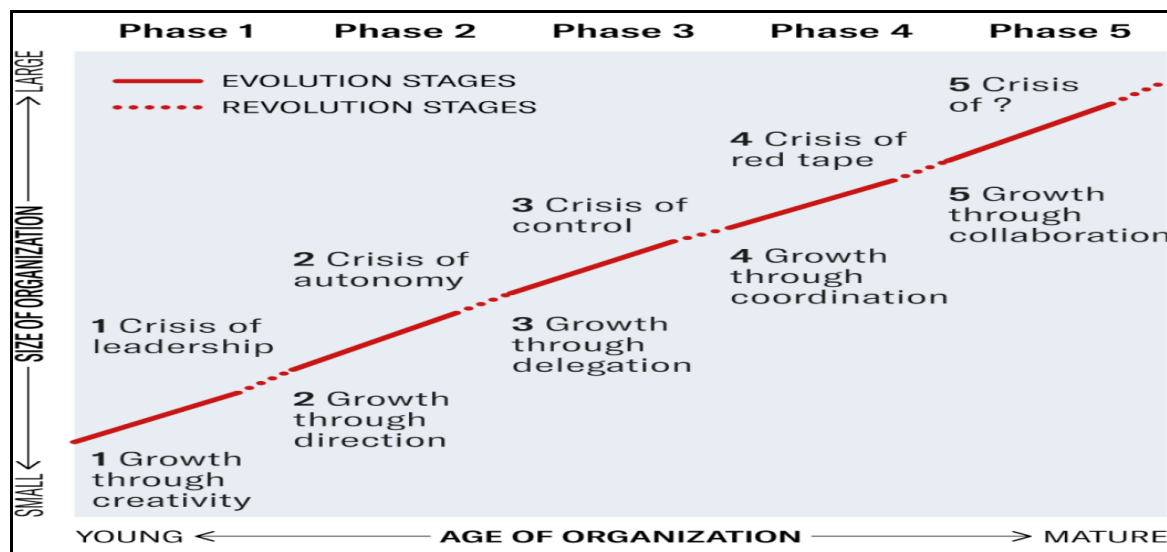
Source: Researchers Findings

DISCUSSION

Figure 6 below shows how organisations in the infancy stages experience a leadership crisis and are overwhelmed by inexperienced organisational management. It is said that in South Africa, the first five years of business survival is critical, which is in consonance with phase 1 of organisational growth as espoused by Churchill and Lewis (1983). Organisations during this phase vacillate between organisational evolution and revolution exerting pressure on leadership. The leadership crisis is highlighted in Table 3 above with only 37% of the respondents being able to attract and retain customers whilst 63% were unable to attract and retain *customers*. Organisational leadership skills in customer attraction and customer retention are critical for organisational growth. This can be generalised by micro businesses' inability to survive the first five years of existence. In addition, only 13% of respondents are able to meet retailer demands and requirements in either price, quality, or quantity.

An alarming 87% of the manufacturers lack this critical skill of meeting retailer demands. This adds to one of many crucial reasons why micro textiles become outsiders in the value chain. 87% is too high a statistic for manufacturers not to be able to meet retailer demands on the first instruction. This disturbing figure projects an undesirable construct to local economic growth. It further discourages retail players from inviting micro textiles to participate in the retail space.

Figure 6: Growth Phases

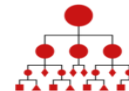


Source: (Churchill & Lewis, 1983)

Micro textiles operate small sized organisations and young aged operations within the crisis leadership category where growth is creativity driven. As indicated in Figure 6, stage 1 is prescribed to as existence stage. The preferred or prescribed management style required at this stage is direct supervision. As the study shows, existence of formal systems is none or close to non-existent. The major form of strategy enforced is 'strive for survival or existence'. The research affirms Figure 6 idiosyncratic view, revealing that in micro businesses, the owner is the centre of attraction (Dawson & Henley, 2012). A view by Valamis (2022) contends that managerial styles differ from supervisor to supervisor. It is argued that there are three broad categories of management styles: autocratic, democratic and laissez-faire. Managerial experience is a long-term investment, attained overtime. It comes with various skills in a wide array of categories.

For some, it is experience in developing company goals, while for some it is professional skill one gains in resolving operational concerns and creating strategies to improve efficiency (Indeed Editorial Team, 2022). Despite increased textile popularity, little is known about micro textile implementation struggles of incumbent firms across industrial sectors, an assistance from Figure 7 below displays managerial functional duties. The diagram further illustrates how size of an institution dictates managers' involvement in overseeing daily overall operations of making sure organisational objectives are met from daily activities.

Figure 7 Characteristics of Small Business at Each Stage of Development

	Stage I Existence	Stage II Survival	Stage III-D Success- Disengagement	Stage III-G Success- Growth	Stage IV Take-off	Stage V Resource maturity
MANAGEMENT STYLE	Direct supervision	Supervised supervision	Functional	Functional	Divisional	Line and staff
ORGANIZATION						
EXTENT OF FORMAL SYSTEMS	Minimal to nonexistent	Minimal	Basic	Developing	Maturing	Extensive
MAJOR STRATEGY	Existence	Survival	Maintaining profitable status quo	Get resources for growth	Growth	Return on investment
BUSINESS AND OWNER*						

Source: (Churchill & Lewis, 1983) *Smaller circles represent owner. Larger circles represent business.

Churchill and Lewis (1983) in Figure 7 display the extent of business owner involvement and supervision requirements. The diagram displays how organisational design and implementation of procedures and policies play a critical role in the functionality of an organisation. Bar chart 2 displays response to question on organisation following any prescribed policies or laws: a considerable 75% of micro textiles within in the Durban precinct have procedures and policies. It should however be articulated that in as much as the clarity or wellness of definition in mission and distinction was not dealt with, a bare minimum of existence of policies was established (OECD, 2014). Micro textiles are small entrepreneurs operating in a demand-pull environment implying that for them to produce garments, a customer must request for an item to be designed for sewing. Sewers are unable to source customers, as at this level the market is fragmented and difficult to target. Micro businesses only become aware and activated to the need when approached by customer. Data reveals that 70% understand and have good knowledge of the business, a strategic exclusionary mechanism designed to exclude or prevent them full economic participation should be deemed inappropriate and unfair.

This study intended to understand the micro textile sector in its entirety towards finding a solution that can get micro textiles into full economic participation. A model where demand for garments from retailers is a reality, allowing an equivalent supply of goods

into a demand-push retail and economic engagement (Asia-Pacific Economic Cooperation, 2017). The study's findings point out that micro textiles are incapacitated to produce required volumes due to a lack of economies of scale, which negatively affects product pricing. These small entities may take three to five days to manufacture a product, which may only take less than a day in a commercial factory (Sello, 2018). The need to advance labour-intensive resources has proved to be a requirement, e.g., irons, cutters, and seamstresses. However, a plausible solution would be to aggregate and convert informal manufacturers into micro-factories to be able to participate in the Global Value Chains as suppliers or sub-suppliers (Splashjet Inkjet Ink, 2022; Asia-Pacific Economic Cooperation, 2017).

CONCLUSION

Small and medium-sized businesses are seen as the lifeblood of economic development, and developing this industry is vital to South Africa's ongoing pattern of positive economic growth. This paper examined the transition from B2C to B2B micro textile entrepreneurship. The results of this study demonstrate that the textile sector is a heavily contested terrain with local South Africans from previously disadvantaged communities swimming against the competitive tide of foreign, national traders and the cheap inflow of imports. In addition, this industrial subsector faces challenges in that it operates in a small market and depends mostly on walk-in and repeat business. These businesses lack the retail toolkits and skill sets needed to grow their market share and surpass their present situation. Furthermore, the manufacture and selling of micro-textiles are insurmountable due to the robust character of the corporate retail business operations, artificial barriers to entry, and aggressive procurement specialists. Unfortunately, these businesses will remain tiny firms if they don't change the socioeconomic structure of an alternate economic environment. This research challenges the notion that micro-textiles should be kept in a box with no room to grow. It also makes reasonable suggestions for state agencies, particularly those in the training sector, to work together on their mandates for skill development and to change the negative perception of micro-textile practitioners.

The development of constructive collaboration through cooperative efforts could be beneficial towards the growth of micro textiles in South Africa. Through this partnership, micro-textile businesses from historically privileged backgrounds may be

able to break through barriers to entry, penetrate the corporate sector, and participate in business-to-business retail sales. This might be a driver for economic transformation. The collaboration may also present chances to expand the product supply throughout communities and include micro textiles in the corporate value chain. This can help enterprises succeed and penetrate the market more effectively because businesses will be able to produce clothing for a larger range of customers. Entry into a larger market facilitates expansion, this can lead to the creation of jobs, a reduction in unemployment, and an increase in the nation's GDP. Additional efforts will be needed to develop the skills of practitioners operating in the micro textile industry. Thus, in order to minimise unemployment and provide opportunities for job creation in the country, the South African government must play a significant role in fostering the growth and development of the micro textile industry.

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The role of Management Information Systems in enhancing organisational performance in the South African public sector

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ABSTRACT

In the dynamic landscape of the South African public sector, the role of Management Information Systems (MIS) has garnered increasing attention as a potential catalyst for enhancing organisational performance. MIS offer the potential to streamline processes, facilitate data-driven decision-making, and ultimately contribute to improved service delivery and citizen satisfaction. The primary objective of this research is to examine and evaluate the role of MIS in enhancing organisational performance in the South African public sector. The Technology-Organisation-Environment (TOE) framework is employed as a theoretical foundation for comprehending the adoption of innovation and technology within organisations. A systematic literature review was undertaken, encompassing a range of databases such as Scopus (Elsevier), Web of Science, ScienceDirect, and EBSCOhost. The search spanned the years 2018 to 2023, ensuring the inclusion of recent and pertinent articles. The synthesis of the literature revealed that MIS plays a crucial role in elevating organisational performance by streamlining operations, enabling informed decision-making, and enhancing overall efficiency. The findings underscored the significance of MIS in augmenting various dimensions of organisational performance,

from operational effectiveness to strategic planning. Based on the research findings, several recommendations emerge to enhance the role of MIS in improving organisational performance within the South African public sector. First, there is an imperative need for increased investment in technological infrastructure and financial resources to ensure the successful implementation and maintenance of MIS. Second, proactive measures should be taken to address resistance to change among employees, including comprehensive training and change management strategies. Third, efforts should be directed toward fostering a pool of skilled personnel capable of effectively managing and utilising MIS systems.

Keywords: Management Information Systems; organisational performance; South African public sector.

INTRODUCTION

In today's rapidly evolving world, information technology plays a pivotal role in transforming various aspects of society, including the functioning of public sector organisations. Within the South African context, the efficient delivery of public services and the overall performance of government institutions are critical for fostering economic growth, social development, and ensuring citizen satisfaction (Mutula & Wamukoya, 2011). Technology plays a fundamental role in the daily operations of most modern business entities, organisations and institutions. Technological innovations and the deployment of automated equipment led to a faster, better and more efficient execution of tasks, in addition to easing data related processes. Subsequently, information systems make it possible to cater for multiple stakeholders by allowing them to customise reports based on their information needs. According to Wu, Straub and Liang (2015); Larson, Sanders & Bohler (2021), information systems are purposive frameworks; they are set up for reasons and have targets or objectives, planned or built up to accomplish some expressed end. Data presented online should be presented in such a way that stakeholders are able to select what they need.

MIS refers to a comprehensive set of software, hardware, and human resources that facilitate the efficient collection, processing, storage, and dissemination of information within an organisation. By providing accurate, timely, and relevant data, MIS empowers public sector entities to make informed decisions, optimise resource allocation, and improve overall efficiency. Moreover, the use of MIS is believed to

enable greater transparency, accountability, and responsiveness in government operations, leading to better service delivery and citizen satisfaction (Mutula & Wamukoya, 2011). To meet these objectives, the adoption of MIS has gained prominence as a strategic tool to enhance organisational performance and decision-making processes in the South African public sector (Mutula & Wamukoya, 2011). Asemi, Safari and Zavareh (2011) state that with a functional MIS, managers can get the necessary data that will help them in identifying the strengths and weaknesses of an organisation. This will consequently help to achieve a higher level of efficiency within the organisation. In short, MIS are a collection of systems, tools, procedures, and people that all work together to process, store and produce useful information for every organisation (Larson, Sanders & Bohler, 2021).

MIS are created as a facility for the use of information technology, people, and business processes for recording, storing and processing data that aims to produce information that can be used by decision-makers to make day-to-day decisions (Savoie, 2016). Larson, Sanders and Bohler (2021) state that the information system is an organised system for the collection, organisation storage and communication of information. MIS is the study of people, technology, organisations and the relationships among them (Majchrzak & Markus, 2012). MIS professionals help firms realise maximum benefit from investment in personnel, equipment, and business processes (Larson, Sanders and Bohler, 2021). MIS is a people-oriented field with an emphasis on service through technology. If you have an interest in technology and have the desire to use technology to improve people's lives, a degree in MIS may be for you (Erasmus, Bothma and Ferreira 2015). The main concern in the field of information systems is the impact of the management information system on the extent to which the management information system is used in decision making (Mjlae, 2020). Wu, Straub and Liang (2015) mention that MIS is the second level of information hierarchy where managers use MIS for tactical decisions in organisations. This means that the company makes decisions that will contribute to the permanency, profitability, and improvement of all areas of operation.

Ndlovu (2015:27) notes that MIS play an important role in managing performance information. Examples of data processed by information systems for measuring organisational performance include budget data, output data, outcome or impact data, performance audits, financial audits, project and programme completion reports, and

donor data information (Kusek & Rist, 2004:48). According to Mackay (2007:58), financial data on programme spending constitutes a fundamental type of information; quality and ready availability must be ensured. This information is supplied by financial management information systems.

The role of MIS is vital now-a-days in a business environment because it has evolved over time to become an integral part of its business operations. The use of a management information system has increased in the last few years not only by firms, but also by individuals and even governments. Because of today's global environment where competition is very high, it is a basic requirement of the organisation to install a management information system to compete in the market and to earn more profit, invest in innovation in their products, and to grow their businesses (Awan & Khan, 2016:1). Information systems play an important role in the collection and processing of information, making it possible to process large quantities of information, and synchronise and share it. MIS are used to process information both at strategic and operational level to monitor activities, assess and plan new services, and monitor trends which enable senior managers to effectively manage the strategic direction of an organisation. MIS play an important role in measuring organisational performance (Nokuthula, 2015).

This system provides information that organisations need to manage themselves efficiently and effectively. MIS is commonly used to refer to the study of how individuals, groups, and organisations evaluate, design, implement, manage, and utilise systems to generate information to improve efficiency and effectiveness of decision making, including systems termed decision support systems, expert systems, and executive information systems. Organisations view the effective adoption of MIS as a way to combat competition by improving productivity, profitability, and the level of information which is one common asset shared by all businesses regardless of their nature because it is a vital part of any business entity irrespective of their forms of ownership as it enables conceptualisation and creation of new products and services (Awan and Khan, 2016:1).

PROBLEM STATEMENT

Currently, most government departments in South Africa have joined the trend to adopt technological developments and are moving towards the use of ICTs to drive

their activities, promote accountability and transparency and improve service delivery (Matlala & Maphoto, 2022:71). The organisations of the 21st century operate in a diverse and highly dynamic business environment characterised by changes brought about by technological advancements and extraordinarily turbulent global transformation agendas (Liu and Arnett, 2000). The new public service era is characterised by reorganisation of the public sector, where government is more responsive to the needs of the citizens and where efficiency and effectiveness of government becomes an important criterion of public service delivery. Due to the trends of modern times, the work of managers in public sectors has become very information-intensive and the environment in which it is done is very information-rich (Sedenberg, 2019). Some of the problems resulting from a lack of a government-wide information management, information systems and technology strategy include the use of incompatible platforms; information is not shared or re-used in an organised manner, and duplication of functions and systems between line functions. The problem of a management information system as an important tool to achieve organisational objectives is challenging to managers of any organisation especially the modern-day operations. No organisation can realise its goals and objectives without a conscious effort using a well-organised management information system (Ijeoma, 2018:30).

While the potential benefits of MIS in the South African public sector are well recognised, there remain several challenges and gaps that hinder its effective implementation and utilisation. Despite significant investments in information technology, there is limited empirical evidence on the extent to which MIS has effectively enhanced organisational performance within the South African public sector (Makkar *et al.*, 2018). Furthermore, given the unique complexities and diverse contexts of public sector institutions, the factors that contribute to successful MIS adoption and its impact on organisational performance require careful examination. Therefore, this study critically assesses the role of MIS in enhancing organisational performance within the South African public sector and identifies the challenges that hinder its effective implementation. By addressing this gap in the existing literature, the study aims to provide valuable insights into the efficacy of MIS in improving decision-making processes, streamlining operations, and ultimately contributing to the overall performance of public sector organisations in South Africa. Understanding the key challenges and limitations of MIS in the South African public sector is crucial for

policymakers, government officials, and organisational leaders to formulate appropriate strategies and address potential shortcomings. By conducting a comprehensive analysis of the current state of MIS adoption and its impact on organisational performance, this study can offer evidence-based recommendations to optimise the utilisation of MIS and its potential to transform public sector operations.

OBJECTIVES OF THE STUDY

The general objective of the study is to address the role of management information systems in enhancing organisational performance in the South African public sector. The specific objectives of this article were:

- To explore the role of management information systems in contributing to organisational performance in the South African public sector.
- To evaluate the effectiveness of MIS in supporting decision making processes in the organisation.
- To identify challenges that hinder the application of MIS in ensuring organisational performance in the South African public sector.
- To make recommendations for the effective use of MIS in ensuring organisational performance in the South African public sector.

LITERATURE REVIEW

MIS is the use of information technology, people, and business processes to record, store and process data to produce data-driven information that helps managers to derive decisions for the organisations (Asemi, Safari & Zavareh, 2011). The decision is consciously taken from a variety of alternatives and the consent of many is based on the goal of achieving the desired outcome. MIS can be defined as a collection of systems, hardware, procedures, and people that all work together to process, store, and produce information that is useful to the organisation. MIS provides information related to possible future events, efficiencies, and outputs. To begin with, MIS provides a fitting platform for good decision making (Savoie, 2016). Hackney and McBride (1995) state that higher management information system capabilities lead to higher strategic performance. These and many other factors are suggested to be important features of MIS that have a direct impact on the company's financial and strategic performance.

According to Asemi, Safari and Zavareh (2011), MIS is one of the major computer-based information systems. Its role is to meet the general information need of all the managers in the organisation. Reinforcing that logic, Wu, Straub and Liang (2015) state that a management information system is one of the most important tools in any organisation, which aims to provide reliable, complete, accessible, and understandable information in a timely manner to the users of the system. MIS assisted in automating tasks and facilitates efficient data collection, storage, and retrieval, enabling public sector organisations to access reliable information in real-time (Botha & Booysen, 2019). This timely availability of data empowers decision-makers to make informed choices, leading to improved policy formulation and resource allocation. Effective data management through MIS also aids in identifying operational inefficiencies and areas for improvement.

Al-Mamary, Shamsuddin and Aziati (2014) state that MIS supports the planning, control and operation functions of an organisation by furnishing uniform information in the proper time frame to assist the decision makers. An MIS is an organisation wide effort to provide decision making process information (Wu, Straub and Liang 2015). The system is a formal commitment by executives to make the computer available to all managers. The MIS sets the stage for accomplishments in the other area, which is decision support systems, the virtual office and knowledge-based systems (Asemi, Safari & Zavareh, 2011). Majchrzak and Markus (2012) note that MIS keeps a continuous supply of information flowing to the management. Supporting that viewpoint, Savoie (2016) asserts that MIS is an important system for every organisation that needs to ensure they remain competitive in the market.

However, not all MIS fulfil the requirements from stakeholders. Hendriks (2012) highlights that MIS collects comprehensive data, organises it and summarises it in useful formats for managers such as helping middle management make semi-structured or tactical decisions. MIS fosters better collaboration and communication among different departments and stakeholders within the public sector (Marais & Cilliers, 2018). By providing a centralised platform for data sharing and information exchange, MIS breaks down information silos, fostering a culture of collaboration and teamwork. This integrated approach leads to better coordination and synergy in achieving organisational goals. Integration of various processes and functions within MIS streamlines operations within the public sector, reducing redundancies and

manual paperwork (Gouws *et al.*, 2017). This results in smoother workflows, reduced administrative burden, and enhanced productivity. Additionally, MIS facilitates process automation, leading to faster response times and improved service delivery to citizens.

Collaborating with that notion, Wu, Straub and Liang (2015) state that MIS is basically concerned with the process of collecting, processing, storing and transmitting relevant information to support the management operations in an organisation. Thus, the success of decision-making, which is the heart of administrative process, is highly dependent partly on available information, and partly on the functions that are the components of the process (Savoie 2016). MIS is a system providing management with accurate and timely information (Majchrzak Markus 2012). Such information is necessary to facilitate the decision-making process and enable the organisations' planning, control, and operational functions to be carried out effectively (Asemi, Safari & Zavareh, 2011). Supporting that viewpoint, Babaei and Beikzad (2013), confirm that MIS is a tool where the organisational information source provides the required information for the managers and makes them prepared for their decision making. The managers use MIS as a tool to define the problems being faced. This can include interaction with other decision support systems, information inquiries, cross referencing of external information and potential data mining techniques (Wu, Straub & Liang, 2015). These systems can also compare strategic goals with practical decisions, giving managers a sense of how their decisions fit organisational strategy.

MIS enables strategic planning by providing data-driven insights and performance indicators (Grant, 2018). Public sector organisations can utilise MIS-generated reports to set clear goals, monitor progress, and evaluate outcomes. This strategic approach helps align organisational efforts with long-term objectives, optimising resource utilisation. MIS enables public sector organisations to enhance service delivery to citizens by providing personalised and efficient services (Chand & Chetty, 2019). Citizen-centric MIS applications facilitate feedback mechanisms, enabling citizens to voice their concerns and opinions. This fosters transparency and accountability in governance and improves public satisfaction.

THEORETICAL FRAMEWORK

The Technology-Organisation-Environment (TOE)

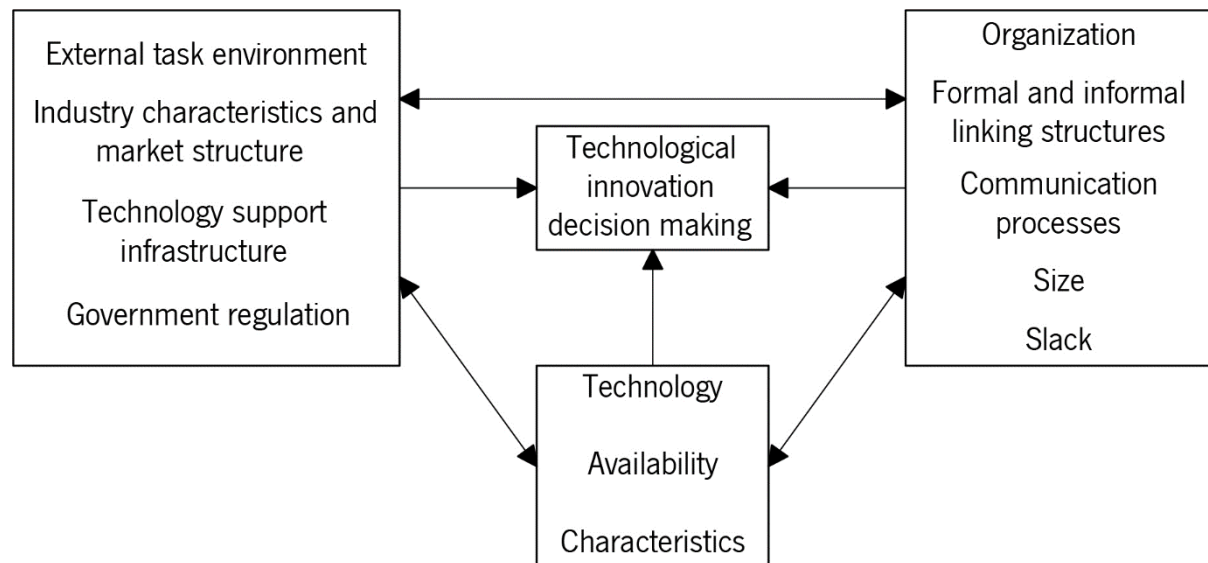


Figure 1: The Technology-Organisation-Environment (TOE) Model

The Technology-Organisation-Environment (TOE) framework, developed by Tornatzky and Fleischer in 1990, serves as a theoretical model for comprehending the organisational adoption of innovations and technology (Baker, 2012; Oliveira & Martins, 2011). Rooted in the information systems domain, the TOE framework aims to elucidate the factors that influence the adoption and utilisation of new technologies. It encompasses three key dimensions: the characteristics of the technology itself, the organisational context in which it is implemented, and the external environment within which the organisation operates (TheoryHub, 2023). Due to its versatility and effectiveness, the TOE framework has gained widespread usage in research pertaining to technology adoption and implementation across various organisational settings (TheoryHub, 2023). Consequently, it has proven to be an invaluable tool for comprehending the intricate interplay between technology, organisation, and environment in the context of IT/IS adoption success.

Baker (2012) and Oliveira and Martins (2011) highlighted that the TOE framework comprises three principal components that collectively impact an organisation's capability to adopt innovations or technologies. The application and implementation of the TOE framework have been instrumental in guiding the study, offering a structured approach to explore the technological, organisational, and environmental factors

impacting the adoption and utilisation of MIS in the South African public sector. By considering these interrelated dimensions, the study can provide meaningful and practical recommendations to improve the effectiveness of MIS in supporting decision-making processes and ensuring organisational performance in the public sector. These components are expounded upon as follows:

The technological context

The technological context, as emphasised by Baker (2012), encompasses all the technologies relevant to the organisation, including those currently in use and those available in the marketplace for potential future adoption. According to TheoryHub (2023), technology is defined by its intrinsic characteristics, such as functionality, complexity, compatibility with existing systems, and ease of use. This context takes into account the available technologies, both internal and external to the firm that have the potential to enhance organisational productivity (Susan & Chittibabu, 2006:149). Moreover, it considers both existing and emerging technologies that hold significance for the organisation (Hong & Zhu, 2006). Organisations rely heavily on their information systems for day-to-day operations, with information system databases holding critical data about customers, suppliers, processes, and business transactions. Any compromise on the security of these systems can result in significant costs for the organisation, including dissatisfied customers leading to a loss of goodwill, potential litigation, and a decline in business (Susan & Chittibabu, 2006:152).

The TOE framework's technological context has enabled researchers to assess the characteristics of the MIS used in the South African public sector. By evaluating the functionality, complexity, compatibility, and ease of use of MIS, the study can identify how well the technology aligns with the specific needs and requirements of public sector organisations. This analysis provides valuable insights into the effectiveness of MIS in supporting decision-making processes within these organisations.

The organisational context

The organisational context revolves around the resources available to facilitate the acceptance and adoption of innovations. These criteria encompass various aspects such as firm size, scope, centralisation, formalisation, interconnectedness, and complexity of the managerial structure, as well as the quality and availability of the firm's human resources (Susan & Chittibabu, 2006:149). It refers to the internal context

within which the technology is implemented, taking into consideration factors like the organisation's size, structure, culture, and available resources (TheoryHub, 2023). The organisational context is further defined by factors such as firm size, complexity of the managerial structure, complementary investments within the firm, quality of human resources, and the availability of slack resources (Tornatzky & Fleischer, 1990; Wang *et al.*, 2010). Notably, business strategy, company structure, processes, and culture are deemed crucial organisational elements that play significant roles in the context of technology adoption. On the other hand, the organisational context pertains to variables that shape the organisation, such as firm size, scope, managerial structure, and internal resources. These factors play a crucial role in influencing the organisation's ability to adopt and implement technological innovations effectively.

Incorporating the organisational context of the TOE framework, the study has investigated internal factors within the South African public sector organisations that impact the adoption and utilisation of MIS. Factors such as firm size, structure, culture, and available resources have been considered to understand their influence on decision-making processes and the integration of MIS. This examination helps in identifying potential challenges and opportunities for enhancing the effectiveness of MIS within the organisational context.

The environmental context

The environmental context encompasses the business setting in which a firm operates and is influenced by various factors, including the industry landscape, competitors, the firm's access to external resources, and interactions with the government (Susan & Chittibabu, 2006:149). It refers to the external context surrounding the organisation, taking into account aspects such as market conditions, regulatory requirements, and social and cultural norms (TheoryHub, 2023). Environmental factors comprise external elements that can either present constraints or opportunities for technological innovations. This includes business pressure, environmental munificence, complexity, and dealings with business partners, competitors, and the government (Tornatzky & Fleischer, 1990; Zhu *et al.*, 2006; Wang *et al.*, 2010; Li, 2008). By adopting information systems, organisations may have the potential to alter the rules of competition, influence the structure of the industry, and leverage new approaches to outperform their competitors, thereby influencing and reshaping the competitive environment.

Lastly, the environmental context encompasses aspects related to the industry, competitors, and interactions with the government. This context takes into consideration the complexity of technologies, their compatibility with existing practices within the organisation, perceived benefits, and the emergence of big-data computing platforms that can aid in increasing data security (Susan & Chittibabu, 2006:152).

The TOE framework's environmental context has facilitated an examination of external factors that affect the adoption and use of MIS in the South African public sector. Factors like market conditions, regulatory requirements, and social and cultural norms have been analysed to understand how the external environment can impact the successful implementation of MIS and its ability to support decision-making processes.

Through applying the TOE framework, the study has gained a deeper understanding of the interplay between technology, organisation, and environment concerning the adoption and utilisation of MIS. The framework has guided the study by providing a structured lens through which to explore the complexities of the research problem. It has helped researchers systematically identify relevant research questions, develop appropriate data collection instruments, and analyse the data effectively to answer the research objectives. Moreover, the TOE framework has allowed the study to consider the dynamic interactions between technology, organisation, and environment, providing a more comprehensive picture of how MIS adoption and implementation can be enhanced in the South African public sector. The framework's guidance has facilitated a rigorous and systematic approach to the research, enhancing the study's credibility and contributing valuable insights to the understanding of the role of MIS in organisational performance.

RESEARCH METHODOLOGY

A systematic literature review (SLR) was conducted in this study, aiming to search for, appraise, and synthesise research evidence by following a systematic process (Grant and Booth, 2009). The unit of research was MIS in enhancing organisational performances in the South African public sector as identified by means of the SLR.

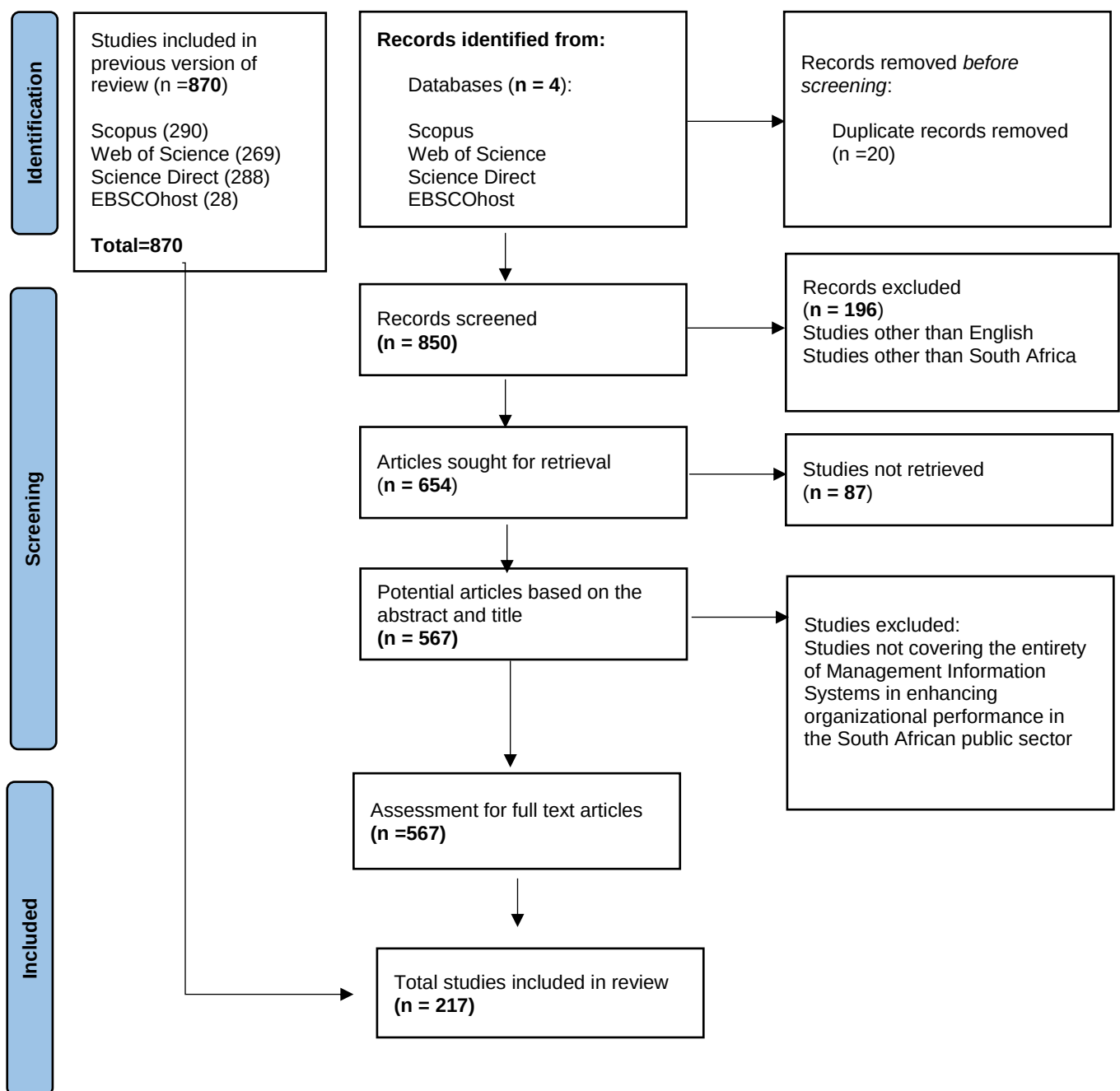


FIGURE 2: Preferred reporting items for systematic reviews and meta-analyses flow diagram for new systematic reviews.

TARGETED BODY OF LITERATURE

Studies considered for inclusion in the original database included the following:

1. academic (peer-reviewed) articles available on electronic academic search databases and/or platforms;

2. the original study needed to be empirically grounded research – either qualitative or quantitative;
3. the original research data had to have been collected on, and be identifiable as, management information systems (mainly, if not solely);
4. the original research needed to have collected data from the public sector of South Africa;
5. the article had to be available in English; and
6. the article needed to have been published between 2018 and 2023.

Electronic searches were conducted between October and November 2023 to trace relevant articles. Databases included Scopus, Web of Science, ScienceDirect, and EBSCOhost. A keyword search was entered into each database using the delimiters mentioned above. In addition, a combination of the search phrases ‘management information systems’ OR ‘information systems’ OR ‘management of information systems’ was utilised, together with the search phrases ‘South African public sector’ OR ‘government departments of South Africa’ OR ‘government organisations in South Africa’. Results were downloaded and saved in a folder.

GATHERING THE DATA

Preference was given to empirical studies that focused solely on the role of MIS in enhancing organisational performance in the South African public sector. In addition, studies that included different organisations were scrutinised to extract data relating to information management systems. Where this was not possible, the study was discarded. South African public sector articles were extracted for analysis during the secondary eligibility screening phase. This secondary-phase screening was conducted to prioritise articles according to South African government departments. All articles not related to government departments’ context were removed, and any documents that had not been published as peer-reviewed empirical data articles. Most of the articles did not explicitly focus on MIS in the public sector. Variables that were sought for this study were narrative evidence that pointed to the following aspects:

(1) the role of management information systems contributing to the organisational performance; (2) evaluate the effectiveness of MIS in supporting decision making process in the organisation; and

(3) challenges that hinder the application of MIS in ensuring organisational performance in the South African public sector in the articles.

ANALYSIS OF THE DATA

The summary measures in this SLR included theme- and pattern-based coding (Saldaña, 2013), where the variables identified from the research articles were thematically coded according to similarities. The results were synthesised by scrutinising each article for data that related to MIS in the public sector. The risk of bias in this study was mitigated by assessing each of the studies included in the literature review for the risk of containing biased information (selection bias, selective reporting or inadequate sampling). However, the risk of bias was still possible because the focus was placed solely on peer-reviewed academic journal articles that were electronically available on the different e-distribution databases mentioned before. No unpublished manuscripts (such as master's or PhD studies) were considered, and any journals not available digitally were, therefore, also excluded.

PRESENTATION OF THE DATA

Figure 2 above, summarises the number of peer-reviewed articles regarding MIS in the public sector screened as relevant to the literature review. Of the articles that were originally sourced, articles contained information relating to MIS in the public sector of South African context. Of these articles, some were found to contain empirical study data that related directly to various aspects that addressed the study concerns. However, many of the articles had either been published in non-accredited journals or contained very basic or dubious empirical data. In the end, the information in 86 articles was utilised to inform the literature review.

PRESENTATION AND DISCUSSION OF THE RESULTS

The role of management information systems contributing to organisational performance in the South African public sector

The significance of MIS in bolstering organisational performance within the South African public sector is evident from a synthesis of relevant literature. Grant (2018) underscores the pivotal role of MIS in furnishing decision-makers with timely and accurate information, thus empowering them to make well-informed choices that enhance overall operational efficiency and effectiveness. This sentiment is echoed by

Botha and Booysen (2019), who point out that the integration of MIS across various departments fosters data sharing and communication, culminating in heightened collaboration and coordination within the organisation.

The practical utilisation of MIS within different South African government departments serves as compelling evidence of its influence. These instances encompass a diverse spectrum, spanning from optimising financial management and citizen services to enhancing personnel administration and judicial processes. These initiatives showcase MIS's capacity to augment transparency, efficiency, and decision-making within the public sector, ultimately translating into improved service delivery and governance. A noteworthy example presented by Nkwanyana (2018) elucidates the substantial benefits yielded by the integration of MIS in supply chain management within the South African public sector. The study reveals that MIS adoption enhances supply chain visibility, equipping managers with the insights required to make informed decisions regarding inventory management, production planning, and logistical operations. Consequently, organisations proficiently leveraging MIS demonstrate an enhanced ability to make strategic decisions, culminating in improved overall performance.

Furthermore, the strategic planning facet of MIS manifests through its capability to facilitate informed forecasting and proactive response to challenges and opportunities. Gouws *et al.* (2017) affirm this capability by emphasising that MIS empowers organisations to scrutinise historical data, identify trends, and predict future scenarios. This prescient approach to planning equips organisations to not only navigate challenges adeptly but also seize emerging opportunities, thereby augmenting their overall performance.

In the realm of enhancing organisational performance through the utilisation of MIS, Nokuthula's study (2015) presents a compelling case through its examination of the KwaZulu-Natal Department of Arts & Culture. This investigation illuminates how government departments collect, process, and employ information to adhere to legislative requirements both operationally and strategically. Nokuthula's objective was to delineate the role of MIS in measuring organisational performance within this department, employing a case study approach that incorporated face-to-face interviews and self-administered questionnaires to gather data from core program

managers. The study unveils a limitation in the department's utilisation of MIS for measuring organisational performance, attributed to the absence of an integrated Performance Management Information System (PMIS) and an inadequate capacity to develop and manage such a system. Consequently, the study's recommendation emphasises the necessity for formalising the performance measurement framework and building the capacity to effectively implement a PMIS.

Expanding this discourse to encompass a broader spectrum of government entities, various literature sources underscore the deployment of diverse MIS solutions across multiple government departments. For instance, the Integrated Financial Management System (IFMS), as adopted by the National Treasury of South Africa, stands as a comprehensive financial management solution. It amalgamates budgeting, accounting, procurement, and reporting processes into a unified system. The utilisation of IFMS yields benefits in terms of financial transparency, accountability, and efficiency, all of which contribute to proficient public funds management (National Treasury, 2021).

Additionally, the e-Government Portal implemented by the Department of Home Affairs exemplifies the transformational potential of MIS in enhancing citizen services. This portal provides citizens with a digital gateway to access government services, thereby expediting processes like passport applications, visa submissions, and birth registrations. The implementation of this system amplifies service delivery, fosters convenience, and alleviates administrative burdens for both citizens and government officials (Nyandoro & Suh, 2019).

Moreover, the Personnel and Salary System (PERSAL), which functions as the central payroll and human resources management system for the South African government, plays a pivotal role. This system streamlines the management of personnel records, payroll processing, and reporting. PERSAL's significance lies in its ability to ensure accurate salary disbursements, maintain personnel data integrity, and ensure compliance with labour regulations, ultimately contributing to the effective administration of public sector workforce management (Zuzana & Michaela, 2019).

The utilisation of MIS across various sectors of the South African government has showcased its transformative potential in enhancing operational efficiency, decision-making, and service delivery. The Integrated Case Management System (ICMS),

adopted by the Department of Justice and Constitutional Development, exemplifies this trend by facilitating efficient case management. It empowers legal proceedings through case tracking, document management, and court scheduling, thus advancing access to justice, reducing administrative bottlenecks, and streamlining the judicial system (Rabie, 2017).

In the healthcare sector, the District Health Information System (DHIS) serves as a pivotal MIS implemented by the South African Department of Health (DoH). This system, inaugurated in 1996, orchestrates the collection and analysis of healthcare data, vital for performance monitoring and planning. The DHIS's role in aggregating data at the district level extends insights into diverse health indicators, thereby enabling evidence-driven decision-making and informed health policies.

The National Health Information Repository and Data Warehouse (NHIRDW), instituted by the DoH in 2012, takes a comprehensive approach to healthcare data integration. By amalgamating specialist information systems' data, NHIRDW centralises health-related information for comprehensive analysis and reporting. The repository's multidimensional role enhances data availability and quality, fostering more accurate performance evaluations.

The Education Management Information System (EMIS), implemented by the Department of Basic Education (DoBE), contributes significantly to the education sector. EMIS offers a comprehensive database encompassing student and school information, facilitating the generation of statistics and reports crucial for educational planning and policymaking.

The forthcoming adoption of a web-based Performance Management Information System by the Department of Science and Technology (DST) underscores a growing emphasis on real-time performance evaluation. Leveraging web-based technologies, this system enables agile monitoring and evaluation of performance indicators, promoting data accessibility, timely decision-making, and performance tracking.

The evolution of the South African government's ICT policies showcases a systematic effort to embrace technology for administrative enhancement. The State Information Technology Agency (SITA) Act, No. 88 of 1998, was enacted to rationalise ICT service procurement and offer support to government entities (Cloete, 2012). Subsequently, the e-government policy of 2001 aimed to revolutionise government-citizen and inter-

departmental interactions, with an overarching goal of enhancing productivity and efficiency in the public sector. This progressive policy trajectory highlights the strategic adoption of MIS to align with the contemporary digital landscape, fostering synergy between government functions, and advancing service delivery.

Evaluating the effectiveness of MIS in supporting decision making processes in the organisation

The examination of various studies on the effectiveness of MIS in supporting the decision-making process within organisations has brought to light several key issues and findings. Firstly, the integration of MIS has demonstrated a significant positive impact on decision-making efficiency. MIS empowers decision-makers with real-time and accurate data, facilitating informed choices that contribute to enhanced organisational performance (Magadla & Plessis, 2020). This infusion of timely information enables managers to respond promptly to dynamic business environments and make well-informed decisions (Marais & Cilliers, 2018).

The efficacy of MIS in bolstering the decision-making process within the South African public sector is conspicuously demonstrated by its capacity to streamline information dissemination and elevate data precision (Magadla & Plessis, 2020). MIS, as evidenced by research, furnishes real-time data accessibility and reporting functionalities, thereby empowering decision-makers with current information to facilitate prompt decision-making (Marais & Cilliers, 2018). Furthermore, the integration of diverse modules within MIS, such as finance, human resources, and procurement, engenders a holistic perspective for decision-makers to contemplate the all-encompassing repercussions of their choices on the organisational landscape (Chand & Chetty, 2019). This comprehensive outlook minimises potential risks and maximises benefits, underscoring the strategic role of MIS in augmenting the decision-making process.

In the contemporary business milieu, the significance of MIS in supporting decision-making processes within organisations is profound. In the midst of an ever-evolving business environment, the timely and accurate flow of information becomes imperative for managers to make informed decisions that align with organisational objectives. This study is poised to assess the efficacy of MIS in facilitating decision-making processes and to discern its tangible impact on organisational performance. Through

an exploration of pertinent literature, this paper endeavours to elucidate how MIS contributes to enhanced decision-making capabilities, offers invaluable insights, and ultimately fosters the overarching success of an organisation.

A study by Govender *et al.* (2019), focusing on the financial sector, underscores the pivotal role of MIS in shaping improved financial decision-making among South African banks. The research findings underscore how real-time access to financial data serves as a catalyst for enhancing risk evaluation, investment analysis, and credit assessment, culminating in an elevated financial performance within these institutions.

A comprehensive case study conducted by Naidoo *et al.* (2020) investigating the adoption of MIS within South African enterprises illuminated that organisations which embraced MIS solutions exhibited notable enhancements in their decision-making processes. The study underscored the critical importance of aligning MIS with organisational objectives, highlighting that such congruence substantiated the potency of MIS in steering effective decision-making. Furthermore, the research emphasised the indispensability of continuous training initiatives to bolster user proficiency, accentuating the dynamic nature of MIS utilization in organisational contexts.

Jacobs and Muller (2018) contributed to the discourse by delving into the impact of MIS on financial decision-making specifically in small and medium-sized enterprises (SMEs) within the South African landscape. This research unfolded that SMEs adept at harnessing the potential of MIS manifested superior financial decision-making capabilities, a phenomenon that translated into discernible gains in terms of heightened profitability and sustainability for these enterprises. The findings from this study underscored the tangible value that effective MIS integration can bring to SMEs' financial decision-making processes.

Turning the spotlight to the operational sphere, a case study by Van der Merwe and Pretorius (2017) zeroed in on the utilisation of MIS in operational decision-making within a South African retail organisation. The study illuminated that the deployment of MIS infused data-driven principles into operational choices, thereby engendering streamlined processes and amplifying overall efficiency within the retail sector. This underscores the role of MIS in optimising operational endeavours and enhancing productivity.

Within the realm of supply chain management, Petersen (2020) meticulously examined the ramifications of MIS on decision-making within the manufacturing sector of South Africa. Petersen's research illuminated that the integration of MIS in supply chain operations paved the way for enhanced decision-making capabilities, which subsequently led to cost savings, improved inventory management, and enriched supplier relationships. This research underscores how MIS can be instrumental in promoting streamlined supply chain processes.

In the context of strategic decision-making at the highest echelons of management, Govender and Reddy (2018) conducted a study to explore the role of MIS in shaping strategic decisions among top-level managers within South African corporations. The findings from this research elucidated that MIS served as a pivotal tool by furnishing top-tier executives with timely and accurate information. This enabled them to make well-informed decisions that were not only in congruence with immediate organisational objectives but also aligned with the broader, long-term goals of the corporation. The study's insights underscore how MIS can significantly contribute to the strategic planning and direction of organisations.

The discussion of results underscores that MIS plays a pivotal role in enhancing the decision-making process within organisations. By providing timely and accurate information, integrating various modules, and enabling comprehensive understanding, MIS effectively contributes to better decision-making outcomes across diverse sectors and organisational functions.

Challenges that hinder the application of MIS in ensuring organisational performance in the South African public sector.

The implementation of MIS in the South African public sector, aimed at enhancing organisational performance, encounters various challenges that require attention for successful integration. One prominent obstacle is the scarcity of sufficient financial resources and infrastructure required for the setup and maintenance of MIS systems (Dzuke & Azeta, 2019). Within the context of limited budgets, public sector organisations often find it difficult to invest in advanced MIS technologies and provide essential training for their staff. This financial constraint compromises the effective implementation and utilisation of MIS systems. Concurrently, challenges in data quality and integration, as well as resistance to change, further exacerbate these difficulties.

Resistance to change and the dearth of skilled personnel represent critical barriers to the successful application of MIS (Botha & Booysen, 2019). In many instances, employees within the public sector may be hesitant to embrace novel technologies and methodologies, leading to a gradual adoption of MIS systems. Moreover, the scarcity of qualified IT professionals capable of managing and resolving technical issues poses additional challenges (Magadla & Plessis, 2020). The insufficiency of personnel well-versed in MIS management can hamper the smooth functioning of the systems, consequently impeding decision-making processes.

Efforts to address these challenges are pivotal in optimising the efficacy of MIS in decision-making procedures. Viljoen and Stander (2017) examined the obstacles faced during the implementation of MIS in South African organisations, highlighting data security concerns, infrastructure limitations, and user resistance. Overcoming these challenges emerged as a prerequisite for unlocking the full potential of MIS in facilitating effective decision-making. Similarly, Nkosi and Makhaya (2016) delved into challenges confronted by South African organisations during the adoption of MIS, identifying issues such as insufficient IT infrastructure, the lack of skilled personnel, and reluctance to embrace change. Tackling these hurdles is imperative for harnessing the power of MIS to enhance decision-making outcomes.

In the realm of the South African public sector, inadequate IT infrastructure and limited resources further underscore the challenges associated with MIS implementation. Ajuwon and Ilozor (2016) emphasised the presence of outdated hardware and software, sluggish network connectivity, and inadequate IT budgets within government departments. These constraints compromise the seamless integration and functioning of MIS systems, thereby impinging on decision-making processes and the overall performance of organisations.

Effective operation of MIS hinges on data quality and availability, critical aspects often plagued by challenges within the South African public sector. Serite *et al.* (2019) shed light on the prevalence of incomplete, inconsistent, and inaccurate data, undermining the reliability of information and curtailing the advantages MIS can offer for decision-making. The successful implementation of MIS is inextricably linked to a shift in organisational culture and the readiness to embrace technological transformations. Mathipa and Phiri (2018) point out that resistance to adopting MIS among South

African public sector employees often stems from concerns about job displacement, technological unfamiliarity, and data privacy worries. Furthermore, insufficiencies in training and skill development programs, as emphasised by Kritzing and Van Belle (2017), exacerbate the impediments to effective MIS utilisation.

The intricate bureaucratic mechanisms and governance structures characteristic of the South African public sector can thwart the swift adoption of new technologies like MIS, elongating decision-making processes. Ndwiga and Angelides (2017) accentuate how bureaucratic hurdles and protracted approval protocols present obstacles to the timely integration of MIS, hampering its potential to impact organisational performance positively. Given that MIS handles sensitive organisational and citizen data, cybersecurity and data privacy are paramount concerns. Vahed *et al.* (2020) underscore the cybersecurity vulnerabilities of the South African public sector due to insufficient safeguards, leaving it exposed to cyber threats and data breaches. Alleviating these concerns assumes pivotal importance in establishing trust and safeguarding the secure implementation of MIS.

Budgetary limitations within the South African public sector have repercussions on MIS deployment and upkeep. Mathipa and Phiri (2018) highlight that restricted financial resources curtail investments in advanced MIS solutions, skilled IT personnel, and comprehensive training initiatives, ultimately impinging on the overall effectiveness of MIS. The costs of new purchases and of the maintenance of existing equipment are another burden for most organisations already battling to stay within their budget allocations. Few organisations have staff with the technical expertise required for the maintenance and repair of equipment (Matlala & Maphoto, 2022:82).

Various inhibitors to the use of MIS are discernible in the literature, with factors such as lack of time, skills, training, senior management support, and technical assistance emerging prominently. The challenges faced by the public sector encompass time constraints, elevated administrative costs, untrained staff's reluctance, misuse of ICT facilities, and complications related to rigid procedural mandates. Babaei and Beikzad (2013) emphasise the influence of limited familiarity with new system environments among analysts and designers as a hindrance to MIS application. Furthermore, inconsistencies and the complexity of existing manual systems (Larson, Sanders, &

Bohler, 2021) and the absence of procedural methodologies (Hendriks, 2012) exacerbate the challenges.

CONCLUSION AND RECOMMENDATIONS

In conclusion, the comprehensive examination of the utilisation of MIS in the South African public sector underscores its critical role in enhancing organisational performance. The results from various studies have illuminated the potential benefits of MIS, particularly in terms of streamlining information flow, enabling data-driven decision-making, and contributing to overall efficiency and effectiveness. The literature and case studies discussed above demonstrate that MIS plays a vital role in supporting decision-making processes in South African organisations. From strategic decisions to operational and supply chain management, MIS provides valuable data and insights that enhance decision-making efficiency and effectiveness. However, organisations must overcome implementation challenges and invest in training and development to fully leverage the benefits of MIS. As technology continues to advance, the role of MIS in decision-making will become even more critical for organisations in South Africa to maintain a competitive edge and achieve their strategic objectives.

However, several challenges have been identified that hinder the full realisation of these benefits. The challenges identified in this discussion encompass inadequate financial resources and infrastructure, resistance to change, lack of skilled personnel, bureaucratic complexities, cybersecurity concerns, and limited budget allocations. These issues collectively underscore the multifaceted nature of the obstacles faced by the South African public sector in effectively deploying and utilising MIS to its fullest potential.

To address these challenges and ensure the effective use of MIS for organisational performance enhancement, several recommendations emerge from the synthesised literature. Firstly, there is a need for a strategic allocation of financial resources to adequately implement, maintain, and upgrade MIS systems. This should be accompanied by investments in staff training and skill development to enhance user proficiency and mitigate resistance to technological changes.

Furthermore, a cultural shift is necessary within the public sector to promote a positive attitude towards the adoption of MIS. This entails leadership support and robust

change management strategies that address concerns such as job displacement and data privacy. Additionally, addressing bureaucratic complexities and governance structures is crucial for expediting decision-making processes and facilitating the integration of new technologies.

Cybersecurity and data privacy must be prioritised through the implementation of robust measures and protocols. This would foster trust among stakeholders and ensure the secure storage and processing of sensitive information. Lastly, a comprehensive IT infrastructure plan and budget allocation are paramount for optimising the deployment and functionality of MIS systems.

Therefore, by overcoming the identified challenges and implementing the recommended strategies, the public sector can harness the full potential of MIS to enhance decision-making, streamline processes, and ultimately contribute to improved organisational performance and service delivery.

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The impact of COVID-19 on income diversification among the rural small-scale farmers in Alfred Nzo District and King Cetshwayo District Municipality

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ABSTRACT

This research paper presents a comparative analysis of the Alfred Nzo and King Cetshwayo District municipalities. The study focuses on income diversification, which has gained significant attention from researchers worldwide. The research highlights that small-scale farmers living in remote rural areas are often neglected. The study reveals that before 2017, small-scale farmers in both ANDM and KCDM experienced a significant increase in farm output. However, a recent decline in farm production has emerged as a major problem in the study areas. The COVID-19 outbreak has further exacerbated the situation, as smallholder farmers faced restrictions imposed by the South African government to contain the spread of the virus. This has led to a negative impact on different sources of income, which may have prompted rural smallholder farmers to engage in multiple income-generating activities. The study utilised a questionnaire as the primary instrument for data collection, and systematic random sampling was employed. The research obtained 268 and 264 observations in ANDM and KCDM, respectively. The Simpsons Diversity Index was used to determine whether the household head diversified income sources or not. A Tobit regression model was used to assess the determinants of income diversification, given the nature of the dependent variable, which ranges between 0 and 1. The results of the study indicate that five variables were statistically significant in ANDM, while only three were significant in KCDM. Based on our findings, the study recommends that the

government should implement policies that promote gender equality in income diversification, make credits more accessible to smallholder farmers, and create programs that will enhance income diversification among rural smallholder farmers in the event of disease outbreaks.

Keywords: smallholder farmers, COVID-19, income diversification, Alfred Nzo District Municipality, King Cetshwayo District Municipality

INTRODUCTION

The global health challenge that emerged from the outbreak of the coronavirus in China in December 2019 and subsequently spread worldwide had far-reaching consequences. Not only did it disrupt economic activities on a global scale, but it also had a significant impact on food systems. The South African government's decision to impose lockdown restrictions as a containment measure further exacerbated the situation, causing stress and frustration among the public, including local farmers who were unable to freely sell their produce.

This was particularly detrimental to rural small-scale farmers who already faced challenges in terms of resources and market access due to poor infrastructure. As a result, livelihoods were threatened, leading to income insecurity as job losses increased, exacerbating the already high rates of unemployment, poverty, and food insecurity. The arrival of COVID-19 in the region has further accelerated the number of undernourished individuals, particularly in the Eastern Cape, which is known for its high poverty and unemployment rates. The Alfred Nzo district municipality is worse off compared to other areas in the region.

According to Stats SA (2019), KwaZulu-Natal is considered the third most impoverished area in South Africa, following the Eastern Cape. The region is largely dominated by households that rely on agricultural activities for their livelihoods, particularly in the northern part of the province, where the uMhlathuze local municipality falls under the King Cetshwayo District, which has been identified as having more farming potential than other districts (Abegunde *et al.*, 2020). While the KCDM experienced a growth of 30.4% in the agricultural sector between 2009 and 2016, it recently recorded a negative growth of 9.7% (KCDM, 2020). On the other

hand, the ANDM reached its highest peak of 17.4% during the same period but recorded a decline of 16.2% after 2016 (ANDM, 2020).

One of the major challenges faced by smallholder farmers in these areas is a reduction in farm productivity. This, coupled with other factors, may lead to farmers engaging in multiple income-generating activities. The current study aims to investigate the impact of COVID-19 on livelihood diversification among rural small-scale farmers in both the ANDM and KCDM districts. By comparing the findings from these areas, it may be possible to determine whether smallholder farmers have fully recovered from the pandemic or not. This information could be used to develop alternative programs to ensure that small-scale farmers have recovered from the shock caused by the coronavirus.

PROBLEM STATEMENT

Numerous research studies have been conducted to evaluate the impact of diversifying livelihoods on food security status. While some of these studies, such as the one conducted by Onunka and Olumba (2017), found a positive and significant relationship and Toyin (2017), reported a non-significant relationship. However, all these studies have focused solely on the effect of livelihood diversification on food security status, without considering the role that food security status may play in determining the income diversification among the rural smallholder farmers. Additionally, there is limited empirical evidence available on how food security status has influenced livelihood diversification during the COVID-19 pandemic era in ANDM and KCDM. This research aims to address this gap in the existing literature.

AIM OF THE STUDY

The primary objective of the research was to investigate the factors influencing the diversification of livelihoods among small-scale farmers residing in ANDM and KCDM. The study seeks to gain a deeper comprehension of the impact of COVID-19 on livelihood diversification within these specific regions.

SPECIFIC OBJECTIVES

- To evaluate the influence of the COVID-19 pandemic on the diversification of livelihoods among small-scale farmers in the rural areas of ANDM and KCDM.

- To examine the determinants of livelihood diversification among the rural small-scale farmers in ANDM and KCDM.

CONTRIBUTION TO THE BODY OF KNOWLEDGE

The research makes a significant contribution by incorporating a new variable related to food security into the livelihood diversification model. This variable, being tested for the first time, aims to determine the relationship between livelihood diversification and food security status. The objective is to examine whether food security acts as a motivating factor for rural households to pursue various income-generating opportunities. This study stands out as the first to assess livelihood diversification while considering food security as an independent variable, and it also considers the impact of COVID-19 on two marginalised rural communities. Therefore, this research adds an original contribution to the existing body of knowledge.

SIGNIFICANCE OF THE STUDY

Livelihood diversification plays a crucial role in various aspects such as employment creation, poverty reduction, and food security improvement, while also contributing to the overall income of households (Maja and Oluwatayo, 2018). Small-scale farmers often engage in different income-generating activities due to declining agricultural productivity (Maja, 2019). Considering the COVID-19 pandemic, it is essential to conduct a research study to examine the impact of this crisis on the livelihood activities of smallholder farmers in ANDM and KCDM. This study aims to offer policy recommendations that encourage small-scale farmers to explore diverse business opportunities, ultimately leading to increased income generation. By promoting livelihood diversification, the reliance on social support grants provided by the South African government can be reduced.

CONCEPTUAL FRAMEWORK

Sustainable Livelihood Approach

It is crucial to possess the ability to respond efficiently to external shocks or pressures while preserving the productivity of natural resources and avoiding any negative impact on the lives of others to maintain a sustainable livelihood (Sneddon, 2000). For a livelihood to be considered sustainable, it must exhibit resilience in the face of

diverse obstacles, while also maintaining or enhancing its resources and assets, without causing any damage to the underlying natural resources (Carney, 1998).

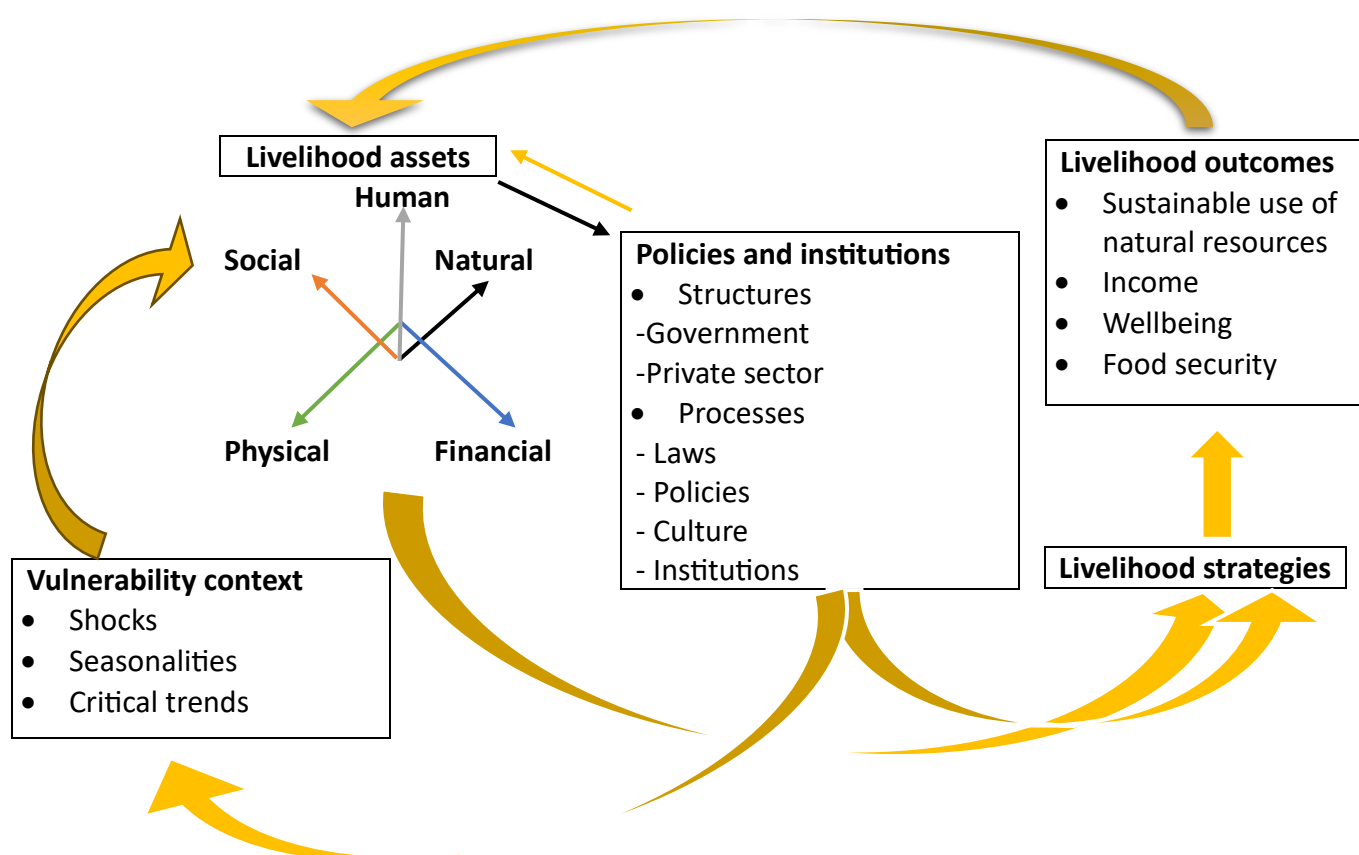


Figure 1. The sustainable livelihood framework. Source: Serrat, (2017).

Capital assets

It is crucial to recognise the capabilities of individuals to effectively evaluate their efforts in converting their resources into a prosperous livelihood outcome, which is the foundation of the livelihoods approach (Bebbington, 1999). To achieve their goals, people require a variety of resources (assets) as one would not be sufficient. These resources include human capital, natural capital, social capital, physical, and financial capital.

Human capital

Human capital refers to the expertise and knowledge that individuals possess within households, which they can effectively utilise to engage in various livelihood activities and achieve desired outcomes. This approach is widely recognised as a crucial means of supporting livelihoods, as it helps households accomplish their objectives. As stated

by DFID (1999), at the micro level, the extent of human capital depends on the number of individuals residing in a household who are capable and available to offer their services in the labour market.

It is widely recognised that restricted access to education and inadequate healthcare services are the main causes of poverty, making it crucial for individuals to confront these obstacles and strive to overcome them. The present study critically analysed education as a component of human capital, aiming to determine its impact on livelihood diversification, food security, and dietary diversity intake.

Natural capital

The term "natural capital" refers to the resources that households rely on for their financial well-being, including land, water, animals, forestry products, environmental services, aquatic resources, wild-sourced food, and biodiversity. Natural capital encompasses both living and non-living organisms. It is also known as a resource that provides beneficial effects to people's livelihoods, such as soil, ecosystems, minerals, species, freshwater, and oceans. Small-scale farmers can utilise land as one of these natural resources to cultivate agricultural products that can significantly benefit subsistence and commercial farmers, as well as reduce poverty and food insecurity at the household level.

Social capital

The notion of 'social capital' has been the subject of much debate, with various interpretations within the sustainable livelihood framework. It is often regarded as a valuable social resource that individuals can utilise to achieve their livelihood objectives. By leveraging the alliances formed with like-minded individuals, having confidence in one's abilities, and possessing the ability to collaborate, the strength of these partnerships can be significantly enhanced, providing access to more influential organisations. This occurs by joining multiple groups that share similar norms and values, fostering mutual trust, exchanging favours, and establishing an informal support system for the disadvantaged.

Participating in groups and associations can expand individuals' access to and control over other institutions. This can serve as a support system to assist rural small-scale farmers in diversifying their asset portfolio, which in turn can help address issues of

food insecurity and improve dietary diversity. Among the five capital assets, social capital is closely intertwined with transformative structures and processes. These structures and processes can be seen as outcomes of social capital, leading to a continuous cycle of support. When individuals are already connected through shared norms, they are more likely to form new entities to pursue their goals. Additionally, influential civil society organisations assist individuals in shaping policies and ensuring that their aspirations are incorporated into legislation.

Physical capital

Physical capital encompasses essential elements of infrastructure such as roads, transportation systems, reliable water supply, secure housing, and buildings, as well as access to information, affordable energy, production equipment, pesticides, fertilisers, and seeds (Kollmair and Juli, 2002; Serrat, 2017). Insufficient infrastructure can pose obstacles to education, healthcare accessibility, and income generation. For instance, the absence of an irrigation system leads to significant time being wasted on tasks like water collection, which demands additional labour and hinders productivity in other areas. Consequently, physical capital plays a pivotal role in determining the success or failure of rural smallholder farmers. Inadequately maintained roads, for instance, can impede the ability of small-scale farmers to sell their products in different regions.

Financial capital

Financial capital refers to the resources individuals utilise to achieve their financial goals. These resources can be obtained from two primary sources: available stocks and regular cash inflows. Available stocks include savings held in cash, bank deposits, or liquid assets such as livestock and jewellery. Accredited financial institutions specialising in providing credits or loans are another avenue for acquiring financial resources (DFID, 1999). Regular cash inflows, excluding earned income, commonly come in the form of pensions and remittances (Waidler and Devereux, 2019). Lack of access to remittances and inability to secure credits from financial institutions can have adverse effects on the livelihood activities, dietary intake, and food accessibility of small-scale farmers in ANDM and KCDM.

Vulnerability context

The survival strategies and resources of small-scale farmers are greatly influenced by various factors such as trends, shocks, and changes in seasonality. Unfortunately, these factors are beyond the control of the farmers themselves. Shocks can come in the form of floods, diseases, pests, droughts, and even changes in employment opportunities. For instance, some individuals may find themselves unemployed once the crop harvest is complete, as employment in the farming sector is often dependent on seasonal changes. On the other hand, critical trends encompass technological advancements, economic shifts, governance policies, and demographic factors.

The level of risk is determined by the likelihood of external shocks, while vulnerability refers to the extent of exposure to such risks (Glopp, 2008). COVID-19 serves as a prime example of an external shock that has significantly impacted the economy, and unfortunately, it was beyond the control of farmers. However, this particular variable is of great interest in the current research, as the researcher aims to investigate its effects on food security, livelihood diversification, and dietary diversity patterns among rural small-scale farmers in ANDM and KCDM.

Policies and institutions

Ineffectiveness of policy-formulating structures can be attributed to the absence of necessary institutions and processes. The success of livelihood strategies and outcomes is not solely reliant on access to capital assets or vulnerability context, but also on the presence of institutions and processes. These structures encompass public and private sector organisations that establish and enforce policy and legislation, while processes include laws, policies, regulations, societal norms, agreements, and operational arrangements.

In South Africa, numerous government institutions are responsible for setting policies and regulations on various aspects. The proposed research aims to suggest policies that can be implemented to encourage rural small-scale farmers in ANDM and KCDM to participate in income-generating activities, leading to positive livelihood outcomes such as improved food security and dietary intake in the study areas.

Livelihood strategies

According to Ellis (2000), intensifying agricultural practices can result in a greater reliance on the sector, as resources that could be allocated to other areas would be assigned into one livelihood strategy. In comparison to other sources of income, agriculture plays a minor role in the overall household income (De Cock *et al.* 2013). Walker *et al.* (2001) highlight that individuals employ various livelihood strategies to enhance their standard of living. Alemu (2012) explains that in rural regions of South Africa, agriculture, migration, and government social grants are the primary means of survival. A rural-urban migration pattern may occur as individuals from rural areas opt to move to urban areas in search of better job opportunities and an improved standard of living.

Livelihood outcomes

The engagement in multiple income-generating endeavours has the potential to enhance the overall household income for small-scale farmers. This, in turn, can contribute to an improved food security status and enhanced dietary intake among rural smallholder farmers. Consequently, diversifying livelihoods can effectively reduce vulnerability and promote the conservation of natural resources. However, the realisation of these positive outcomes heavily relies on the unwavering support of institutions and policy-making structures towards the livelihood strategies adopted by rural small-scale farmers in both ANDM and KCDM, ensuring the sustainability of their livelihoods. In the current research study, the Sustainable Livelihoods Approach (SLA) served as a conceptual framework to justify the various livelihood activities pursued by rural small-scale farmers in both ANDM and KCDM.

METHODOLOGY

Selection and justification of study areas

The selection of the ANDM in the Eastern Cape was purposeful because it was reported as the COVID-19 hotspot in the province in 2020 (ANDM, 2020). Despite the KCDM district being ranked fifth in terms of COVID-19 cases, it was reported as the second highest in terms of fatalities (KCDM, 2020). Hence, both districts were deliberately chosen as they were significantly impacted by the COVID-19 pandemic.

Description of study areas

A comparative analysis has been conducted on the Alfred Nzo and King Cetshwayo District Municipality. The Alfred Nzo District Municipality is in the northern part of the Eastern Cape Province and comprises of four municipalities, namely Mbizana, Ntabankulu, Umzimvubu, and Matatiela local municipality (ANDM, 2017). It is the smallest district in the region, covering an area of 10 731km², which represents 6% of the geographical area. The district extends to the Drakensberg mountains, with Harry Gwala District in the north, OR Tambo District in the south and east, and Lesotho in the west. Additionally, there are over 1000 individual households who are members of maize co-operatives (Miti, 2017).

The King Cetshwayo District is positioned in the northern part of KwaZulu-Natal, with its administrative headquarters situated in Richards Bay. This district is located at the following geographic coordinates: 28.6192S, 31.5370E. It encompasses five (5) municipalities, namely uMhlathuze, uMthonjane, uMlalazi, uMfolozi, and Nkandla local municipality. To focus on the farming potential within the region, the study specifically selects uMhlathuze and uMlalazi local municipality. These areas are known for their significant number of small-scale sugarcane growers, with approximately 4500 households or more engaged in this agricultural activity. The map provided below illustrates the various district municipalities and the precise location of King Cetshwayo.

Target population

The Alfred Nzo District is currently implementing 13 CASP agricultural projects in all the local municipalities. The majority of rural households in this district rely on farming as their main source of income (ANDM, 2020). Similarly, in the King Cetshwayo District, farming is the primary livelihood strategy for rural dwellers (UMLM, 2020). According to the FAO (2017), a small-scale farmer is defined as someone who owns 5 hectares of land or less.

In the Amatikulu and Felixton region, sugarcane farming is a prominent crop, while maize co-operatives dominate in Mbizana. For this research study, we will focus on individual smallholder farmers who produce sugarcane in the Amatikulu and Felixton areas of northern KZN. In Mbizana, which falls under the Alfred Nzo District, our target will be household heads who are members of the maize co-operatives. To gather

information about the smallholder farmers in KZN, we will approach the extension officers at both the Felixton and Amatikulu mills, where the households sell their sugarcane. In the Mbizana local municipality, we will request the details of maize co-operative members from the chairperson of the Dyifani maize mill, where the households sell their maize.

Sampling methods

The process of choosing participants for a research study relies on two sampling methods: probability and non-probability. In this study, systematic random sampling was employed to select the respondents. This method was chosen due to its simplicity in drawing a sample from a larger population. The process begins by selecting a starting point from the sampling frame and then consistently maintaining the same interval while skipping certain households or individuals. This sampling technique was utilised in both districts as the farmers have organised groups or organisations with registers containing member details.

Sample size

The data collection process for this research was conducted in two locations, which required the sample size to be calculated separately. To determine the appropriate sample size for this study, the Krejcie and Morgan sampling formula was employed.

$$s = \frac{x^2 NP(1 - P)}{d^2(N - 1) + x^2 P(1 - P)}$$

Sample size for ANDM

According to the data acquired from the Department of Agriculture and Rural Development in Mbizana (ANDM), it is evident that 1457 household heads are actively participating in the formal maize projects.

$$s = \frac{3.842 \times 1457 \times 0.50(1 - 0.50)}{0.0025(1457 - 1) + 3.842 \times 0.50(1 - 0.50)}$$

$$s = 304$$

Sample size for KCDM

According to a study conducted by Sifundza (2019), it was found that a total of 787 households from the KwaMkhwanazi community were engaged in farming and delivered their sugarcane produce to Felixton Mill.

$$S = \frac{3.842 \times 787 \times 0.50(1-0.50)}{0.0025(787-1) + 3.842 \times 0.50(1-0.50)}$$

$$s = 258$$

Data collection and instrument

The structured questionnaire was employed as the main instrument to collect the data from the small-scale farmers in ANDM and KCDM. The data collection in KCDM started on the first week of March 2023, while in ANDM it commenced on the first week of August 2022.

Technique for data analysis: Censored Tobit model

The Tobit model, introduced by Tobit in 1958, is extended by the Censored Tobit model. The researcher opted for this model due to the dependent variable's nature, which has two censoring limits. To measure livelihood diversification, the Simpsons Diversification Index (SDI) was used as a proxy, with values ranging from 0 to 1. The Ordinary Least Squares (OLS) method produces biased estimates in this scenario since it does not consider the dependent variable's range. Therefore, the Censored Tobit model is the most suitable estimation technique that generates unbiased coefficients. This model has a high predictive capacity when the dependent variable has a left or right censored limit. Younesi and Kamangar (2013) specified the Censored Tobit model as:

$$y_i = x_i\beta + \vartheta\varepsilon_i$$

In the Tobit model, the latent variable is represented by y_i , while x_i denotes the characteristics of the sampled population. The coefficients to be estimated in the model are symbolised by β , and the error term is represented by ε_i , whereas ϑ is known as the scalar.

$$y_i = \begin{cases} 0 & \text{if } y_i^* \leq 0 \\ y_i^* & \text{if } y_i^* > 0 \end{cases}$$

The left censored threshold is denoted by $y_i^* \leq 0$, whereas the right censored limit is indicated by $y_i^* > 0$.

$$y_i = \begin{cases} k_i & \text{if } y_i^* < k_i \\ y_i^* & \text{if } k_i < y_i^* < k_j \\ k_j & \text{if } y_i^* > k_j \end{cases}$$

The equation above pertains to situations where the data is bounded by two censoring limits. This implies that the data has both left and right censoring thresholds. To illustrate, the dependent variable in this research has a minimum value of 0 and a maximum value of 1.

Model specification

The study employed the SDI as the dependent variable which is the proxy for livelihood diversification. The model for the Tobit regression model was specified as:

$$SDI = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \beta_k x_k + u_i$$

Where β_0 denotes the slop of the regression model, β_1 , β_2 , and β_k represents the coefficient that will be estimated, x_1 , x_2 , and x_k symbolises the characteristics of the sampled households, and u_i signifies the error term.

Measurement of the dependent variable

The Simpson's Diversity Index (SDI) was calculated using the following formular.

$$SDI = 1 - \frac{\sum n(n-1)}{N(N-1)}$$

In this context, the lowercase letter "n" denotes an individual's income source, whereas the uppercase letter "N" represents the total income from various livelihood strategies. If the head of the household has only one income source, the SDI will be zero. Conversely, if the head of the household has multiple income sources, the SDI will be closer to or equal to 1, indicating that a smallholder farmer in the surveyed population has multiple income sources. This means that the dependent variable ranges from 0 to 1.

Measurement of independent variables

The independent variables used to predict the factors influencing livelihood diversification are presented in Table 1, with a comprehensive explanation provided below the table.

Table 1: Independent variable

Variables	Type	Description
HHG	Dummy	1, Male
		0, Female
HHMS	Dummy	1, Married
		0, Otherwise
HHED	Dummy	1, Formal education
		0, Otherwise
CRED	Dummy	1, Access to credits
		0, Otherwise
HHEMP	Dummy	1, Employed
		0, Otherwise
HHAG	Continuous	Age in years
LVST	Dummy	1, Livestock owner
		0, Otherwise
FSS	Dummy	1, Food secure
		0, Otherwise
COV-19	Continuous	COVID-19
HS	Discrete	Number of household members

Household head gender – HHG

The gender variable, HHG, was assigned a value of 1 to represent male-headed households and 0 for female-headed households. It was hypothesised that male-headed households would have more sources of income compared to their female-headed counterparts.

Household Head Marital status – HHMS

The marital status variable, HHMS, was coded as 1 for married-headed households and 0 for single-headed households. It is expected that married-headed households would engage in multiple income-generating activities compared to single-headed households.

The education status of the household head – HHED

Education status is coded as a dummy variable. If the household head has formal education, they are assigned a numerical value of 1; otherwise, it is 0. The study expects that smallholder farmers who have received education will be involved in multiple income-generating activities.

Credit access – CRED

Credit access is a dummy variable that indicates whether the head of the household has access to credits. A value of 1 represents access to credits, while 0 indicates no access. It is expected that small-scale farmers who have access to credits would engage in various livelihood activities.

Household head employment status – HHEMP

Household head employment status is a binary outcome variable. It is coded as 1 if the head of the household is currently employed and 0 if they are not. When the household head is employed, it is expected that they are engaged in other income-generating activities.

Household Head age – HHAG

This is a continuous variable that measures the age of the household head in years. This variable was included in the research to examine which age group, whether elderly or younger household heads, has a higher likelihood of diversifying their sources of income in the study area.

Livestock ownership – LVST

This is a binary variable that takes a value of 1 if the household head owns livestock such as cattle, and 0 otherwise. It is hypothesised that household heads who have livestock will have more diverse income streams.

Food security status – FSS

Food security status is coded as 1 if the household members did not experience any food shortages in the 30 days prior to the survey, and 0 if they did. Small-scale farmers who are food-secure are anticipated to participate in various livelihood activities that not only provide food but also generate income for their households.

Proxy for coronavirus – COV-19

COVID-19 is a Likert scale-type question that measures the level of fear or anxiety regarding the loss of livelihood activities due to the COVID-19 pandemic. The responses range from strongly disagree to strongly agree, with corresponding codes of 1 to 5. The average score is calculated using these codes, providing a mean score for the Likert scale question. To convert this categorical variable into a continuous form, the researcher employed the jittering method proposed by Machado and Santos Silva (2005).

Household size – HS

This is a discrete variable that represents the number of members in a household. It is anticipated that households with larger family sizes will have multiple sources of income.

DESCRIPTIVE STATISTICS

Table 2 illustrates the contrasting minimum household head ages in ANMD and KCDM, which were 20 and 33 years, respectively. Moreover, the oldest smallholder farmer in ANMD was 92 years old, while in KCDM, the oldest farmer was 95 years old. In terms of the average age of the respondents, it was 57 years in ANMD and slightly higher at 60 years in KCDM. The mean household size was almost identical in both districts, with 8 persons in ANMD and 9 persons in KCDM.

The average number of household members in KCDM exceeded that of ANMD by 1 person. Additionally, the mean farm experience was 12 years in ANMD and 13 years in KCDM, indicating that smallholder farmers in KCDM had 1 year more experience compared to those in ANMD. Although there were minor disparities in the average total monthly income between ANMD and KCDM, the difference amounted to approximately R916.20.

Table 2: Descriptive statistics from continuous variables.

ANDM					KCDM			
Variables	Min.	Max.	Mean	Std.	Min.	Max.	Mean	Std.
Age	20	92	57	14.05	33	95	60	10.34
Household size	1	30	8	4.40	2	23	9	3.56
Farm exp.	1	40	12	12.36	1	55	13	9.56
Total income	0	30000	4064.48	4087.33	920	81000	4980.68	5598.97

Source: authors' computation.

RESULTS FROM TOBIT REGRESSION MODEL

There were 268 observations in ANDM and 264 observations in KCDM. The Pseudo R-squared values were 0.3953 for ANDM and 0.3447 for KCDM, as shown in Table 3. The chi-square probability was 0.0000 for both ANDM and KCDM, indicating a good fit of the model with the data. Table 3 reveals that 5 variables were statistically significant in ANDM, whereas only 3 variables were significant in KCDM.

Table 3: Determinants of livelihood diversification

	ANDM			KCDM		
SDI	Coef.	t	P> t	Coef.	t	P> t
HHG	0.1197039	1.71	0.089*	0.1035631	1.35	0.178
HHMS	0.0664624	1.02	0.310	-0.0004849	-0.01	0.995
HHED	-0.1415765	-1.36	0.175	-0.0161192	-0.20	0.843
CRED	0.2249215	2.59	0.010**	0.225698	2.15	0.030**
HHEMP	0.049822	0.30	0.764	0.1037602	0.89	0.377
HHAG	-0.0083499	-2.85	0.005***	0.0024636	0.61	0.543
LVST	-0.0373477	-0.47	0.635	0.2235085	1.82	0.069*
FSS	0.1821548	2.15	0.033**	0.0800354	0.70	0.487
COV-19	0.1554461	3.07	0.002***	0.2457381	4.21	0.000***
HS	0.0007611	0.09	0.925	0.0089283	0.83	0.405
_cons	-2.400888	-4.90	0.000	-5.415402	-7.30	0.000
	Number of obs. 268			Number of obs. 264		
	Prob > chi = 0.0000			Prob > chi = 0.0000		
	Pseudo R-squared = 0.3953			Pseudo R-squared = 0.3447		

***Significant at 1 percent, **Significant at 5 percent, *Significant at 10 percent.

The gender coefficient is positively associated with SDI and statistically significant at less than 10% in ANDM, while it is not significant in KCDM. These findings suggest that male-headed household heads are more likely to diversify their income sources compared to their female counterparts, when controlling for other factors. These results were in line with Tyenjana and Taruvinga (2019).

Credit access is found to be positive and statistically significant at 5% in both ANDM and KCDM. This indicates that household heads who have access to both formal and informal credits are more likely to diversify their sources of income. It is possible that smallholder farmers, when receiving loans from financial institutions, invest the money in various types of businesses.

The coefficient for household head age is statistically significant at less than 1% and negatively related to SDI in ANDM. This means that as the age of the household head increases by 1 year, they are less likely to diversify their sources of income, when controlling for other factors. Younger household heads are expected to invest in different business opportunities. The results of the current study correspond with Dinku (2018).

Ownership of livestock was discovered to have a favourable impact on SDI and was statistically significant at a level below 10% in KCDM. The findings demonstrate that small-scale farmers who possess livestock are more inclined to diversify their sources of income compared to those who do not own any livestock if all other factors remain constant.

The coefficient for food security exhibited a positive association with SDI and was statistically significant at a level below 5% in ANDM. Holding all other factors constant, the results suggest that households with food security were more likely to diversify their income compared to the group facing food insecurity.

The variable for COVID-19 was expected to have a negative relationship with SDI, but surprisingly, it is positive and significant at a level below 1% in both ANDM and KCDM. These results suggest that household heads who perceived COVID-19 as a serious threat to their livelihood activities were more inclined to invest in different types of businesses to safeguard their income sources from the associated risks. These findings are in line with Yazdanpanah (2021)

CONCLUSION AND RECOMMENDATIONS

The purpose of this research was to investigate how COVID-19 affected income diversification among rural small-scale farmers in ANDM and KCDM. The study found that COVID-19 had a significant impact on both districts, and as a result, smallholder farmers were forced to engage in various livelihood activities to protect their income from the pandemic. The research question was successfully addressed, and the objective was achieved in both districts.

The Tobit regression model revealed that income diversification in ANDM was influenced by household head gender, access to credit, household head age, food security status, and COVID-19. In KCDM, income diversification was impacted by credit access, livestock ownership, and COVID-19. These findings were consistent with previous studies.

Based on the results, we recommend that the government formulate policies to make credit more accessible to small-scale farmers, enabling them to invest in non-agricultural businesses. Secondly, the government must implement the policies that will promote income diversification in any situation of the disease outbreak to ensure that the small-scale farmer's livelihood activities are not affected by the pandemic. Additionally, policymakers should implement measures to ensure that both men and women have equal opportunities for income diversification.

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Impact of workplace aggression on educators' public service motivation: A Case Study

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ABSTRACT

Workplace aggressiveness is a risk in all work situations and appears to be increasing in South African schools, especially against teachers. The literature on workplace aggression and public service motivation among the public sector is still limited. Existing research suggests that public service motivation has been used as an independent variable to predict how it affects individual performance in public organisations. In this study, we evaluate how learner-initiated workplace aggression affects teachers' public service motivation. We also establish a mediated moderated model to determine the effects of workplace aggression on public service motivation using psychological capital and perceived organisational support. A correlational design was used to explore the relationship between multiple variables by administering surveys to teachers. We used convenience sampling through which respondents were recruited to participate in the study based on their availability. The respondents in this study consisted of 82 teachers employed in various schools in the iLembe district. The study findings show that workplace aggression was negatively correlated with public service motivation ($r = -.33, p < .01$). Our empirical results also

show that psychological capital operates as a mediating mechanism that links workplace aggression to public service motivation. Furthermore, perceived organisational support acts as a boundary condition that moderates the relationship between workplace aggression and psychological capital. The study specifically focusses on teachers and public schools, shedding light on the challenges they face due to workplace aggression. The findings highlight the importance of addressing aggression within educational institutions to ensure that the motivation to serve remains strong and intact. Theoretical and practical implications of the study are discussed.

Keywords: workplace aggression, teachers, learners, public service motivation

INTRODUCTION

The study was motivated by a lived experience of a radio caller. On 26 October 2019, while listening to Radio 702, a caller requested a song and when the anchor asked what the song reminded her of, she said that she was assaulted by a learner and felt down (Radio702, 2019). This prompted interest to study more about workplace aggression and how it affects civil servants, and especially their resource predisposition. Workplace aggressiveness is a risk in all work situations, and appears to be increasing in South African schools, especially against teachers (Dlamini, 2018).

The most precious resource in organisations, its human capital, is regularly the victim of workplace aggressiveness, a pervasive destructive phenomenon. Some academics contend that this phenomenon has existed since the beginning of the employer-employee relationship (van der Merwe, Myburgh & Poggenpoel, 2015), yet it is still increasingly common in the workplace globally (Jaradat *et al.*, 2016). Furthermore, researchers agree that aggression is a universal phenomenon ingrained in social norms (Severance *et al.*, 2013; van der Merwe *et al.*, 2015). According to Severance *et al.* (2013), aggression includes any conduct that is typically directed at one or more targets with the purpose of inflicting harm in ways that the targets are motivated to avoid. Ferris, Yan, Lim, Chen, and Fatimah (2016) go on to say that workplace violence can be carried out purposefully or accidentally, but always with the intention of harming the target.

In a school setting, aggression can take many different forms. The first being aggression from teachers to learners, learners to teachers, teachers to principals, and

principals to teachers (Woudstra, Van Rensburg, Visser & Jordaan, 2018). This particular form of workplace aggression occurs in an educational setting, such as in the classroom or on school grounds (Kreifels & Warton, 2018). At school, every stakeholder is a potential aggressor. Dias and Ventura (2017) accentuate that some workplace environments promote aggressive behaviour, for example, schools play a prominent role in the prominence of aggressive behaviour. Teachers should play a disciplinarian role with learners, and how this is done varies from one individual to another. Due to this setup, Severance *et al.* (2013) argue that school could aggravate aggressive behaviour, as the learner might view being disciplined by a teacher as victimisation.

Individuals, family, and social determinants can influence the aggressive behaviour of learners, as learners would assimilate aggressive behaviour learnt from friends, family or within their surrounding environment (Pérez-Fuentes, Molero Jurado, Barragán, & Gazquez, 2019). According to van der Merwe *et al.* (2015), South Africa's high levels of unhappiness and trauma among its people contribute to increased workplace violence. Masweneng (2018) states that encounters with disobedient learners have increased teacher turnover. Regardless of the way aggressive behaviour is perceived, its adverse impact cannot be overstated, whether for an individual or for an organisation. Workplace aggression remains a significant challenge for organisations, by hampering the functioning of employees because they may suffer mentally and physically (Niven, Sprigg & Amp, Armitage, 2013). For employees, it can equally have devastating effects even on their families and society (Johnson, Nguyen, Groth & White, 2018).

Over the years, empirical research on workplace aggression has focused on health and attitudinal consequences for the individual exposed to workplace aggression (Schat & Frone, 2011). Another aspect of the workplace aggression literature has focused on examining the perpetrator and target perspective (Hershcovis & Reich, 2013). Schat and Frone (2011) also point out that some parts of the workplace aggression literature have received less attention, e.g., whether workplace aggression predicts important workplace behaviours, such as performance.

Research linking workplace aggression and public service motivation among public service employees in the public service environment is still scant. This lack of attention

is striking due to the importance of public service in public organisations. Public service motivation is an 'individual' orientation to the delivery of services to people with the purpose of doing good for others and society (Andersen, Heinesen, & Holm Pedersen, 2014, p.651). Existing research suggest that public service motivation has been used as an independent variable in order to predict how it affects individual performance in public organisations (Perry & Wise, 1990; Wright & Grant, 2010; Kim *et al.*, 2013; de Simone, Pinna, Cicotto & Giustiniano, 2016). The findings of these researchers were able to provide more insight on how public service motivation influences job-related behaviours of individuals such as job satisfaction and job participation (de Simone *et al.*, 2016).

Since workplace aggression has been found to have negative consequences for public employees, it was also assumed that it could further decrease public service motivation (Tummers, Brunetto & Teo, 2016). Public service motivation is necessary for public employees in government entities; this would allow them to serve the public successfully and be of help using their jobs or careers (Cheng, 2019). The greater the motivation of an individual for public service motivation, the more likely it is that the individual will seek membership in a public organisation.

In light of the importance of public service motivation, research is necessary to investigate whether and how encountered workplace aggression influences civil servants, particularly teachers' public service motivation. In this study, we evaluate how learner-initiated workplace aggression affects teacher public service motivation. We also establish a mediated, moderated model in ascertaining the effects of workplace aggression on public service motivation by using psychological capital and perceived organisational support.

This paper focusses on teachers as individuals who are regarded a great resource in education (Falecki & Mann, 2020). If teachers are perceived as mentioned above, it is essential to investigate factors that could negatively affect their psychological well-being in the teaching environment.

REVIEW OF RELATED LITERATURE

Background

The news documented on social media showing learners being hostile towards teachers appears to have become common recently. A 17-year-old learner stabbed his teacher to death in September 2018 at Ramotshere Secondary School in Zeerust, North West, claiming that he was upset because the instructor had refused him a second plate of food a few days before the attack (Tshehle, 2018). According to research, one third of all persons in South Africa are subjected to some form of violence (van der Merwe *et al.*, 2015). Since then, the experience of violence in the workplace has been widespread, even in public schools. Workplaces are dynamic environments that often present unexpected human behaviour to researchers. Organisational research is needed because it is interested in the evolution of human behaviour, allowing managers to better understand causal factors. Workplace violence is a serious and widespread phenomenon that has a major impact on victims (Demskey, 2015). The impact of workplace aggression has become a research subject that considers it to be an external stressor to work at work, consuming personal resources and invariably threatening organisational performance.

As a common workplace stressor, workplace aggression has been associated with a number of deleterious outcomes for both employees and organisations alike, including decreased job satisfaction, affective commitment, physical well-being, and job performance, as well as increased turnover intentions, emotional exhaustion, depression, interpersonal, and organisational deviance (Hershcovis & Reich, 2013). The foundation to which workplace aggression finds a source of existence is in societal aggression. Myburgh, Poggenpoel & Nhlapo (2015) indicate that aggression is a social act and that various forms of socially acceptable aggression are reinforced by daily activities through the media, public discourse, and teaching. Therefore, aggression seen within society comes from social factors such as the political situation of the country and societal engagement.

In case a country has constant political instability and lack of cohesion among its society, it is conceivable that aggression would be more prevalent. In essence, whatever happens in the society will inadvertently escalate to the workplace and reflect the aggression as witnessed by the society. Steinman (2003) states that South Africans have been traumatised by the brutality of violent crimes and the violence ended up spilling over from the streets into various workplace environments. Workplace aggression has also found fertile ground to breed even in South African

public schools (Singh & Steyn, 2013; Myburgh & Poggenpoel, 2009; Naicker *et al.*, 2014; Myburgh *et al.*, 2015; van der Merwe *et al.*, 2015; Woudstra *et al.*, 2018).

School violence in South Africa

Violence in public schools has been on the rise in South Africa, and scholars and the media have paid close attention to the issue in recent years (Burton & Leoschut, 2013). Violence in schools is well-known in South Africa; even the Department of Basic Education admits in its studies that violence is rampant in South African public schools. According to Ncontsa and Shumba (2013), the escalation of violence in schools causes fear among learners and instructors. In the same way that schools may have a code of conduct intended to produce a disciplined and meaningful school environment (Davids & Waghid, 2016). Violence in schools is still a prevalent occurrence for both teachers and learners. It should also be pointed out that school violence is not a South African problem and the situation in the United States is far worse. For example, Turanovic and Siennick (2022) claim that a subset of school violence includes acts such as serious threats, weapons in the school, aggravated attacks, robbery or sexual battery and school shootings.

Public schools are a workplace for teachers, but as these schools are within a society where violence is common, it is further reverberating in the workplace (Steinman, 2003). Considerable attention has been paid to bullying in schools. Tugli (2015) conducted a study to investigate violence-related behaviour among learners in rural schools. The study found that rural schools are riddled with violence-related activities by learners. This supports the claims that learners in some public schools are the main perpetrators of violence. Van der Merwe *et al.* (2015) also conducted a study on the experience of aggression by female teachers in the workplace. It found that the school system is also part of the experience of aggression. The argument from these researchers indicates that aggression in public schools will remain because the school system embraces the phenomenon; perhaps this argument is attached to the abolishment of corporal punishment in schools.

Another study by Myburgh *et al.* (2015) investigated the patterns of aggression associated with culture among learners in a secondary school. This study shows that the aggression that people assume takes place in the school takes different forms, emphasising that teachers at times are instigators of aggression towards learners.

Similarly, to the intention of the current study, Woudstra *et al.* (2018) studied learner-to-teacher bullying as a potential factor influencing teacher mental health. The findings revealed that bullying experienced by teachers and initiated by learners can result in “negative emotions, disempowerment, low morale, and low motivation” (Woudstra, 2018:1).

In all aforementioned studies, there is sufficient evidence that the school environment in South Africa is characterised by aggression, bullying, and violence. Therefore, it is essential to determine how workplace aggression affects the motivation of public service teachers.

THEORY AND HYPOTHESIS DEVELOPMENT

The conservation theory of resources (COR) is used as the central theory in this study. This theory claims that individuals are motivated to maintain, build, and protect their personal resources (Hobfoll, 1989). These resources are said to be objects, conditions, personal characteristics, or energies that a person values or serves as a means of obtaining additional resources. According to COR theory, people are stressed when resources are threatened, lost, or cannot be recovered after investment. In a recent review of COR theory, several specific psychological resources were reviewed as reported in organisational literature (Halbesleben, Neveu, Paustian-Underdahl and Westman, 2014). Two relevant and well-studied psychological resources are social support and recovery experiences. In the context of the current study, workplace aggression can be seen as a threat to resource allocation, such as social support, information, self-esteem, and psychological capital. Holmgreen, Tirone, Gerhart, and Hobfoll (2017) assert that individuals place a lot of emphasis on resources because some resources are essential to survival and inherently reinforced by humans. In order for teachers to be motivated to do their job, these resources must remain available to them.

Psychological capital is part of the personal resources an individual can use in performing his duties. According to Johnk and Nievadomska (2020), psychological capital is a positive state of psychological development, with four elements of optimism, self-efficacy, resilience, and optimism, as argued by Louthans, avarois, and Norman (2007). Grabarek (2018) further adds that the set in psychological capital is useful to help an individual improve their success and performance in the job. Given

the nature of teaching, psychological capital is necessary, because it plays a central role in the well-being of teachers both for teachers' participation and for the academic success of learners (Xu, 2023). Psychological capital is an important factor for motivation, effective cognitive processing and achievement (Çimen and Ozgan, 2018).

According to research “supportive organisational climate, collaboration, communication, convenient physical conditions of the school, parental involvement, professional characteristics and positive experiences” are among the contributors to teacher's psychological capital (Çimen & Özgan, 2018:308). On the contrary, the same scholars identify factors that are damaging to teacher psychological capital, among others, including “inadequate physical conditions of the school, negative attitude of parents and colleagues, poor reputation of the teaching profession, and negative experiences of teachers” (Çimen & Özgan, 2018:308). It is evident that there is an interplay between various factors that affect the psychological capital which resources that teachers need for their performance and motivation. As has also been illustrated above, teachers in public schools experience workplace aggression and so we make the following hypothesis:

H1: Workplace aggression is negatively correlated with public service motivation.

Mediation effect of psychological capital

Psychological capital plays a central role in motivation to succeed (Çimen & Özgan, 2018). Research has shown that individuals with a high level of psychological capital are among the most optimistic and confident about their work. These individuals can effectively cope with the challenges and difficulties at work, so they have a high degree of job satisfaction (Han, Xu & Xiao, 2022). Therefore, research implies that people with a high psychological capital can cope with difficulties at work. Therefore, researchers claim that psychological capital can help people cope with depressive symptoms and burnout (Sui, Liu, Jia, Wang, & Yang, 2019). The argument posited by the scholars suggests that psychological capital operates like a buffer for employees, and if it was on the low side, then employees would struggle to cope with difficult circumstances in the workplace. Liu, Zhang, and Ch (2012) found that psychological capital mediated the relationship between effort-reward imbalance and depressive symptoms. Sui *et al.* (2019) found that workplace aggression increased the level of depressive symptoms and burnout by damaging psychological capital.

Since workplace aggression is a common phenomenon in the workplace, researchers suggest that a safer work environment and strong psychological capital may be ideal to help employees prevent mental health concerns (Liu *et al.*, 2012; Sui *et al.*, 2019). It is important for educational organisations to work with individuals who have constructs of positive psychological capital characterised by optimism, hope, resilience, self-efficacy, extroversion, and confidence (Kulekci Akyavuz, 2021). Teachers can experience a more peaceful work environment if the school environment is without workplace aggression. Educational institutions such as schools occupy an essential role in society, as they contribute significantly in the raising of future generations (du Toit, Redelinghuys & van der Vaart, 2022). The role of teachers in fulfilling this task and to have educational institutions that achieve its objectives is sacrosanct. Kulekci Akyavuz (2021) argues that it is important to have teachers who are aware of their own characteristics, look at the future with hope, are able to overcome difficulties at work, and can be role models for their learners. Researchers have found that psychological capital has mediation effects in various aspects of life (Liu *et al.*, 2012; Sui, Liu *et al.*, 2019). For example, when individuals possess high levels of psychological capital, they are more likely to experience lower levels of stress and burnout, as well as higher job satisfaction and performance. In addition, psychological capital can mediate the relationship between challenging situations or adversity and an individual's ability to overcome them effectively. Therefore, this study hypothesises:

H2: Psychological capital mediates the relationship between workplace aggression and public service motivation.

Moderation effect of perceived organisational support

Perceived organisational support is defined as the degree to which employees believe that their organisation values their contributions and cares about their well-being (Ming-Chu & Meng-Hsiu, 2015). Scholars suggest that there are several things that organisations can do to increase perceived organisational support; this includes being fair to employees, providing support that would assist employees to succeed, creating good work conditions, communicating with employees, and also recognising their contribution (Ming-Chu & Meng-Hsiu, 2015; Eisenberger, Shanock, & Wen, 2020; Li, Mohamed, Mahomed, & Khan, 2022). Perceived organisational support is a critical

concept in organisational behaviour. Organisational support can be improved by being fair to employees, providing supervisor assistance, establishing pleasant working environments, interacting with employees, and recognising employee accomplishments. Du Toit *et al.* (2022) argue that schools should consider implementing interventions that would enhance teachers' perceptions of organisational support in order to improve performance.

Additionally, perceived organisational support is also regarded as a valued resource which bolsters employee confidence in coping with role demand, thus making it consistent with COR theory (Bai, Yan & Othman, 2023). In a supportive work environment, an employee would be able to overcome job-related challenges based on the high perceived organisational support. Saeed and Hussain (2021) indicate that employees do so because the support from the organisation improves their sense of achieving the organisational goals. Flowing from the discussion, we propose that:

H3: Perceived organisational support moderates the relationship between workplace aggression and public service motivation. This relationship is stronger when the perceived organisational support is higher (as opposed to when it is lower).

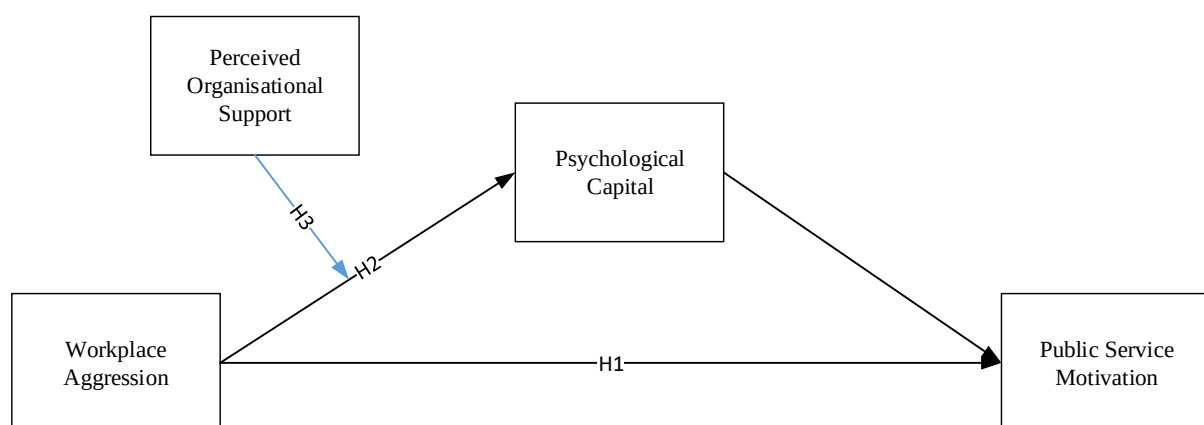


Figure 1: Study proposed model

METHODOLOGY

The study of workplace aggression requires respondents to indicate the number of incidents of workplace aggression they have had from learners. In this regard, the researcher used the last 12 months to be the year 2022. To successfully execute this

study, the researchers approached schools in the ILembe district. In this research, a correlational design was used to explore the relationship between multiple variables by administering surveys to teachers. Correlational studies aim to examine the relationship between variables and provide further information on the likelihood of causation and effect between the variables studied (Köksoy & Kutluer, 2023). The agreement between researchers and respondents was that questionnaires can be collected a week from the time they were distributed. In the survey questionnaire, instructions to respondents and details about our research were provided, and we also included a section in which respondents could consent to participate. The respondents were also guaranteed confidentiality and anonymous participation in this study.

The respondents in this study consisted of 82 teachers employed in various schools in the iLembe district. They were recruited to state how many times they had encountered learner initiated workplace aggression. The data was collected in January and May 2023. Due to financial constraints, researchers used convenience sampling by which respondents were recruited to participate in the study by their availability. Veal (2017) states that if the convenience sampling method is used, there should be a convenience factor such as friendship, family, colleagues, learners, or neighbours. Although the respondents in this study were not from one organisation, being a teacher was used as a convenience factor to recruit the respondents.

The encounter, seeing and hearing about acts of aggression were assessed using the workplace aggression scale with 24 (24) items (Dupré, Dawe, & Barling, 2014) which were adapted from various sources such as Rogers & Kelloway (1997) and Greenberg & Barling (1999). Eleven (11) items assessed workplace aggression of a psychological nature; while thirteen (13) items assessed workplace aggression of a physical nature. The respondents were asked to answer whether they had encountered, seen or heard about these types of aggressive behaviour occurring within the last 12 months (e.g. yelled or shouted, pushed or shoved). To measure the frequency of these incidents, a Likert scale (1 = never, 2 = once, 3 = twice, 4 = 3-5 times, 5 = 6-10 times or more) was used. The Cronbach Alpha was .94, which indicates that the scale was reliable.

Public service motivation was assessed using a revised international applied measurement instrument, by a group of researchers (Kim *et al.*, 2013) which contains four dimensions using sixteen items, with a framework that offers a better theoretical

and empirical foundation for measuring public service motivation across cultures. A 5-point Likert-type scale with a response ranging from 1 = strongly disagree to 5 = strongly agree was used. The Cronbach Alpha was .85, which an indication that the instrument has acceptable levels.

The psychological capital questionnaire developed by Luthans, Youssef and Avolio, (2007) with 24-items was used to measure the psychological capital construct. This questionnaire is designed to assess the four components of psychological capital: hope, self-efficacy, optimism, and resilience, with each component evaluated using six items. The Cronbach alpha was .84, suggesting that the scale was acceptable.

In the present study, the perceived organisational support scale developed by Eisenberger, Huntington, Hutchinson & Sowa (1986) was used. This scale has eight (8) items, and each item on the scale had a five-point Likert-type response format ranging from 1 = strongly disagree to 5 = strongly agree. In this study, this measure had the reliability of Cronbach's alpha $\alpha = 0.88$.

Control variables

We controlled for age, gender, school level, current position and years of service in this study because previous studies indicated that these teacher demographics were likely to be associated with encounters of workplace aggression (Pillay, Coetzee, Scheepers & Ellis, 2023). Gender was dummy coded, with male coded as 1 and female coded as 2. Age was measured as a categorical variable (e.g. 18-35, 36-55, 56-65). The school level was also measured as a categorical variable: primary and high school. The current position was measured using four categories: educator, head of department (HoD), deputy principal, and principal. Year of service was measured using five categories: less than two years, 2-5 years, 6-10 years, 11-15 years and over 15 years. As age, school level, current position and years of service were categorical variables, we included dummy coding for them in the regression model.

RESULTS

Confirmatory factor analyses

To verify the convergent and discriminant validity of four self-reported scales (workplace aggression, public service motivation, psychological capital, and perceived organisational support), we conducted confirmatory factory analysis to compare

several nested measurement models. We compared four alternative models with the base line model 1 and then tested chi-square differences to see which model provided the better fit to the data (Anderson & Gerbing, 1988). As shown in Table 1, the nested models exhibited significantly worse outcomes than the baseline model, as reflected in the chi-square difference tests and the model fit indices. The baseline model of four factors fitted the data well ($\chi^2 = 520.353$, $df = 334$, $RMSEA = .05$, $IFI = 0.97$, $TLI = 0.98$ and $CFI = 0.99$). The standardised loadings of all indicators on their specified constructs were significant at the 0.01 level. Therefore, there was evidence of the distinctiveness of the construct of the variables reported by teachers.

We also examined the average shared variance of each construct. In most cases, variance-extracted estimates from any two measures were greater than their squared interconstruct correlations, thus providing clear evidence of distinctiveness of our key variables (Fornell & Larcker, 1981).

Common method bias

This study relied on self-reported data, which was collected using the same questionnaire at the same time. As a result, the common method bias (CMB) test was used. This study used a Hamman single-factor test, which incorporated all questionnaire items into a one-factor analysis. Unrotated exploratory factor analysis found that a single component accounted for 26% of the variance. Because the entire variation for a single factor is less than 50%, this suggests that CMB has no effect on the data (Podsakoff, MacKenzie, & MacKenzie, 2003).

Table 1. Comparison of measurement models

Models	Factors	χ^2	$\Delta\chi^2$	d.f.	IFI	TLI	CFI	RMSEA
1	Baseline four-factor model	520.353***		334	0.97	0.98	0.99	0.05
2	Three-factor model: Perceived organisational support and Psychological Capital, Workplace Aggression and public service motivation were combined into one factor	940.799***	420.446***	337	0.79	0.80	0.79	0.09
3	Two- factor model: Workplace Aggression, perceived organisational support and Psychological Capital were combined with public service motivation into one factor	1688.213***	747.414***	339	0.70	0.61	0.71	0.10
4	One- factor model: Workplace Aggression and Perceived organisational support; Psychological Capital and public service motivation were combined into one factor	1992.911***	304.698***	341	0.50	0.52	0.56	0.11

*** $p < .001$.

Table 2. Correlations between studied variables

	Variables	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8
1.	Gender	2.22	1.22	-							
2.	Age group	1.98	1.17	.11*	-						
3.	School level	3.83	0.91	.10*	.55**	-					
4.	Years in Teaching Profession	4.54	0.58	.12*	.33**	.44**	-				
5.	Workplace Aggression	3.42	0.93	.10*	.32**	.11*	.10*	(.88)			
6.	Psychological Capital	4.27	0.69	.10*	.40**	.13*	.11*	.29**	(.80)		
7.	Perceived Organisational Support	2.42	1.22	.12*	.38**	.20**	.12*	.20**	.29**	(.81)	
8.	Public Service Motivation	2.28	1.17	.10*	.33**	.11*	.12*	-.33**	.44**	.29**	(.82)

Note: *N* = 83. AVEs are exhibited in digressions on the diagonal.

* $p < .05$, ** $p < .01$.

Table 3: Results of hierarchical regression analysis

<i>Independent</i>		<i>Public Service Motivation</i>		<i>Psychological Capital</i>				
		<i>Model1</i>	<i>Model2</i>	<i>Model3</i>	<i>Model4</i>	<i>Model5</i>	<i>Model6</i>	<i>Model7</i>
Control Variable								
	Gender dummy	-.20	-.19	-.01	-.03	.06	.03	.04
	Age Group dummy	-.11	-.05	.08	.11	.14*	.14*	.08
	School level dummy	.08	.09	.03	.02	-.05	-.06	-.05
	Years in Teaching Profession dummy	-.02	-.04	-.02	-.01	.00	-.00	-.01
Main Effects								
	Workplace Aggression		-.44***	.45***		-.23***	.20***	.30***
Mediator Effects								
	Psychological Capital			.40***				
Moderator Effects								
	Perceived Organisational Support						.36***	.40***
Interaction Effects								
	Workplace aggression × Perceived Organisational Support							.20***
	Overall <i>F</i>	4.32**	9.88***	1.22	7.88**	30.21***	30.12***	29.99***
	<i>R</i> ²	.10	.20***	.01	.20***	.29***	.40***	.51***
	Adjusted <i>R</i> ²	.01	.28***	.25***	.21***	.28***	.41***	.50***
	Change <i>R</i> ²	.02	.27***	.03	.00	.00	.00	.00

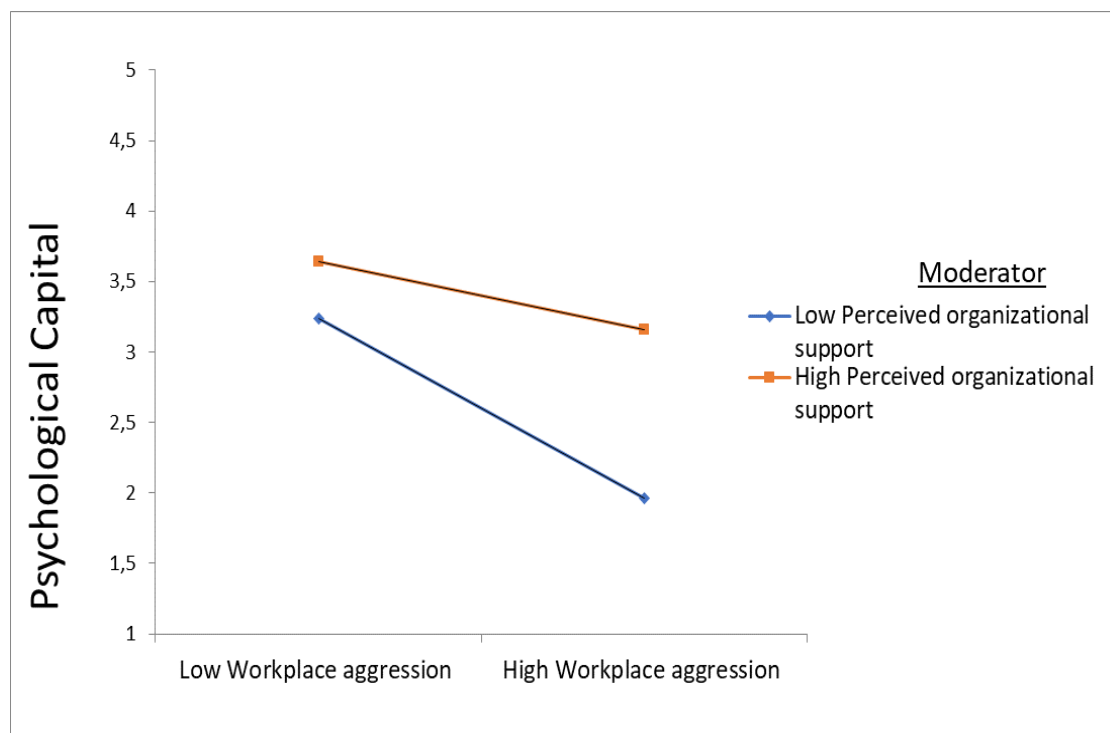


Figure 2: Perceived organisational support as a moderator between workplace aggression and psychological capital

Descriptive statistics

Table 2 presents the means, standard deviations and zero-order correlations of all key variables. As shown in Table 2, workplace aggression was negatively correlated with public service motivation ($r = -.33, p < .01$).

Hypotheses

A series of multiple regression analyses was performed to examine the hypotheses. in all analyses, we examined the proposed relationships while controlling for gender, age group, school level, and years in teaching profession. To test Hypothesis 1 and Hypothesis 2, we entered the variables into the model in three steps. The control variables were first entered, followed by the independent variable of workplace aggression, and finally the mediator (psychological capital) was entered to test the mediation effect. As shown in Table 3, workplace aggression had a negative effect on public service motivation ($\beta = -.44, p < .01$). Therefore, Hypotheses 1 was supported.

In order to test Hypothesis 2, we examined the necessary conditions for mediation prescribed by Baron and Kenny (1986). Workplace aggression was negatively correlated to psychological capital ($\beta = -.23, p < .01$). Furthermore, when psychological capital was entered, the negative relationship between workplace aggression and public service motivation became stronger and significant ($\beta = .40, p < .01$), whereas psychological capital was found to be positively related to public service motivation ($\beta = .44, p < .01$). Thus, Hypothesis 2 was supported.

Hypothesis 3 targeted the moderating role of perceived organisational support in the relationship between workplace aggression and psychological capital. We centred workplace aggression and perceived organisational support to avoid multicollinearity with their product terms in the moderation regressions (Aiken & West, 1991). The workplace aggression x perceived organisational support interaction term was significant ($\beta = .20, p < .01$). As shown in Figure 2, a plot was drawn for individuals whose scores on the moderator were one standard deviation below and above the mean (Aiken & West, 1991). Figure 2 shows the relationship between workplace aggression and perceived organisational support was significant for psychological capital ($\beta = .20, p < .01$). Therefore, Hypothesis 3 was supported.

DISCUSSION

The current study develops and tests a moderated mediation model centred on workplace aggression and public service motivation. Our empirical results show that psychological capital operates as a mediating mechanism that links workplace aggression to public service motivation. Furthermore, perceived organisational support acts as a boundary condition that moderates the relationship between workplace aggression and psychological capital.

As expected, our findings proved that there is a significant negative correlation between workplace aggression and psychological capital and public service motivation. The findings of this study are important in that they provide evidence on how teachers' public service motivation is affected by the rampant workplace aggression in public schools. Scholars recognise the need for an advance understanding of what attracts individuals to work in the public sector and what motivates them to serve others and advance public interest (Ritz, Brewer, & Neumann, 2016). Unlike various scholars who have studied public service motivation as an

independent variable, this study used public service motivation as an outcome variable. The results show that workplace aggression negatively correlates with public service motivation, although this relationship was moderated by psychological capital.

Evidently, the mediating role of psychological capital helps individuals overcome the negative effects of workplace aggression and continue to feel motivated to serve the public. This suggests that individuals with stronger psychological capital are more likely to channel their experiences with workplace aggression into a determination to make a positive impact, ultimately strengthening their public service motivation. Previous studies indicate that when individuals possess higher psychological capital, they are more resilient and better equipped to cope with the negative effects of workplace aggression (Liu *et al.*, 2012; Sui *et al.*, 2019; Han *et al.*, 2022). Individuals' positive psychological state acts as a buffer against the detrimental impact of aggression. As a result, even in the face of workplace aggression, these individuals can maintain or even enhance their public service motivation.

It was also observed that workplace aggression is negatively correlated with psychological capital. In other words, when individuals experience aggression in their workplace, it tends to undermine their positive psychological state thus lowering their psychological capital. This can lead to decreased self-efficacy, reduced optimism, and increased stress, which negatively affect their overall well-being and job satisfaction. It was further observed that perceived organisational support positively moderated the relationship between workplace aggression and psychological capital. As it can be seen in figure 2 which shows that teachers with high levels of psychological capital are more resilient to workplace aggression, even when they perceive low levels of organisational support. However, teachers with low levels of psychological capital are more vulnerable to workplace aggression, especially when they perceive low levels of organisational support.

Theoretical implications

The findings of this study contribute to a deeper understanding of how workplace aggression can negatively impact individuals' public service motivation. It highlights that experiencing aggression in the workplace can lead to a decrease in psychological capital, which in turn diminishes public service motivation. COR argues that once individuals' personal resources have diminished, they are likely to experience stress

and job burnout in the workplace (Holmgreen *et al.*, 2017). This insight underscores the need for organisations to address and mitigate workplace aggression to foster a more motivated and engaged workforce.

The study emphasises the mediating role of psychological capital between workplace aggression and public service motivation. This suggests that enhancing employees' psychological capital could potentially buffer the negative effects of workplace aggression and help maintain or even enhance their motivation to serve the public. Public schools could focus on interventions and programmes that develop employees' psychological capital, such as building resilience, self-efficacy, optimism and hope (du Toit *et al.*, 2022).

The study also highlights the moderating effect of perceived organisational support on the relationship between workplace aggression and psychological capital. This finding underscores the importance of creating a supportive work environment. Even when faced with workplace aggression, employees who perceive higher levels of support from their organisation are better equipped to maintain their psychological capital. Therefore, public organisations like schools should prioritise efforts to enhance employee perceptions of support which could include clear communication, recognition, fair treatment, and opportunities for growth. Although previous studies found that perceived organisational support is conditional on teacher's job crafting behaviours (du Toit *et al.*, 2022). This finding underscores the need for school administrators to have a comprehensive understanding and appreciation of teachers, as they are different individuals motivated by different reasons to be in the teaching profession.

Unlike previous studies that often treated public service motivation as an independent variable, this study examines it as an outcome variable. This perspective offers a novel understanding of how workplace factors, such as aggression and psychological capital, influence individuals' motivation to serve the public. Organisations and policy makers can use this insight to design interventions that enhance public motivation and attract individuals who are genuinely committed to advancing the public interest.

Practical implications

The study specifically focuses on teachers and public schools shedding light on the challenges they face due to workplace aggression. The findings highlight the

importance of addressing aggression within educational institutions to ensure that teachers' motivation to serve remain strong and intact. This has implications for school administrators and policy makers in terms of fostering a positive work environment that supports teachers' well-being and commitment. The study underscores the importance of building resilience among employees, particularly in the face of workplace aggression. Training and development programs that focus on enhancing employees' ability to cope with and overcome adverse situations can help maintain their psychological capital and, consequently, their motivation to serve the public. Policymakers and organisational leaders can use these findings to inform policy decisions and management strategies. They can implement measures to prevent workplace aggression, promote a supportive organisational culture, and provide resources to strengthen employees' psychological capital. Such initiatives can contribute to a more motivated and dedicated public service workforce.

CONCLUSION

This study sheds light on the intricate dynamics between workplace aggression, psychological capital, perceived organisational support, and public service motivation within the context of public schools. Our findings underscore the significant impact of workplace aggression on educators' motivation to serve the public and highlight the critical role of psychological capital as a mediator in this relationship. Furthermore, the moderating effect of perceived organisational support emphasises the importance of fostering a supportive work environment to increase employee resilience and motivation. By examining public service motivation as an outcome variable, this study provides a fresh perspective on the factors influencing individuals' commitment to advancing the public interest. The results emphasise the need for comprehensive interventions that address workplace aggression, promote psychological capital development, and improve perceived organisational support.

In the realm of educational institutions, our findings have implications for administrators, policymakers, and educators alike. The study underscores the urgency of addressing workplace aggression in public schools to preserve and strengthen teachers' dedication to their profession. Efforts to cultivate resilience and coping mechanisms among educators can lead to a more motivated and engaged teaching workforce, ultimately benefitting both educators and the learners they serve.

As we look ahead, these findings offer a roadmap for crafting effective strategies that support public service motivation and well-being among public sector employees. By fostering a workplace environment that nurtures psychological capital and emphasises organisational support, we can ensure that individuals are empowered to transcend the challenges posed by workplace aggression and continue their vital mission of serving the public and advancing the common good. Ultimately, this study contributes to the ongoing discourse on improving public service motivation and underscores the importance of holistic approaches in promoting a positive and motivated public service workforce.

LIMITATIONS OF THE STUDY

This study only focused on certain schools in KwaZulu-Natal, and thus the findings cannot be generalised to the whole population, although workplace aggression is a phenomenon in all public schools.

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Fighting public sector corruption in post-apartheid South Africa: Progress on paper, hurdles on the ground

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ABSTRACT

Ever since African states gained their independence from European colonial masters in the 1960s, they have faced many challenges; from political instability, military coups, malnutrition and terrorism, etc. One among these has also been the element of corruption in the public sector. After the successful transition from apartheid rule to democracy, South Africa was free from its pariah status and could drive economic development for its people. This is notwithstanding that the African National Congress (ANC) government inherited a state in dire need of economic restructuring due to the apartheid regime's destabilisation policies internally and externally. Corruption has been a pandemic in the South African public sector since the ANC assumed power after the first-ever democratic elections in 1994. Much of this corruption has been blamed on the ANC, which, since 1994, continues to hold the majority of power in eight of the nine provinces in South Africa.

Corruption has severe implications for development in any country, and South Africa is no exception. Corruption severely affects the South African population, which continues to grow but is still subject to ever-increasing inequality, unemployment, and poverty levels, especially for the majority black population. Over the past 29 years, South Africa has produced numerous policy documents and corruption-fighting units, and while some achievements have been made, corruption continues to thrive in the public sector. Using a qualitative research methodology supplemented by secondary data and further supported by the Collective Action Theory (CAT), this article finds that corruption has been a prevailing phenomenon in South Africa. Corruption brings with it dire consequences towards achieving needed development objectives. Similarly,

while the government has often stated that it is fighting corruption, there seem to be different elements on the ground where corruption continues to prevail.

Keywords: ANC; Africa, corruption, South Africa, Public Sector

INTRODUCTION

Corruption is known to be as old as humankind. It has existed for many decades in ancient Egypt, China, and Greece. Over the last four decades, it has been witnessed in the public and private sector(s) and has become a norm and way of life in many states. While the conceptual framework of corruption is well understood (which stipulates the abuse of public power and private gain), the concept is generally defined in numerous and disparate ways by scholars of Public Administration and other cognate disciplines. As a phenomenon, corruption is a behaviour that is unethical and deviates from the enshrined regular duties of a public role because of greed (Doshi and Ranganathan, 2019). These include behaviours such as bribery, nepotism, maladministration, and misappropriation. Such occurs when an individual entrusted to carry out specific law-abiding duties instead renders such duties for individual gain (Nye, 1976). From an African perspective, the post-1960s ushered in an era where some African states were gaining or about to gain independence from European colonial rulers. From this period, the African populace and heads of state developed various blueprint initiatives geared toward economic growth. However, while much has been attained over the last few decades, major socio-economic ills still prevail, and corruption has become a way of life and a norm for most African states (Mlambo *et al.*, 2023).

While corruption is a global phenomenon, it is more evident on developing continents such as Africa. Hence, the reason some scholars (Mlambo, 2023; Mbaku, 2010; Hope Sr, 2020; Fantaye, 2004) are of the view that corruption is more prevalent in third world countries. Mantzaris and Pillay (2016) contend that globally, there is a notion that those employed in the public service perform their duties and responsibilities ethically, efficiently, and effectively according to the laws, rules, and regulations. Any observer following Africa's post-colonial political landscape will attest that corruption has become a pivotal discussion in the continent's political discourse. Thus, according to Mubangizi (2020), the sentiments of corruption being a norm for most African societies paints a bleak picture for needed development reforms as the dangers of corruption

are well understood. According to Transparency International (2019), apart from averting funds from their rightful purposes into deceitful hands, corruption erodes accountability, violates numerous human rights conventions, and undermines basic principles and values such as equality, non-discrimination, human dignity, and social justice. Similarly, corruption also affects human rights by weakening institutions and diminishing public trust in government.

The World Bank views corruption as a critical hindrance to its vision of ending poverty by 2030 and stimulating shared prosperity for the poorest 40 per cent of people in developing countries. Since becoming colonial-free (especially apartheid free in South Africa), corruption in the public sector has become one of the main issues occupying the public discourse. Since 1994, the South African government has drawn and implemented numerous policies to fight what Mlambo, Mphurpi, and Makgoba (2023) call the corruption surge. Thus, tracking the drivers of corruption conflates the conditions, contributing factors, determinants, stimulators, opportunities, incidences, and explanatory factors. From this, many factors lead individuals to participate in corruption, including social, cultural, economic, and political factors. Goto and Ogunnubi (2014) contend that since emerging from its political doldrums in 1994, South Africa has been viewed as the most developed state in Africa. However, over the past 29 years (apart from other social ills), corruption has manifested itself in different forms and sizes in the country. Hence, we may deduce 1994 as the most significant turning point in the 350 years of the modern South African historical landscape.

Similarly, we may add the different administrations of Nelson Mandela (the late), Thabo Mbeki, Jacob Zuma and Cyril Ramaphosa (current) tenures as transitional moments in modern post-apartheid South Africa. Driven by the Collective Action Theory (CAT), this article provides insights into the mechanisms of fighting public sector corruption in post-apartheid South Africa. The article shows that while the South African government often articulates making progress on the mechanism of fighting corruption, this is not supported by actual statistics on the ground, as corruption continues to prevail at alarming rates. Apart from this introduction, this article is divided into five sections. The first section reviews the literature on corruption in Africa from a post-colonial perspective. Section two unearths the drivers of corruption from a South African standpoint. The third section provides the theoretical framework through the

CAT. While, the fourth section includes a discussion and makes recommendations while the fifth section contains the concluding remarks.

Corruption in Africa: A post-colonial perspective

Driven by various conceptualisations and forms, neo-patrimonialism has been a much-used concept in the African political landscape for accounting and explaining nearly every perceived African socio-political discontent, difficulty, corruption, institutional decay, communication breakdown, authoritarian rule, state failure, civil and political unrest. The concept figures most African states as dysfunctional. Post the 1960s, the continent has been governed by corrupt political elites whose endless greed has led to the ongoing underdevelopment of many African states (Wai, 2012). The end of colonialism marked a turning point for millions of Africans in the sense that much-needed development and economic growth were envisioned to benefit the masses. Nevertheless, most leaders who succeeded the colonisers did not facilitate the effective development of institutional arrangements. Their development was mainly top-down, advancing the interests of the few elites against the majority's interests. Mulinge and Lesetedi (1998) argued that to further safeguard and guarantee a smooth transition to neo-colonialism, erstwhile colonisers established economic, social, and political structures that would safeguard their interests long after relinquishing direct control of the colonies. This pertained to the transfer of economic, social, and political institutions that European colonisers had formed during colonial rule. However, the transition was organised purposively to usher in the next phase of colonialism, that of neo-colonialism. Thus, this has been central to explaining the rampant corruption witnessed in most African societies over the last few decades.

Over the last six decades, discussions regarding African state forms and political realities have dominated mainstream Africanist political sciences discourse by two universal concepts, neo-patrimonialism and, more recently, the elements of state failure. From the 1990s, the discussion around state failure has taken center stage in Africa's political debates driven by the numerous ills most African states are still subject to. Since gaining their independence, there have been many scholarly debates (Herbst, 1996; Bleck, Di John, 2011; Michelitch, 2015) that contend that the elements of state failure pose a security threat for not only the inhabitants of these states but also for peace and security. This is driven by the fact that these states create zones

of lawlessness open to exploitation by others. We may conceptualise failed states as those in which public authorities are either unable or unwilling to carry out their end of what Zartman (1995) calls their end of the social contract but which now includes more than maintaining the peace among society's many factions. When a state can no longer provide the needed services to the customer's satisfaction, claim legitimacy to govern, or stimulate its economy, it is heading toward a failed state. The legitimacy of any state is drawn from the constitutional functions it performs. Hence, a state fails when it has lost the right to rule (when legitimate power has fallen apart) driven by suitable governance mechanisms.

It is from this instance that post the colonial era, numerous scholars from diverse disciplines have and continue to describe the socio-economic milieu of Africa via numerous forms and interpretations driven by diverse assessments of the development strides. While many have pinned this on some states' numerous natural resources, corruption does not occur because a state has resources and portrays itself in any state yet through different levels. Such is driven by the fact that even in states possessing little resources, the elected leaders have also used their position of power to exploit state coffers. Over the years, most African heads of state have continued to lack the political will to deal with corruption despite numerous legislations and protocols initiated to deal with this. Hence, there has often been a lack of accountability to steer forward further anti-corruption reforms as the demand for accountability by the public from those in power becomes the instrument for ensuring the decriminalisation of corruption. By accountability, the author demotes that public service personnel entrusted with public power should account for or answer for their actions and activities (Olsen, 2015; Fagbadebo, 2019). Africa represents a typical case where the elements of corruption have consistently undermined and retarded development. This is notwithstanding that numerous anti-corruption reforms have been carried out over the years.

Nevertheless, such reforms have not brought with them the anticipated results, in most African states, as individuals have continued to be corrupt-minded, thus making them lack in their needed development efforts. Diverse explanations have come to the fore regarding what drives corruption in Africa. Some of these have included poverty, the personalisation of public office, and the failure of some public leaders to overcome their colonial curse. Over the years, some public leaders with high positions have often

been implicated in corruption (Lawal, 2007). Numerous factors contribute to the failure of most African states, and as outlined by Kelly (2014), two of these seem to be weak political institutions and economic reliance on one or two natural resources (as in the case of the Democratic Republic of Congo). While most of these were because of colonialism, post the colonial era, many African heads of state have continued to run their states like former European masters. These colonisers (like King Leopold of Belgium) looked at Africa, among other parts of the world, for critical resources for their economic development and expanding markets for their production. Apart from other corruption-contributing drivers that have been mentioned, Kalombo (2005) indicates three factors that he thinks also play a vital role in driving corruption:

1. A particular ethos of style that attaches a relatively low value to probity, impersonal efficiency, and relatively high values of favour, personal loyalty, and private gain can lead to corruption.
2. Individuals face numerous temptations.
3. Some government employees fail to execute their work without being involved in corrupt behaviour.

Tanzi (1998) further mentions the quality of bureaucracy; low public sector wages, and inadequate leadership by some public bearers. Thus, the degree paid to corruption leads to numerous questions. Why does it exist? What are its drivers? Who is involved? What legislations and policies are there to fight corruption? How does corruption affect development? Judging from these questions, several arguments can be made that corruption continues to attract significant attention. To Goto and Ogunnubi (2014), some drivers include weak checks and balances, mismanagement, greed, a decline in morals and ethics, socio-economic challenges, politics of the belly, and self-entitlement. Thus, corruption is embedded in any circumscribed political and economic environment. (1) It grants the resources that the incumbent government needs to purchase regime security; (2) it serves as the framework through which the state can redistribute bribe money to government followers and competitive elites who are capable of destabilising the government; and (3) it can be used to compromise critical competitive elites, destroy their political clout and effectively minimise their ability to affect the government as a way to counter the rising scourge of corruption.

A robust and effective government is a product of effective institutions. Hence, when government institutions, such as the judiciary and legislature, are ineffective, any country's accountability and justice system are impacted. Thus, the government must ensure its institutions are well-capacitated with robust monitoring and evaluation systems. The plethora of corruption cases in Africa (especially Sub-Saharan Africa) can be attributed to weak government institutions, and most leaders have relied on such institutions to stay in power. In normal circumstances, every society is based upon a social organisation that is mirrored in the smooth operation of its social systems. In essence, effective social systems play a pivotal role in stimulating harmonious relations upon which human lives strive beyond mundane routines and thus engage one in more intellectually challenging activities.

Similarly, corruption is one indicator that reflects ineffective and dysfunctional social systems as it fundamentally emerges from social disorganisations typified by narcissist conduct (Clammer, 2013). Under effective social systems, society embraces a set of values as integrated into its culture. Nevertheless, when such values are devalued and forced to degenerate into individualistic and egoistic interests, systematic ills such as corruption surface (Khasoane, 2019).

From pariah to corruption in the public sector: A South African assessment

During the apartheid era, the National Party's (NP's) destabilisation tactics fuelled by racial discrimination, were implemented with a strong focus on central planning and prevented local authorities from executing development planning or driving economic growth. The 1990s marked a tremendous political landscape driven by the NP government's unbanning of liberation movements and release of liberation prisoners. This was also followed by peaceful negotiations (from apartheid to democratic rule) between the NP and opposition parties, eventually giving way to the interim Constitution that provided for the first democratic elections in 1994. From a political perspective, since 1994, South Africa has been a stable state governed by its strong Constitution and respect for human rights. However, apart from the significant strides made over the last 29 years, the country still faces major social ills such as poverty, unemployment, inequality, and especially corruption in the public sector. When considering the attributes of the newly established democratic government, corruption has become one of the top defining features, as it has been witnessed in all spheres

of government. South Africa has, since 1994 (and since becoming a member of the Southern African Development Community), continued to be seen as a regional hegemon or emerging regional power due to its relatively advanced economy in comparison with other regional and African states (Mlambo, 2017). Nevertheless, numerous scholars (Lodge, 1998; Bauer, 2005; Camerer, 2009; Mlambo, 2019) have pointed out corruption as a disease that has further impeded South Africa's development (apart from other social ills).

The history of South Africa presents numerous challenges that since 1994 are still witnessed today, such as:

1. The legacy of apartheid that stripped individuals of their assets, especially land, distorted economic markets and social institutions through racial discrimination.
2. Continued discrimination and social isolation.
3. The impact of disabling the state was based on government officials' behaviour and attitudes, the absence of information concerning rights to roles and responsibilities, and the continued lack of accountability in the public sector.

When the new government came to the fore after the 1994 elections and to achieve some of its goals post-1994, the ANC produced numerous development-oriented blueprints, such as the Reconstruction and Development Programme (RDP) to the current National Development Plan (NDP) Vision 2030. However, Zondi (2015) noted that such policies have continued to be undermined by the same people putting them into practice. Accordingly, 29 years into democracy, South Africa remains one of the most unequal societies in the world. Naidoo and Jackson (2009) note that while an essential doctrine of transition from apartheid to democratic rule was driven by political reforms inspired by equality and non-discrimination, a dominant element that South Africa has been presented with is corruption. From the late Nelson Mandela to the current Cyril Ramaphosa administration, the talk about the fight to deal with corruption has always been on the government's lips through speeches and policy documents. Nonetheless, corruption has continued to erode much needed development. Hence, achieving good governance and fighting corruption have become two of the most critical challenges facing South Africa's 29-year democratic history.

Within the political domain, opposition parties such as the Democratic Alliance (DA), Economic Freedom Fighters (EFF), and Inkatha Freedom Party (IFP) have continuously labeled the ruling ANC as a corrupt party that continues to protect its cadre who in most cases are implicated in corruption (Hyslop, 2005). Recent efforts to tackle corruption in the South African public sector have included the Zondo Commission of Enquiry⁶⁸ into State Capture, which exposed dire institutional weaknesses and implications for several ANC politicians, their associates, and many companies involved in corruption deals. Even though task teams that have been established in all nine South African provinces to deal with corruption. However, these (including the Zondo Commission) have done little to bring those implicated to book nor to prosecute them, irrespective of the millions of taxpayers' money used to set up some of these commissions. One may deduce that South Africa lacks efficient institutions to deal with corruption (especially concerning those who hold or occupy high government positions) nor to track or recover most of the usually stolen money (Mokgonyana, 2023). One should note that the weight of our history hinders attempts to create a prosperous society. In many scholarly circles and even the current government itself, apartheid is still to blame for the country's current ills.

Nevertheless, I believe that current social ills cannot, after 29 years of democracy, still be pinpointed to the doings of apartheid. This is notwithstanding that apartheid played a critical role in dividing society and, to a large degree, contributed to the current economic challenges. However, the ANC has also had 29 years to correct some of the wrongs of the past. While massive strides have been attained (especially in rural areas), most government blueprints have not made needed strides, and corruption has also prevailed where tenders have been made available. The ANC's cadre deployment has given incompetent people top positions in government departments (including municipalities), and some have gone on to make most municipalities unstable, driven by corruption, and lacking planning or vision. One may rightfully posit that cadre deployment has also added to South Africa's current status quo regarding corruption and development. In any government department, entity, or private sector, corruption occurs within a system, structure, organisational hierarchy where there are

⁶⁸ The Judicial Commission of inquiry into allegations of State capture, corruption and fraud in the public sector including Organs of State, commonly referred to as the Zondo Commission was an inquiry that was set up by former South African president Mr. Jacob Zuma to look into allegations of corruption in the South African public sector where many politicians (particularly from the ANC) had been implicated.

systematic inadequacies, leadership shortcomings, inadequate monitoring systems, or a combination of these. Thus, having cadres who are, in most cases, not qualified to do such jobs further leads to such shortcomings, and this has been evident in most local government structures in post-apartheid South Africa.

Apart from other aspects driving corruption in South Africa, elements that have stimulated this, as noted by Kalombo (2005), are:

1. Non-meritocratic bureaucratic recruitment and promotion processes that are inherent in certain kinds of affirmative action.
2. Tendering principles sometimes favour small businesses and require much more efficient administration if they are to be handled honestly.
3. Increasing shortages of skilled staffing in the public service, predominantly in its financial control system and
4. Nepotism because of political solidarity.

Since 1994, corruption has taken different forms and turns in South Africa through different administrative governments. What is surprising is that since 1994, the majority black population has continued to suffer (especially in rural areas and townships) in receiving the needed services regarding proper service delivery. From a political point of view, corruption in South Africa has continued to undermine the ethos of democratic governance, which in the short and long run, erodes public confidence and trust in the democratic process, leading to the many public service delivery protests that are often witnessed.

THEORETICAL FRAMEWORK

CAT

A theoretical framework is generally viewed as a blueprint the researcher uses to build the research inquiry to achieve findings that enable them to confirm or disconfirm their hypotheses. A theory is essential insofar as it serves as a foundation upon which research is conducted (Osanloo and Grant, 2014). A theoretical framework is essential because it guides the researcher so that s/he would not deviate from the confines of the accepted theories to make the researcher's final contribution. Numerous theories

are used globally to further dwell on corruption and its manifestations, and one of these theories is the CAT or theories of collective action.

Over the years, CAT has been applied to the study of corruption, with scholars arguing that in societies (as in Africa) with systematic corruption, individuals have few incentives to partake in corrupt behaviour. Hence, to some, the free rider problem leads to citizens accepting and/or actively participating in corrupt activities even though they know it harms society (Walton and Jones, 2017). The theory is based on the elements of trust and how some people perceive others, as people rationalise their behaviour based on the perceptions of what others will do in the same situation. When corruption becomes a social norm, everyone sees it as the way to go, notwithstanding that they know its effects. Most CAT and research involve identifying and evaluating solutions to collective action or free rider problems. It usually involves entailing a conflict between individuals and group-level rationality. In collective action settings, individuals are deterred from contributing by one or both factors (1) the temptation to free-ride and (2) the fear of inefficacy. Hence, the temptation to free-ride reflects the desire to let others contribute to collective action (Willer, 2009).

DISCUSSION AND RECOMMENDATIONS

Corruption brings consequences far beyond the point at which a corrupt act has been committed. Severe complications for the wider population, especially low-income people, are significant. While there was corruption during the apartheid era, modern-day corruption has become deeply entrenched in the culture and norms of many societies. The article finds that while the South African government has always said it is fighting corruption in the public sector, there are still numerous obstacles. Thus, not only in Africa but in South Africa's 29-year democratic history, literature has shown that combating corruption needs a dynamic and multi-faceted strategy or strategies that utilise scarce resources effectively on a constructive shared basis. This should also comply with legislative frameworks, supposing that corruption must be tackled hands-on in Africa and South Africa. In that case, corruption fighting objectives should be to enhance efficiency, effectiveness, and accountability; improve the application of systems and policies; support an excellent corporate culture; put the public interest first; have good monitoring and evaluation mechanisms; and possess robust corruption detection protocols (Goto and Ogunnubi, 2014).

At the local government level, individuals must feel that they have a role to play during decision-making processes and be able to hold public office bearers accountable for their actions. This is because deep-rooted corruption challenges created over many years require thoroughgoing conditions, which will also take time and years to implement. The question of how these will differ from the ones already available remains a fundamental question to most policymakers and observers. The most effective solution to fighting public sector corruption in South Africa should be of an international standard. These solutions need to incorporate prevention measures, education and awareness, and detection together with enhancing the capacity of law enforcement. While from a South African context, these are at play and available, they seem to be failing in the war to fight corruption (Kelly, 2014). The World Bank Institute (2008) provides three levels (see Table 1) at which any government and company may tackle corruption:

Table 1: Ways to tackle corruption

Internal	External	Collective
Any institution must be able to assess corruption risks.	Be able to share internal policies, experiences, and success stories with external stakeholders.	Reach out to industry peers, suppliers, and other stakeholders through neutral facilitators and initiate joint activities to fight corruption.
Be able to implement anti-corruption policies as part of the corporate compliance program.		
Provide specific guidance to managers.		

Source: World Bank Institute (2008).

While the above table provides a nuanced initiative to tackle corruption internally and externally, the author fails to consider that these initiatives are already available in most government institutions. For example, most public sector institutions possess internal checks and balances to fight corruption. Only when these do not work are

external factors brought in. However, eradicating corruption in Africa has become a difficult task. Hence, most scholars, policymakers, and observers have concluded that corruption has become entrenched in the mentality and perceptions of African people. Thus, there is a strong need for political reforms to fight corruption and to bring in other third parties, such as civil society (Mlambo, Zubane, and Mlambo, 2020). In most African states, civil society movements post the colonial era have played a significant role in bringing government to account. While civil society movements can not provide the necessary power to work effectively in some African states, civil society has a loud and valid voice in South Africa. This is why Khasoane (2019) avers that any strategy to fight corruption will remain waning with no involvement of civil society. Thus, the government must operate in unison as the apex organisation in a state, its ministries, departments, and agencies. For this to occur, government agencies should not operate in isolation but effectively interact with one another. Any serious attempt to fight corruption will be driven by (1) a visible and honest drive by the government of the day, (2) robust policy change that reduces the demand for corruption, and (3) a strong notion of ethical leadership in the public sector.

CONCLUSION

This article aimed to ponder on the elements of corruption in post-apartheid South Africa. The prevalence of corruption in any society where it is not supposed to flourish presents a complicated situation containing deeply rooted problems. Corruption has been a pandemic in the South African public sector since the ANC assumed power after the first-ever democratic elections in 1994. Much of this corruption has been blamed on the ANC, which, since 1994, continues to hold the majority of power in eight of the nine provinces in South Africa. Corruption has severe implications for development in any country.

Corruption severely affects the South African population, which continues to grow but is still subjected to ever-increasing inequality, unemployment, and poverty levels, especially for the majority black population. Over the past 29 years, South Africa has produced numerous policy documents and corruption-fighting units, and while some achievements have been made, corruption continues to thrive in the public sector. Using a qualitative research methodology supplemented by secondary data and further supported by the Collective Action Theory (CAT), this article found that

corruption has been a prevailing phenomenon in South Africa and brings with it dire consequences towards achieving needed development objectives. Similarly, while the government has often stated that it is fighting corruption, there seem to be different elements on the ground where corruption continues to prevail

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Assessing the impact of climate change on coastal Ecosystems: A gap analysis in KwaZulu-Natal

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ABSTRACT

This comprehensive literature review addresses the gap in understanding the specific consequences of climate change on coastal ecosystems. Through a systematic analysis of peer-reviewed articles, scientific reports, and relevant publications, the study synthesises existing knowledge and identifies key research gaps. The findings highlight the threats posed by rising sea levels, ocean acidification, and increased storm intensity on coastal habitats and communities. Rising sea levels result in coastal erosion and loss of wetlands, while ocean acidification degrades coral reefs and disrupts the marine food web. Increased storm intensity leads to more frequent and severe coastal flooding, exacerbating habitat loss and vulnerability. Urgent actions are needed to mitigate these impacts, reduce carbon emissions, and conserve coastal habitats. Interdisciplinary research and collaboration are crucial to address research gaps, develop adaptation strategies, and inform policy decisions. By filling this knowledge gap, we can work towards a sustainable future for coastal ecosystems and their invaluable services.

Keywords: climate change, coastal ecosystems, rising sea levels, ocean acidification, storm intensity, coastal flooding, habitat loss

INTRODUCTION

Climate change is one of the most pressing global challenges of our time, with far-reaching impacts on various ecosystems and the services they provide. Coastal ecosystems, in particular, are vulnerable to the effects of climate change due to their unique characteristics and proximity to the dynamic interface of land and sea (Myhre,

2013). The rising temperatures, changing precipitation patterns, and increasing frequency of extreme weather events associated with climate change have the potential to significantly alter the structure and function of coastal ecosystems (Wolfe, 2022). Assessing the impact of climate change on coastal ecosystems is essential for understanding the magnitude of these changes and developing effective strategies for their conservation and management. However, despite growing recognition of the importance of coastal ecosystems and the urgent need for action, there is still a significant gap in knowledge regarding the specific impacts of climate change on these fragile environments (Barnes, MacGregor, & Alberts, 2012). This paper draws understanding on the least and most researched effects of climate change, as well as providing focus to some overlooked elements in the KwaZulu-Natal coastal region.

South Africa, located on the southernmost tip of the African continent, experiences a diverse range of climates, from arid and semi-arid regions to more temperate areas (Barnes, MacGregor, & Alberts, 2012). However, like many other countries, South Africa has been significantly impacted by climate change. One of the most noticeable effects is the rise in temperatures; average temperatures have noticeably increased, leading to more frequent and intense heatwaves. These heatwaves pose risks to human health, agriculture, and wildlife. Additionally, rising temperatures contribute to the melting of snow and glaciers in the country's mountainous regions which results in rising sea levels. Climate change has also altered precipitation patterns in South Africa, while some areas have experienced increased rainfall, others have seen decreased rainfall. Increased rainfall has led to flooding and soil erosion, while decreased rainfall results in drought conditions. Drought events have become more severe in recent years, particularly in the Western Cape, Eastern Cape, and Northern Cape provinces. These droughts have had a significant impact on agriculture, livestock farming, and water supply for both rural and urban areas. Increased rainfall has led to flooding in KwaZulu-Natal and Gauteng provinces with extreme cases resulting in fatalities and loss of infrastructure more notably in KwaZulu-Natal (Development Bank of South Africa, 2023).

The rich biodiversity and unique ecosystems of South Africa are also at risk due to climate change. The country is known for its diverse flora and fauna, including the iconic fynbos, savannas, and wetlands. Climate change leads to a disruption of natural habitats, altered species distributions, and contributes to the spread of invasive

species (Collier, *et al.*, 2013). This has significant implications for both the environment and the economy, as these ecosystems support various industries such as tourism and agriculture. In response to the challenges posed by climate change, South African leaders have taken steps to address the issue by being signatory to the Paris Agreement and committing to reducing countrywide greenhouse gas emissions, however these promises of action are not sufficient in the fight against climate damage. South African policymakers are thorough and detailed in inventing policies and initiatives to promote renewable energy, energy efficiency, and sustainable development however, the implementation of policy is stifled by corruption and misinformation, along with challenges in balancing economic growth with environmental sustainability to ensure that vulnerable communities are adequately protected from the impacts of climate change. International cooperation and local collaboration are crucial in effectively addressing climate change and building a more resilient future for South Africa (UN Habitat, 2014).

PROBLEM STATEMENT

Coastal ecosystems in KwaZulu-Natal, South Africa, are facing significant threats due to climate change. The increasing frequency and intensity of extreme weather events, rising sea levels, and ocean acidification pose severe risks to the region's coastal biodiversity and ecosystem services. However, there is a lack of comprehensive knowledge regarding the specific impacts of climate change on these ecosystems and the subsequent implications for their conservation and management.

The gap analysis aims to assess the impact of climate change on coastal ecosystems in KwaZulu-Natal and identify the existing knowledge gaps. The analysis will focus on understanding the direct and indirect effects of climate change on key ecological components such as mangroves, seagrasses, coral reefs, and estuaries, as well as associated species and habitats.

SIGNIFICANCE OF THE STUDY

The objective of this study is to assess the impact of climate change on coastal ecosystems in KwaZulu-Natal, identify knowledge gaps, and inform conservation and management strategies for mitigating climate change impacts.

PRIORITISED RESEARCH QUESTIONS

1. How is climate change affecting coastal ecosystems in KwaZulu-Natal?
2. What are the specific impacts of climate change on key coastal ecosystems?
3. What are the vulnerabilities and adaptive capacities of coastal ecosystems in KwaZulu-Natal to climate change impacts?

LITERATURE REVIEW

This study utilised a systematic review to identify literature that is applicable to the objective of this study. The table below encompasses the relevant literature that contributed to the data collection and recommendations developed herewith;

TITLE	YEAR	AUTHOR/S	CLIMATE CHANGE RESEARCH IN KZN OVER TEN-YEAR PERIOD (2013-2023)
Adaptation to climate change and other stressors among commercial and small-scale South African farmers	2013	J Wilk, L Andersson, M Warburton	The study examines the adaptation strategies employed by commercial and small-scale farmers in South Africa to address climate change and other stressors. It emphasises the importance of understanding the diverse challenges faced by farmers from different sectors and tailoring adaptation approaches accordingly. The findings contribute to the knowledge of effective adaptation practices and can inform policies and support mechanisms aimed at enhancing the resilience of farmers in the face of changing environmental and socio-economic conditions.
Some aspects of agricultural vulnerability to climate change in the KwaZulu-	2014	P Hitayezu, EW Zegeye, GF Ortmann	The systematic review provides valuable insights into the agricultural vulnerability to climate change in the KwaZulu-Natal Midlands region of South Africa. It underscores the urgency

Natal Midlands, South Africa: A systematic review			of taking proactive measures to address climate-related challenges in the agricultural sector and emphasises the importance of building resilience through adaptation strategies and collaborative approaches.
Systematic land-cover change in KwaZulu-Natal, South Africa: Implications for biodiversity	2015	D Jewitt, PS Goodman, BFN Erasmus	The study highlights the systematic land-cover change in KwaZulu-Natal, South Africa, and its implications for biodiversity. It emphasises the importance of understanding and addressing the drivers of land-cover change to protect and conserve the region's rich and diverse ecosystems. The findings can contribute to informed decision-making and the development of sustainable land-use practices that prioritise biodiversity conservation in KwaZulu-Natal.
Adaptation to climate change and the impacts on household food security among rural farmers in uMzinyathi District of Kwazulu-Natal, South Africa	2016	S Shisanya, P Mafongoya	The study sheds light on the adaptation strategies employed by rural farmers in the uMzinyathi District of KwaZulu-Natal, South Africa, to address the impacts of climate change on household food security. It emphasises the significance of context-specific approaches and supportive policies in promoting effective adaptation measures. Understanding and supporting farmers' adaptation efforts is essential for building resilience and ensuring sustainable food production in the face of climate change.

Potential impacts of climate change on wildfire dynamics in the midlands of KwaZulu-Natal, South Africa	2017	S Strydom, MJ Savage	The study evaluates the potential consequences of these changes on wildfire dynamics. Considering factors such as fire frequency, fire size, fire intensity, and fire behaviour. The research emphasises that climate change can lead to more frequent and intense wildfires, as well as alterations in fire behaviour, such as increased fire spread rates and fire severity.
The adaptive capacity of smallholder mixed-farming systems to the impact of climate change: The case of KwaZulu-Natal in South Africa	2017	NN Mthembu, EM Zwane	The study highlights the importance of building adaptive capacity among smallholder mixed-farming systems in KwaZulu-Natal, South Africa, to effectively respond to the impacts of climate change. It emphasises the need for supportive policies, access to resources, and knowledge-sharing platforms to enhance farmers' resilience and enable them to adapt to changing climatic conditions.
Integration of indigenous and scientific knowledge in climate adaptation in KwaZulu-Natal, South Africa	2017	M Basdew, O Jiri, PL Mafongoya	The study highlights the importance of recognising and respecting indigenous knowledge systems, fostering dialogue and knowledge sharing between different knowledge holders, and incorporating indigenous perspectives into climate policy and decision-making processes.
Responses to climate variability in urban poor communities in	2018	S Hlahla, TR Hill	The research investigates various aspects of responses to climate variability, including the socio-economic conditions of urban poor communities,

Pietermaritzburg, KwaZulu-Natal, South Africa			their access to resources, and the strategies they employ to mitigate and adapt to climate-related risks, identifying several key responses to climate variability in these communities. These responses include changes in livelihood strategies, such as diversifying income sources or engaging in alternative economic activities and the adoption of sustainable practices, such as rainwater harvesting, water conservation, and energy-efficient technologies.
The alpine flora on inselberg summits in the Maloti–Drakensberg Park, KwaZulu-Natal, South Africa	2019	RF Brand, CR Scott-Shaw	The study focuses on the alpine flora found on inselberg summits in the Maloti-Drakensberg Park, KwaZulu-Natal, South Africa. It highlights the significance of these unique habitats and their role in supporting diverse and specialised plant species. The findings contribute to the understanding of alpine ecosystems in the region and provide insights into their conservation and management needs.
Estimating soil organic carbon stocks under commercial forestry using topo-climate variables in KwaZulu-Natal, South Africa	2020	O Odebiri, O Mutanga, J Odindi, K Peerbhay	The study focuses on estimating soil organic carbon stocks under commercial forestry in KwaZulu-Natal, South Africa, using topo-climate variables. It emphasises the importance of understanding the relationship between topo-climate factors and SOC levels to improve carbon stock estimation and inform sustainable forest

			management practices. The research contributes to the knowledge of SOC dynamics in commercial forestry areas and provides insights into the potential for mapping and predicting SOC stocks based on topo-climate variables.
Assessing the social vulnerability of small-scale farmers to drought in uMsinga, KwaZulu-Natal	2021	SJ Lottering, P Mafongoya, RT Lottering	The study assesses the social vulnerability of small-scale farmers to drought in uMsinga, KwaZulu-Natal, South Africa. By understanding the specific challenges faced by small-scale farmers in the region and identifying their needs, effective strategies can be developed to support them and enhance their resilience to drought. The findings of this study contribute to efforts aimed at reducing vulnerability and promoting sustainable agriculture in uMsinga.
Historical and projected climatic trends in KwaZulu-Natal: 1950–2100	2022	MR Jury	The study presents historical and projected climatic trends in KwaZulu-Natal from 1950 to 2100. It provides insights into temperature and precipitation patterns, identifying potential changes and impacts on the region. The findings contribute to the understanding of climate change dynamics in KwaZulu-Natal and can inform decision-making processes regarding climate adaptation and mitigation strategies.
Validating the National Coastal	2023	J Law	The study focuses on validating the National Coastal Climate Change

Climate Change Vulnerability Assessment's inundation and erosion layers for the KwaDukuza Municipality, KwaZulu-Natal, South Africa			Vulnerability Assessment's inundation and erosion layers for the KwaDukuza Municipality in KwaZulu-Natal, South Africa. By assessing the accuracy and reliability of these layers, the research contributes to the understanding of coastal vulnerability in the municipality and provides valuable insights for future coastal planning, adaptation strategies, and risk management efforts.
The effects of climate change on informal settlements	2023	D Steyn	The effects of climate change on informal settlements are intertwined with social, economic, and environmental factors. Limited access to resources, lack of infrastructure, and marginalised socio-economic conditions amplify the impacts of climate change on these communities. Informal settlements often lack the necessary infrastructure and services to withstand and adapt to climate-related challenges, exacerbating the vulnerability of residents.
A new flood chronology for KwaZulu-Natal (1836–2022): The April 2022 Durban floods in historical context	2023	SW Grab, DJ Nash	The study presents a new flood chronology for KwaZulu-Natal, covering the period from 1836 to 2022, and provides historical context for the April 2022 Durban floods. The research enhances our understanding of flood patterns in the region and underscores the importance of proactive flood risk management strategies to protect lives, property, and infrastructure.

Application of the Disaster Management Cycle and Climate Change: Studying Flood Disasters in South Africa	2023	BS Ngcamu	The study applies the Disaster Management Cycle framework to examine flood disasters in South Africa and their relationship to climate change. It emphasises the importance of integrating climate considerations into all phases of the cycle to effectively manage and reduce the impacts of flood events. The findings contribute to the knowledge base for developing strategies and policies to enhance flood resilience and promote climate adaptation in the country.

Table 2: Literature Review; Climate Change Research in the KwaZulu-Natal Region (2013-2023)

While acknowledging that the literature review conducted for this study is not exhaustive in capturing all research efforts in the KwaZulu-Natal region, it serves as a critical snapshot of the prevailing research landscape. Notably, the existing body of literature predominantly centres around capital impact, reflecting an emphasis on larger-scale considerations. The research extensively explores aspects such as small holdings, farms, sugarcane production, and economic and community success factors in the context of climatic events. The prevailing focus on these macro-level dimensions highlights the gap that this study seeks to address. The literature available, while substantial, tends to concentrate on specific sectors and their capital implications. This emphasis, while crucial, may inadvertently overshadow the nuanced and interconnected dynamics at play in the coastal ecosystems of KwaZulu-Natal.

The decision to embark on this systematic review is influenced by the recognition that, despite the existing wealth of research, there is a noticeable dearth of comprehensive studies addressing the intricate relationships between climate change and coastal ecosystems in the region. The prevalent focus on capital-driven impacts underscores the urgency and relevance of expanding the scope of inquiry to encompass the ecological intricacies that characterise coastal areas. The systematic review process adopted for this study was guided by Google Scholar search results using the query

"Climate Change in KwaZulu-Natal, South Africa." This approach ensures a broad exploration of available academic literature and scholarly publications. While recognising the limitations of relying on a single search term, the intent is to cast a wide net to capture diverse perspectives and insights within the existing body of work.

The emphasis on small holdings, farms, sugarcane production, and economic and community success factors in the current literature underscores the necessity of this study. By adopting a more holistic approach that delves into the specificities of coastal ecosystems, this research aims to bridge the gap in the existing knowledge, contributing valuable insights into the lesser-explored dimensions of climate change impact in KwaZulu-Natal. Through this systematic review, the study aspires to enrich the current discourse and provide a foundation for future research endeavours that transcend the confines of capital-centric perspectives.

METHODOLOGY

Climate change represents a pressing global challenge with far-reaching consequences, particularly for ecologically sensitive regions like coastal ecosystems. This study delves into the intricate dynamics of climate change and its impact on coastal ecosystems in the distinctive context of KwaZulu-Natal. As a province characterised by diverse coastal landscapes, KwaZulu-Natal is susceptible to the multifaceted consequences of climate change, necessitating a comprehensive examination of its ecological resilience (Beilin & Wilkinson, 2015).

Importance of the study

Understanding the implications of climate change on coastal ecosystems is crucial for effective environmental management and sustainable development (Goh, Lai, & Zakaria, 2017). Coastal regions play a pivotal role in global biodiversity, provide critical habitats for numerous species, and contribute significantly to the livelihoods of local communities. Against the backdrop of climate change, these ecosystems face unprecedented challenges, ranging from sea-level rise and extreme weather events to shifts in biodiversity and ecosystem services (Wolfe, 2022).

Emphasis on gap analysis

This study places a strategic focus on conducting a gap analysis within the existing body of knowledge concerning climate change in KwaZulu-Natal's coastal

ecosystems. While prior research has made valuable contributions, there is a recognised need to systematically identify areas where research is lacking or underrepresented. The gap analysis serves as a compass guiding this research, steering it toward the unexplored territories of knowledge, where understanding is currently incomplete or insufficient.

Objectives of the gap analysis

The primary objective of this study is to assess the impact of climate change on coastal ecosystems in KwaZulu-Natal exclusively utilising secondary data sources. By honing in on this approach, the research aims to bridge existing knowledge gaps and contribute to the broader understanding of climate change dynamics in this region. The gap analysis seeks to unveil areas where comprehensive research is lacking, providing a roadmap for future investigations.

Contextualising the study

KwaZulu-Natal's coastal ecosystems represent a unique ecological tapestry, and their vulnerability to climate change necessitates region-specific insights. This study, therefore, aspires to contextualise its findings within the distinct socio-environmental context of KwaZulu-Natal, acknowledging the regional nuances that contribute to the complexity of climate change impacts.

This study uses systematic review and secondary data to successfully develop the objective of this study – to identify the gap in climate change research in the KwaZulu-Natal region with specific reference to coastal ecosystems. A case study approach enables the data collection to be thorough and reliable.

Due to time constraints and funding restrictions, this study makes use of secondary data to achieve the primary objective of assessing the impact of climate change on coastal ecosystems. By relying solely on secondary data sources, this methodology enables the assessment of climate change impacts on coastal ecosystems in KwaZulu-Natal without the need for primary data collection. It leverages existing information to provide valuable insights into the current state and potential future scenarios of coastal ecosystems in the face of climate change. While acknowledging the limitations and potential biases of the secondary data, it is imperative to note that this study has highlighted a gap in research whilst sourcing data.

Study design

This research adopts a systematic review methodology combined with a case study approach to achieve its objectives. The systematic review is employed to comprehensively identify and analyse existing literature on climate change research in the KwaZulu-Natal region, particularly focusing on coastal ecosystems. The case study approach is utilised to facilitate in-depth and reliable data collection (Cohen, Potchter, & Schnell, 2014).

The choice of a combined systematic review methodology and a case study approach is grounded in the need for a robust and multifaceted exploration of climate change impacts on coastal ecosystems in the KwaZulu-Natal region. The systematic review serves as the foundational pillar, allowing for an exhaustive examination of the existing body of literature. This inclusive approach ensures that a broad spectrum of knowledge is considered, providing a comprehensive backdrop against which the specificities of the case study can be examined.

Objective development

The primary objective of this study is to identify gaps in climate change research specific to the KwaZulu-Natal region with a specific emphasis on coastal ecosystems. This objective is derived from a thorough analysis of existing literature through a systematic review process.

Data collection

Literature Review: A systematic review is conducted to identify and assess relevant studies, reports, and articles related to climate change and its impacts on coastal ecosystems in KwaZulu-Natal. This involves searching databases, academic journals, and other reputable sources to compile a comprehensive dataset.

Case Study Approach: The case study approach is employed to supplement the systematic review by focusing on specific instances and detailed examinations of climate change impacts on coastal ecosystems in the region. This includes examining historical data and documented cases.

Secondary Data Sources: Due to time constraints and funding limitations, this study relies exclusively on secondary data sources. Existing datasets, reports, and research

findings are systematically reviewed and analysed to fulfil the primary objective of assessing the impact of climate change on coastal ecosystems.

Data analysis

Thematic Analysis: The collected data is subjected to thematic analysis to identify recurring patterns, trends, and gaps in the existing literature and secondary data. This analysis is crucial for understanding the current state of climate change research in the specified region.

Data validation

The secondary data used in this study underwent a meticulous validation process to ensure its reliability and accuracy. The implementation of robust measures strengthened the credibility of the findings, enhancing the overall integrity of the research. The following steps were taken during the data validation process:

Source verification

Rigorous verification of the credibility and reputation of selected sources was conducted. Emphasis was placed on utilising data from reputable institutions, governmental agencies, and peer-reviewed publications to enhance the reliability of the information.

Cross-referencing:

Multiple independent sources were systematically cross-referenced to identify and reconcile discrepancies. This approach aimed to ensure consistency across various sources, minimising the risk of relying on potentially biased or erroneous data.

Temporal consistency

The temporal consistency of the data was thoroughly evaluated by comparing information across different time periods. Any inconsistencies or anomalies in trends or patterns were identified and addressed during the analysis phase.

Methodological consistency

The consistency of methodologies used in different studies or data sources was assessed. Variations in measurement techniques or data collection methods were

documented, and efforts were made to understand and account for their potential impact on the analysis.

Peer review and expert input

External validation was sought through peer review and consultation with subject matter experts. This collaborative effort added an additional layer of scrutiny, helping to identify potential errors or biases and ensuring the accuracy of the secondary data.

Statistical validation

Statistical validation techniques, including correlation analysis, regression analysis, and other relevant tests, were applied to assess the reliability of quantitative data. These analyses verified the consistency of data points and identified any outliers that required further investigation.

Quality control checks

Quality control checks were implemented to identify and rectify errors or inconsistencies in the secondary data. This process included scrutinising data entry, verifying units of measurement, and ensuring data integrity throughout the dataset.

Sensitivity analysis

Sensitivity analyses were conducted to assess how variations in the secondary data might affect the study's outcomes. This proactive approach tested the robustness of findings under different assumptions or scenarios, providing insights into the potential impact of uncertainties.

Documentation of validation process

The entire data validation process was thoroughly documented, encompassing the steps taken, challenges encountered, decisions made, and adjustments applied. This documentation ensures transparency and allows for the replication of the validation process by other researchers.

Iterative validation

Data validation was treated as an iterative process throughout the study. Regular revisits to the validation measures were conducted as new data was incorporated or as the research progressed, maintaining the integrity and reliability of the findings.

LIMITATIONS

Acknowledgment of Limitations: The study recognises the inherent limitations and potential biases associated with relying solely on secondary data. These limitations are transparently acknowledged throughout the research process.

Several limitations that impact the comprehensiveness and validity of the findings through systematic review include:

Publication bias

Systematic reviews may be susceptible to publication bias, where studies with positive or statistically significant results are more likely to be published, leading to an overestimation of the prevalence or strength of certain findings. This bias can affect the accuracy of the identified themes and trends.

Language bias

The restriction to peer-reviewed articles may introduce language bias, as studies published in languages other than the primary language(s) of the reviewers may be excluded. This limitation could lead to the omission of valuable research, particularly from regions where English may not be the predominant language.

Time lag

The systematic review process may not capture the most recent research due to the time lag between the completion of the review and the publication of the review itself. This lag may result in a potential gap in the inclusion of the latest studies and findings on climate change in the KwaZulu-Natal region.

Heterogeneity of study designs

Climate change research may vary significantly in terms of methodologies, sample sizes, and study designs. The heterogeneity of these studies can pose challenges in synthesising and comparing findings, potentially limiting the ability to draw clear and universally applicable conclusions.

Quality of available data

The systematic review relies on the quality of the data available in the selected studies. If the studies themselves have methodological limitations or weaknesses, it can impact the overall reliability and validity of the systematic review findings.

Geographical and ecological variability

The KwaZulu-Natal region is diverse in its geographical and ecological characteristics. Variability in climate change impacts across different sub-regions or ecosystems within KwaZulu-Natal may not be fully captured in a generalised systematic review, potentially overlooking localised nuances.

Data accessibility

Access to some databases or sources of information may be restricted, limiting the ability to comprehensively cover all relevant studies. This issue could lead to an unintentional exclusion of valuable data, particularly if certain studies are not easily accessible.

Risk of overlooking grey literature

The focus on peer-reviewed literature may result in the exclusion of valuable insights present in grey literature, such as reports from government agencies or non-governmental organisations. This oversight may limit the depth and diversity of information considered in the systematic review.

IMPLICATIONS

Highlighting Research Gap: The methodology underscores the importance of the study by demonstrating how the research process itself has revealed a significant gap in the current body of knowledge pertaining to climate change in the KwaZulu-Natal region.

ETHICAL CONSIDERATIONS

Integrity and Transparency: The study adheres to ethical principles by ensuring the integrity and transparency of the research process. Proper citation and acknowledgment of sources are maintained throughout.

The in-depth nature of data collection enables the contextualisation of findings within the broader socio-ecological context. This includes understanding the local

governance structures, economic activities, and cultural practices that intersect with climate change impacts. Such contextualisation is crucial for generating actionable insights and policy recommendations.

FINDINGS

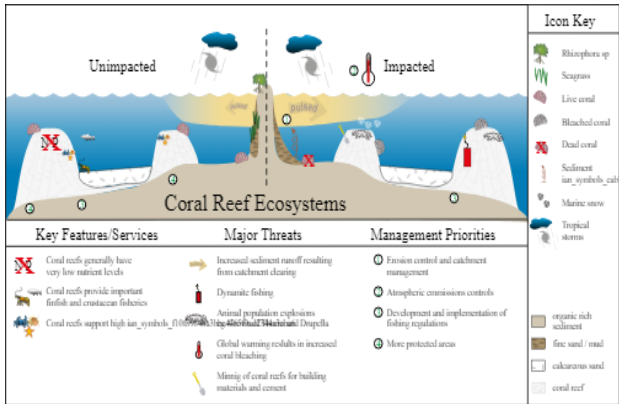
The Global Climate Indicators encompass a range of parameters that go beyond temperature to provide a comprehensive description of climate change (Wolfe, 2022). These indicators cover crucial aspects of climate change, including temperature and energy, atmospheric composition, ocean and water dynamics, as well as the cryosphere.

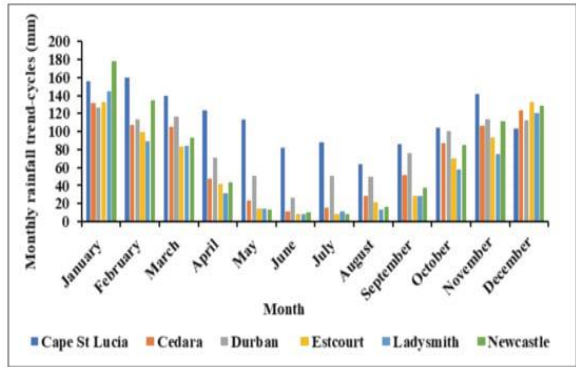
The gap analysis through secondary data case study has identified the key areas where understanding of the impact of climate change on coastal ecosystems is lacking, and to provide a roadmap for future research and monitoring efforts. Through systematically assessing the existing literature, scientific studies, and available data, identifying critical knowledge gaps that need to be addressed to improve our understanding of the complex interactions between climate change and coastal ecosystems is more attainable. The significance of climate change gap analysis contributes to the scientific understanding of climate change impacts and provides valuable insights for policymakers, resource managers, and conservation practitioners. Climate change is rapidly impacting ecosystems and resources, where inaction will be dire for both the ecological integrity of coastal ecosystems and the communities that depend on them.

Assessing the impact of climate change on coastal ecosystems in KwaZulu-Natal

Impacts of Climate Change on Coastal Ecosystems in KwaZulu-Natal	Description	Evidence
Sea Level Rise	Rising sea levels threaten coastal ecosystems, leading	eThekweni municipality prepared a document titled Planet in Peril for COP17 to highlight climate change adaptation by the

	to increased erosion, habitat loss, and inundation of low-lying areas. This affects critical habitats such as mangroves, seagrasses, and salt marshes, impacting biodiversity and shoreline stabilisation.	Durban coastal system. Estimating increased sea levels as adapted in the study by A.A Mather (2007), the trend of sea level rising is 2.4 ± 0.29 mm/yr annually. While rising levels are allotted to melting icecaps, taking storm surges into account will broaden the impact analysis on coastal communities. Seen during the flooding of 2022 (Omarjee, 2022), hundreds of fatalities, loss of livelihood, displacements and overall disruption to city and province processes, the coastal ecosystem was met with sewage shocks, and exponential waste carried into the ocean system devastating tourism and local communities living in coastal settlements formally and informally.
Ocean Acidification	Increasing carbon dioxide emissions cause ocean acidification, harming marine ecosystems. Acidic waters inhibit the growth and survival of calcifying organisms like corals, molluscs, and some plankton species. This impacts the biodiversity and health of coral reefs and other vulnerable habitats.	Oceans Day 2010 presented findings that ocean acidification, warming, and deoxygenation are three interrelated consequences of human-induced climate change. The oceans have become 30% more acidic since the industrial revolution, hindering the growth and reproduction of shell-forming organisms and affecting marine species distribution and food security. Ocean warming, with a projected increase of 3 degrees Celsius by the century's end, reduces nutrients and oxygen availability for marine organisms. These rapid changes in ocean chemistry result from rising greenhouse gas emissions, particularly carbon dioxide. Addressing these challenges requires urgent action to

		mitigate climate change's impact on the oceans. (Global Ocean Forum, 2010)
Changes in Water Temperature	Climate change induces shifts in water temperature, affecting the distribution and abundance of marine species. Rising temperatures lead to coral bleaching events, where corals expel their symbiotic algae, resulting in the degradation of coral reef ecosystems.	Ocean warming as a consequence of human induced climate change, has affected the biodiversity and ecosystem health of ocean species, further degrading the coastline through sewage infrastructure collapse and introducing E. coli into the waterway has a ripple effect on inhabitants of the coastal region.  Figure 1: Coral Reef Ecosystems; University of Maryland (2019) University of Maryland, Centre for Environmental Science conducted advance studies to identify the impact of global warming on coral ecosystems, identifying that overfishing, ocean exploitation, and general climate change indicators affect the health of the ecosystem. Similarly, Durban coastline – off the Umkomaas coast boasts a thriving coral ecosystem which faces threat due to climate change consequences.
Altered Precipitation Patterns	Changing rainfall patterns impact estuarine	Durban's climate action plan alluded to intense flooding and severe storms being a possibility for the municipality and spreading

	ecosystems. Variations in freshwater input influence the salinity levels, nutrient dynamics, and biodiversity within estuaries, potentially disrupting ecological balance and compromising the health of these transitional ecosystems.	to the province (UN Climate Summit , 2014), prior to the flooding in 2022 (Omarjee, 2022). Recommendation by Global Ocean Forum (2010), informed that urgent action is required to reduce CO2 emissions and implement adaptation, mitigation, research, capacity building, and public outreach efforts at various scales. Collaborative initiatives involving multiple stakeholders are essential to address climate change challenges effectively and promote sustainability and resilience.
Increased Storm Intensity	Climate change contributes to more frequent and intense extreme weather events, including storms and hurricanes. These events cause physical damage to coastal ecosystems, resulting in habitat destruction, loss of vegetation, and disruption of ecological processes.	Ndlovu M (2021) identified monthly weather cycles using six weather stations in the KwaZulu-Natal region identifying that increased rainfall is evident.  Figure 2: Monthly Rainfall Cycles, Ndlovu M., (2021) This study forecasted through to 2025 identifying that storm intensity and rainfall changes impact on climatic conditions that allow an ecosystem to thrive or fail.

Loss of Biodiversity	The cumulative impacts of climate change, including sea level rise, temperature changes, and ocean acidification, pose a significant threat to the biodiversity of coastal ecosystems. Habitat loss, changes in species composition, and potential extinctions disrupt ecosystem functioning and resilience.	KwaZulu-Natal has experienced high rates of habitat loss and transformation, particularly in Durban. The KwaZulu-Natal Sandstone Sourveld (KZNSS) has been heavily impacted, with about 68% of its original extent irreversibly transformed for agriculture, forestry, urban development, and roads. The remaining patches of KZNSS have also suffered from degradation and encroachment of woody vegetation. Less than 15% of KZNSS remains in Durban, making it challenging to achieve conservation targets. The situation calls for strategic approaches to protect and restore the remaining habitat, considering equitable distribution of responsibilities across local governments.

Table 3: An Assessment of the Impact of Climate Change; As Per Secondary Data Analysis

Vulnerabilities and adaptive capacity of coastal ecosystems in KwaZulu-Natal

Vulnerabilities of Coastal Ecosystems in KwaZulu-Natal to Climate Change Impacts	Adaptive Capacities of Coastal Ecosystems in KwaZulu-Natal to Climate Change Impacts
Sea Level Rise	Coastal Management Strategies
Extreme Weather Events	Restoration and Conservation
Coastal Erosion	Sustainable Land-Use Planning
Salinity Intrusion	Ecosystem-Based Approaches
Ocean Acidification	Community Engagement and Education

These vulnerabilities highlight the challenges coastal ecosystems in KwaZulu-Natal face due to climate change, including sea level rise, extreme weather events, coastal erosion, salinity intrusion, and ocean acidification (Cohen, Potchter, & Schnell, 2014).

On the other hand, the adaptive capacities of these ecosystems involve coastal management strategies, restoration and conservation efforts, sustainable land-use planning, ecosystem-based approaches, and community engagement and education. By implementing these adaptive measures, coastal ecosystems can enhance their resilience and ability to withstand and recover from climate change impacts.

Roadmap for future research and monitoring efforts in climate change within the KwaZulu-Natal region

Roadmap for Future Research and Monitoring Efforts in Climate Change
1. Enhanced Climate Modelling
2. Long-Term Monitoring Programs
3. Ecosystem-Based Research
4. Integrated Socio-Ecological Studies
5. Vulnerability Assessments
6. Advanced Remote Sensing and GIS Applications
7. Community Engagement and Citizen Science
8. Climate Change Adaptation and Mitigation Strategies
9. Knowledge Sharing and Collaboration
10. Communication and Public Outreach

Table 4: Roadmap for Future Research; As Per Systematic Review

This roadmap outlines key areas for future research and monitoring efforts in climate change, including improving climate modelling, establishing long-term monitoring programs, conducting ecosystem-based research, integrating socio-ecological studies, performing vulnerability assessments, utilising remote sensing and GIS technologies, engaging communities and citizen science, evaluating adaptation and mitigation strategies, fostering knowledge sharing and collaboration, and enhancing communication and public outreach. By following this roadmap, advancing understanding of climate change impacts and developing effective strategies for mitigation and adaptation become possible.

KwaZulu-Natal coastal ecosystem

KwaZulu-Natal, located on the eastern coast of South Africa, is a region of remarkable natural beauty and ecological significance. Stretching along the warm waters of the

Indian Ocean, this province is renowned for its diverse coastal ecosystems, which support a wide array of plant and animal species. From pristine beaches and estuaries to mangrove forests and coral reefs, KwaZulu-Natal's coastal environment is a vital component of the region's ecological integrity and cultural heritage. The coastal ecosystem of KwaZulu-Natal is characterised by its rich biodiversity and unique ecological dynamics. It encompasses a variety of habitats, including sandy beaches, rocky shores, dune systems, tidal pools, and submerged reefs (Ramalanjaona, 2011). These habitats provide essential breeding, feeding, and nesting grounds for a multitude of marine species, including fish, turtles, dolphins, and whales, the estuaries and mangroves found along the coast are vital nursery areas for numerous fish species and serve as critical buffers against storm surges and coastal erosion (Fabry, Seibel, Feely, & Orr, 2008).

However, the coastal ecosystem of KwaZulu-Natal is currently facing significant challenges. One of the most pressing threats is the impact of climate change. Rising sea levels, increased ocean temperatures, and changing weather patterns pose substantial risks to the delicate balance of this coastal environment (Worm, *et al.*, 2006). These changes lead to coastal erosion, loss of habitat, alteration of species distributions, and disruption of ecological processes. In addition to climate change, other anthropogenic factors also contribute to the degradation of the coastal ecosystem in KwaZulu-Natal. Coastal development, pollution from urban centres and agriculture, overfishing, and destructive fishing practices all place additional strain on the region's natural resources and biodiversity (Worm, *et al.*, 2006). Balancing the needs of human development and the preservation of the coastal ecosystem presents a complex and ongoing challenge for stakeholders and decision-makers in the region.

To address these issues and safeguard the future of KwaZulu-Natal's coastal ecosystem, a comprehensive understanding of its current state and the potential impacts of climate change is crucial. By conducting research, monitoring key indicators, and implementing sustainable management practices, it is possible to mitigate the adverse effects of human activities and climate change on this invaluable coastal environment. Such efforts are essential not only for the protection of biodiversity but also for the well-being and resilience of local communities that rely on the ecosystem's services, such as tourism, fishing, and recreation. KwaZulu-Natal's coastal ecosystem is a unique and diverse environment facing multiple challenges

(eThekweni Municipality, 2020). Understanding its current condition and the potential impacts of climate change is vital for its preservation. By adopting sustainable management practices and engaging in collaborative efforts, we can work towards maintaining the ecological integrity and resilience of this remarkable coastal region for future generations.

Climate change has the potential to significantly impact the lives of people in KwaZulu-Natal, South Africa. This region, with its diverse ecosystems and vibrant communities, is particularly vulnerable to the effects of a changing climate. Ultimately the population is at risk and affected by:

Climate Change Impacts	Description
Water Resources	Altered rainfall patterns leading to increased variability, droughts, and floods, impacting access to clean water for drinking, agriculture, and sanitation.
Agriculture and Food Security	Rising temperatures, changing rainfall patterns, and increased pest and disease pressure threatening agricultural productivity, leading to crop failures, reduced yields, and food shortages.
Coastal Communities	Rising sea levels, increased storm surges, and coastal erosion posing risks to infrastructure, homes, and livelihoods in coastal areas, resulting in displacement and vulnerability to extreme weather events.
Health Impacts	Higher temperatures contributing to heat-related illnesses, changes in rainfall patterns increasing the spread of waterborne diseases, and extreme weather events causing injuries and disruption of healthcare services.
Biodiversity and Ecosystem Services	Habitat loss, species extinctions, and changes in ecological dynamics impacting biodiversity, ecosystem services, and the tourism industry.
Adaptation and Mitigation Strategies	Implementing water conservation measures, drought-resistant agriculture, coastal infrastructure planning, early warning systems, and greenhouse gas emissions reduction to adapt to and mitigate the impacts of climate change.

Collaboration and Resilience	Collaboration among governments, communities, scientists, and stakeholders in developing and implementing effective climate change strategies. Prioritising resilience, sustainability, and social equity to minimise negative impacts and build a more resilient future.

Table 5: Climate Change on Community in KwaZulu-Natal; Local Municipality eThekweni, 2022

These climate change impacts in KwaZulu-Natal highlight the diverse challenges faced by the region. By addressing water resource management, agricultural practices, coastal infrastructure, healthcare, biodiversity conservation, and engaging in adaptation and mitigation efforts, KwaZulu-Natal can work towards minimising the adverse effects of climate change and building a more sustainable and resilient future.

Municipal involvement in KwaZulu-Natal

The local government of KwaZulu-Natal, in collaboration with the national government of South Africa, has taken several measures to mitigate and adapt to the impacts of climate change. These initiatives aim to reduce greenhouse gas emissions, enhance resilience, and promote sustainable development. According to the municipal development plan, the province of KwaZulu-Natal has taken some action as follows (eThekweni Municipality, 2020):

Climate Change Response Strategies	Description
Climate Change Response Strategy	Provincial government's approach to addressing climate change impacts, focusing on sustainable development, adaptive capacity, and emissions reduction
Renewable Energy Initiatives	Support for renewable energy projects, including solar power systems, wind farms, and biomass energy facilities
Water Resource Management	Programs to improve water resource management and conservation, including catchment rehabilitation, infrastructure enhancement, and water-use efficiency
Climate Change Adaptation Plans	Integration of climate change considerations into planning processes, development of sector-specific adaptation plans

Sustainable Transport and Infrastructure	Measures to promote sustainable transport and infrastructure development, including investment in public transportation and integration of climate change considerations
Awareness and Capacity Building	Efforts to raise awareness and build capacity on climate change issues through education campaigns, training programs, and workshops

Table 6: Climate Change Strategies; KwaZulu-Natal Local Government

These climate change response strategies and initiatives demonstrate the proactive approach taken by the KwaZulu-Natal provincial government in addressing climate change impacts. By implementing these strategies, the region aims to promote sustainable development, reduce greenhouse gas emissions, enhance adaptive capacity, and mainstream climate resilience into various sectors of the economy and society. It is important to note that while these initiatives demonstrate the government's commitment to addressing climate change, ongoing efforts and collaboration with various stakeholders are necessary to achieve effective and sustainable outcomes. As climate change is a global challenge, the government's actions are complemented by international agreements and partnerships to collectively tackle this issue.

Impact on coastal ecosystems in KwaZulu-Natal

Climate change poses a significant threat to coastal ecosystems worldwide, including those found in KwaZulu-Natal. These unique ecosystems, situated at the interface of land and sea, are particularly vulnerable to the effects of a changing climate. The escalating temperatures, rising sea levels, altered precipitation patterns, and increased frequency of extreme weather events associated with climate change are causing widespread disturbances and posing serious challenges to the ecological integrity and resilience of coastal areas (Klemas, 2011). This study examines the various ways in which climate change is affecting coastal ecosystems, emphasising the need for urgent action to mitigate its impacts.

Climate Change Impact	Description
Sea Level Rise and Land Loss	Submergence of low-lying coastal areas, erosion, intrusion of saltwater, loss of critical habitat

Ocean Acidification	Increased CO ₂ emissions leading to changes in ocean chemistry, detrimental effects on marine organisms
Changes in Water Temperature	Warmer waters causing coral bleaching, shifts in fish species distribution, altering coastal ecosystem dynamics
Altered Precipitation Patterns	Disruption of estuarine ecosystems due to changes in freshwater inputs and salinity levels
Increased Storm Intensity	More frequent and intense storms leading to physical damage, habitat destruction, and species displacement
Loss of Biodiversity	Combined impacts contributing to the loss of specialist species, disrupting ecosystem functions and services

Table 7: Climate Change Impact in KwaZulu-Natal; (Corbella & Stretch, 2012)

These climate change impacts highlight the vulnerabilities and risks faced by coastal ecosystems in KwaZulu-Natal and emphasise the urgent need for understanding, mitigating, and adapting to the changing climate conditions to protect these valuable ecosystems. The impact of climate change on coastal ecosystems in KwaZulu-Natal and globally cannot be overstated. Rising sea levels, ocean acidification, changes in water temperature, altered precipitation patterns, increased storm intensity, and the loss of biodiversity are all clear indicators of the urgent need for action. Conservation efforts, sustainable coastal management practices, and the reduction of greenhouse gas emissions are crucial for the long-term preservation and resilience of coastal ecosystems. Addressing climate change impacts and implementing proactive measures are essential to ensure the survival of these invaluable ecosystems, protect vulnerable coastal communities, and secure the well-being of future generations.

RESEARCH GAPS

The focus of climate change research varies depending on various factors, including the specific research goals, geographic regions, and available resources. However, there are certain areas that tend to receive more attention and are commonly focused on in climate change research, while others receive comparatively less attention.

Most Focused Areas in Climate Change Research	Least Focused Areas in Climate Change Research
Temperature Changes	Social and Behavioural Aspects

Sea Level Rise	Equity and Justice
Carbon Emissions and Mitigation	Indigenous Knowledge and Traditional Practices
Impacts on Biodiversity	Cultural and Heritage Impacts
Human Health Impacts	Interdisciplinary Approaches

Table 8: Research Efforts in Climate Change; As Per Systematic Review

These areas of focus in climate change research highlight the topics that receive significant attention and extensive study, as well as areas that have relatively less research emphasis. While efforts are being made to address the least commonly focused areas, further research, collaboration, and interdisciplinary approaches are needed to broaden understanding of climate change impacts and develop effective strategies for mitigation and adaptation.

This study has identified that studying phytoplankton affected by climate change in the KwaZulu-Natal region has been severely overlooked – climate change has significant impacts on phytoplankton, the microscopic plant-like organisms in aquatic environments. Rising temperatures, altered nutrient availability, ocean acidification, changes in light availability, and shifts in species composition all affect phytoplankton. These changes can disrupt the balance of phytoplankton communities, impact their growth and productivity, and have far-reaching consequences for marine ecosystems and carbon cycling (Guinder, 2013). Understanding the effects of climate change on phytoplankton is essential for assessing the overall health and functioning of marine ecosystems. While important economic indicators are excessively studied, as well as the local community economies, study and assessment is required beyond the scope of capital creation. Addressing the root cause of a damaged coastal ecosystem to implement repair processes should be of utmost importance to a city that is motivated to become the most caring and liveable city in South Africa by 2030 (eThekweni Municipality, 2020).

RECOMMENDATIONS

Future studies on assessing the impact of climate change on coastal ecosystems in KwaZulu-Natal should prioritise several key recommendations. Firstly, establishing a standardised long-term monitoring program is crucial to assess the ongoing impacts of climate change on coastal ecosystems. This will provide valuable data on

ecosystem responses and changes in species distribution over time. Secondly, an interdisciplinary research approach should be adopted to understand the complex interactions between climate change and coastal ecosystems, incorporating ecological, climatological, and socio-economic aspects. Additionally, fine-scale studies focusing on specific coastal ecosystems within KwaZulu-Natal can provide localised insights into vulnerabilities, impacts on unique habitats, and implications for biodiversity and ecosystem services. Species-level assessments should be conducted to evaluate vulnerabilities and responses of key indicator species, shedding light on their role in ecosystem dynamics. Climate modelling techniques can be employed to project future climate scenarios at regional and local scales, enabling proactive planning and adaptive management strategies. Engagement with local communities and stakeholders is essential to incorporate traditional ecological knowledge, fostering community-based adaptation strategies. Research should also explore effective restoration and adaptation strategies tailored to coastal ecosystems, considering habitat restoration, coastal protection measures, and sustainable land-use practices. Education programs can enhance awareness and understanding of climate change impacts on coastal ecosystems. Lastly, fostering collaboration with international research institutions allows for knowledge exchange and sharing of data, methodologies, and best practices. By implementing these recommendations, future studies can deepen understanding, inform conservation strategies, and build resilience in KwaZulu-Natal's coastal ecosystems.

CONCLUSION

Climate change poses grave threats to coastal ecosystems, with rising sea levels, ocean acidification, and intensified storms at the forefront. These impacts lead to habitat loss, coral reef degradation, and increased vulnerability for coastal communities. Urgent and decisive action is imperative to mitigate these effects by reducing carbon emissions and conserving vital coastal habitats. It is crucial to foster interdisciplinary research and collaboration to bridge knowledge gaps, develop robust adaptation strategies, and inform effective policy decisions. By acknowledging and confronting these challenges, we can strive for a sustainable future that safeguards the invaluable ecological services and socioeconomic benefits provided by coastal ecosystems. Emphasising the conservation and restoration of coastal habitats is paramount to ensure their resilience and long-term well-being. Through these

concerted efforts, we can address climate change impacts head-on and secure the prosperity of both coastal ecosystems and the communities that depend on them.

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The impact of workplace cyber incivility on employee commitment

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ABSTRACT

The experience of uncivil behaviours influences employees' emotional states, which result in decreased commitment. This paper investigates the impact of workplace cyber incivility on employee commitment at public health care organisations, with a focus on nurses. The challenges brought by the digital era have given rise to a new form of incidents of uncivil behaviour at the workplace, known as workplace cyber incivility, which may reduce nurses' commitment. The study adopted a quantitative research method, employing a correlational design to assess the quantity of association between workplace cyber incivility and commitment. A structured questionnaire was used to collect data from a convenient sample of 101 nurses employed at a selected public hospital situated in Polokwane Local Municipality in the Limpopo Province. A 14 item cyber incivility scale was utilised to assess cyber incivility while nurses' commitment was measured by using an existing 18-items organisational commitment scale, on a 5-point Likert scale. The study findings indicate that workplace cyber incivility has a negative relationship with organisational commitment and its dimensions. Based on the findings of this study, it is important for leaders of public health care organisations to provide ongoing documented nurses' education that aids in clearly defining and identifying uncivil cyber behaviour and to increase their presence and visibility while also listening to nurses' problems in order to eliminate workplace cyber incivility and increase nurses' commitment.

Keywords: workplace cyber incivility, commitment, nurses, employees, health care organisations.

INTRODUCTION

In today's fast-paced and competitive work environment, it is of utmost importance to maintain a workplace culture that is positive and respectful of others. However, a significant number of organisations, including public health care organisations, struggle with the problem of incivility in the workplace and the profound impact it has on the commitment of their employees (Martin and Zadinsky, 2022). Mehmood, Sajid, Mehmood, Bano, Ullah, and Ashraf (2021) reported that incivility among nurses at their workplace influences their performance. Employees' ability to do their jobs became increasingly difficult during the emergence and spread of the COVID-19 pandemic. Organisations were forced to rely on the fourth industrial revolution (4IR) technology in order to continue with their operations, and such a move required employees to learn new ways of working in addition to their regular work duties (Mihalache, 2022).

The emergence and spread of the COVID-19 pandemic compelled health care organisations to begin to use virtual platforms, whereby telemedicine and virtual staff meetings were used to conduct more clinical and non-clinical tasks (Schwamm, Estrada, Erskine and Licurse 2020). The adoption of 4IR technology brought new challenges such as a rise in new forms of uncivil behaviour incidents at the workplace, known as workplace cyber incivility. Workplace cyber incivility is defined as a rude or discourteous behaviour that occurs during interactions mediated by technology such as emails, online text messages and virtual meetings (Niven, Connolly, Stride and Farley, 2022).

The cyber space that has become part of the nurses' world of work has the potential for creating more opportunities for nurses to be exposed to workplace cyber incivility (Kim, Lee and De Gagne, 2020a). Nurses use online platforms to obtain and share health-related information with other healthcare providers (Kim, Song and Lee, 2020b). Although the move ensured continuity in terms of daily operations, workplace cyber incivility emanated in the process (Kim *et al.*, 2020a). Research revealed that workplace cyber incivility has a negative impact on employees' organisational commitment (Sood and Kour, 2023).

Organisational commitment can be defined as the strength to which an employee and an organisation share a sense of identity (Doan, Nguyen and Nguyen, 2020). There are three dimensions that constitute organisational commitment, namely; affective commitment, continuance commitment and normative commitment. Affective commitment can be defined as an employee's sentimental connection to the organisation, which determines an employee's level of participation and dedication within the organisation (Guzel, 2019). Continuance commitment refers to employees' perceptions of the costs of departing the organisation (Anwar and Abdullah, 2021) while normative commitment refers to a sense of responsibility and loyalty to an organisation centred on a moral obligation (Mazahreh, 2021).

Employees who are committed to their organisation are aligned with the organisation's missions and vision, making them to share the same values with their organisation. However, employees' commitment can be threatened by the rise in workplace cyber incivility (Kim *et al.*, 2020a). Workplace cyber incivility may contribute to the inability of the public health care organisations to provide quality health care services, which could prevent the African continent from rising. This paper reflects on the impact of workplace cyber incivility on organisational commitment among nurses at a selected public hospital, which could shed light on possible mechanisms to prevent nurses' low commitment.

PROBLEM STATEMENT

The impact of workplace cyber incivility on employee commitment in public health care organisations is a pressing issue that requires special attention (Rehman, Ziaullah, Mehmood, Buzdar, and Kashif, 2022). Africa is regarded as a continent that is faced with multiple health related challenges (Bongmba, 2018) and for the African continent to keep rising, African public health care organisations should devise proactive mechanisms that would ensure effective provisioning of primary health care services to the public. For public health care organisations to be able to deliver high-calibre care and services, they rely heavily on the devotion and unconditional commitment of their employees (Schwamm *et al.*, 2020).

In South Africa, nurses play an active role in the provision of public primary health care services. However, South Africa experiences shortages of nurses as a result of turnover and emigration, which could be caused by nurses' low commitment (George,

Atujuna and Gow, 2013). The rapid advancement in technology and challenges brought by the digital era has given rise to workplace cyber incivility, which may further reduce the ability of public health care organisations to render effective health care services to the public as a result of decreased nurses' commitment (Mehmood *et al.*, 2021). Employees who are uncommitted tend to put in less effort in performing their duties, which might result in poor service delivery and excessive costs (Sood and Kour, 2023). The prevalence of incivility in the workplace has the potential to significantly undermine employee commitment, putting at risk their ability to effectively carry out their duties in order to realise organisational missions. However, there seems to be limited research on the impact of cyber incivility on nurses' behaviours at the workplace (Kim *et al.*, 2020b).

There is a need to research the relationship between workplace cyber incivility and nurses' commitment in order to develop effective strategies that promote a conducive working environment for nurses, protect nurses' well-being, maintain a high level of dedication, and ultimately assure the continuous provision of high-quality health care services. Therefore, the objectives of this paper were to assess the nurses' exposure to workplace cyber incivility and their level of commitment, with the investigation of the impact of workplace cyber incivility on employee commitment as the main objective.

LITERATURE REVIEW

Theoretical literature

The following theories are regarded as relevant in explaining workplace cyber incivility and organisational commitment: social learning theory, equity theory, leader-member exchange theory and conservation of resources theory. The social learning theory is relevant in understanding workplace cyber incivility while the equity theory and the leader-member exchange theory assist to explain organisational commitment. The conservation of resources theory assists to establish theoretical support for the relationship between workplace cyber incivility and organisational commitment.

Social Learning Theory

Bandura (1977) developed the social learning theory to explain how people think and the traits that shape their behaviour. This theory assists to understand factors that contribute to employees' engagement in cyber incivility. Bandura's theory is divided

into three categories: personal factors such as age, gender and cognitive biases; behavioural factors; and the environment (Cook and Artino, 2016). According to social learning theory, employees use social information in their environment by witnessing the actions of others in their surroundings to predict their own behaviour (Austin, 2020).

The increasing use of technology because of changes in the external environment, contributed to the rise in pervasiveness of cyber incivility (Brynjolfsson, Horton, Ozimek, Rock, Sharma and Tu Ye, 2020). This implies that nurses, as members of community, witness cyber incivility occurring in their communities as well as being exposed to cyber uncivil behaviour at their workplace may act as a social cue for them to engage in cyber incivility (Leiter, 2019).

Equity Theory

The equity theory was introduced by Stacy Adams in 1963. Equity theory assumes that employees are presumed to compare their benefits from their jobs such as salary, recognition, and promotion, with the effort they put in their work such as their experiences and education (Robbins and Judge, 2018). Equity theory also emphasised that employees who perceive inequity in their rewards, may seek to restore equity in the workplace by engaging in negative behaviour (Adams, 1963). This means that if the employees perceive that their efforts are not equivalent with the outcomes they receive from their organisation, they will become less committed to their organisation and put less effort in their job.

Leader member exchange theory

Dansereau, Graen and Haga (1975) developed the leader-member exchange (LMX) theory to describe the triadic process by which a leader's duties and expectations are developed with each subordinate. This theory assists to explain organisational commitment. It is based on the premise that when the leader gives subordinates the support they desire, such as exciting jobs and reasonable recognition, subordinates will respond with work devotion and loyalty to their leader and the organisation (Dansereau *et al.*, 1975). The LMX theory depends on the positive working relationships between organisation's leaders and employees (Strukan and Nikolic, 2017). Thus, a good relationship increases employee commitment and results in a

positive attitude that encourages teamwork and efforts for organisational goal attainment (Garg and Dhar, 2014).

Conservation of Resource (COR) Theory

The Conservation of Resource (COR) theory was developed by Hobfoll (1989). The theory of resource conservation assists to establish a theoretical support for the relationship between cyber workplace incivility and organisational commitment. The COR theory is founded on the notion that employees are encouraged to acquire resources and avoid loss of resources because both the threat of and actual resource loss are linked to more distress (Park, Fritz and Jex, 2018). The nursing profession is regarded as the most demanding profession, requiring the use of social and cognitive resources for effective performance (Schwamm *et al.*, 2020).

According to this theory, social relationships are a type of specific resource that can either deplete or supply the respective resources (Hobfoll, Halbesleben, Neveu and Westman, 2018). Thus, cyber incivility is a social stressor that can jeopardise nurses' social relationships while also reducing their affective and cognitive resources to be committed to their organisation. Employees who are subjected to more uncivil behaviour are more likely to experience negative emotions which may affect their level of commitment (Giumetti, McKibben, Hatfield, Schroeder and Kowalski, 2012; Giumetti, Hatfield, Scisco, Schroeder, Muth and Kowalski, 2013).

Empirical literature

Empirical studies on workplace cyber incivility discovered that employees experiencing cyber incivility take part in workplace deviance, which in turn affect employees' level of commitment (Han, Kim and Hur, 2021; Rehman *et al.*, 2022; Sood and Kour, 2023). Mahmood, Yasmeen, Ramzan, and Zafar (2023) found that the high level of uncivil workplace behaviour causes a decline in organisational commitment. Similarly, Shin and Hur (2020) found that increased levels of workplace incivility reduce commitment to the organisation. Research also revealed a negative relationship between workplace cyber incivility with the three dimensions of organisational commitment, namely; affective, normative, and continuance commitment (Han *et al.*, 2021; Mahmood *et al.*, 2023).

There seems to be limited research that specifically focusses on the relationship between workplace cyber incivility and organisational commitment among nurses as most studies tend to focus on the relationship between workplace incivility (in general) and organisational commitment in general or its dimensions (Liu, Friedman, Chi and Tsa, 2018; Guzel, 2019; Shin and Hur, 2020; Mahmood *et al.*, 2023). Those studies discovered that a negative relationship exists between workplace incivility and organisational commitment, including its dimensions.

The findings of the limited studies that focus on workplace cyber incivility and organisational commitment revealed a negative relationship between the two constructs (Han *et al.*, 2021; Rehman, *et al.*, 2022). This implies that it is important for organisations to create a suitable working environment for their employees in order to enhance their organisational commitment. However, the working environment that is characterised with hostility and uncivil behaviours has a negative impact on employees' commitment. It can therefore be safely hypothesised that workplace cyber incivility negatively influences organisational commitment and its dimensions among nurses.

METHODOLOGY

Research approach

A quantitative research approach in the form of a correlational design and cross-sectional survey design was adopted in this study. The quantitative approach makes it possible to use mathematical models in order to analyse the collected data by examining the nature of relationships between workplace cyber incivility and organisational commitment (Creswell and Creswell, 2017). This study is quantitative in nature as numbers were assigned to code the nurses' responses in relation to the items measuring workplace cyber incivility and organisational commitment. The assignment of numbers to code the nurses' responses made it possible to measure a monotonic association between workplace cyber incivility and organisational commitment (Schober, Boer and Schwarte, 2018).

Population and sampling

The population for this paper includes all nurses who were employed at a selected public hospital, situated in Polokwane Local Municipality in the Limpopo Province.

Bryman and Bell (2015, p. 536) regard “population as the universe of units from which a sample is drawn”. A convenient sample of 101 nurses was drawn from this study’s population. The convenience sampling method is a non-probability sampling strategy that enables the gathering of data from willing and available participants at a low cost and in a short period of time (Creswell and Creswell, 2017). Table 1 provides a summary description of the sample based on gender and age.

The majority, 73% of the participants, were females (N=74) while 27% were males (N=27). This supports the historical background of perceiving the nursing profession as a feminine profession (Mao, Cheong, Van and Tam, 2021). Majority of the participants fall under the age group of between 21-30 years (39.6%, N=40), followed by 25.7%, (N=26) falling under the age group of between 41-50 years then 23.7% (N=24) for those who are between 31-40 years and 10.8% (N=11) were 51 years old and above. It can be concluded that the majority of the nurses are those who are still new in the nursing profession. This confirms findings of a study by George *et al.* (2013) in South Africa which found that age could be one of the determinants of health workers’ decision to migrate and that those who are at the age that requires more financial resources are more likely to migrate.

Table 1: The gender and age of respondents

Gender and Age	Number	Percentage (%)
Gender		
Male	27	27%
Female	74	73%
Total	101	100%
Age		
21-30 years old	40	39.6%
31-40 years old	24	23.7%
41-50 years old	26	25.7%
51 and older	11	10.8%
Total	101	100%
Male age		
21-30 years old	13	48.1%
31-40 years old	9	33.3%
41-50 years old	3	11.1%
51 and older	2	7.5%
Total	27	100%
Female age		
21-30 years old	27	36.5%
31-40 years old	15	20.3%
41-50 years old	23	31.1%
51 and older	9	12.1%

Total	74	100%

Data collection and analysis

A structured questionnaire consisting of demographic questions (gender and age) as well as workplace incivility scale and organisational commitment scales was used to collect data from the nurses. A 14-items scale developed by Lim and Teo (2009) was utilised to assess workplace cyber incivility. Respondents indicated the extent to which co-workers or supervisors engaged in cyber incivility over the previous year. Items were graded on a 5-point Likert scale ranging from (1) Never, (2) Rarely, (3) Occasionally/sometimes, (4) Often, and (5) Very Often. An 18-items scale was used to measure organisational commitment and the scale was developed by Meyer *et al.* (1993). The scale assesses three dimensions, namely; affective commitment, continuance commitment and normative commitment, with six items measuring each dimension. The scale's expressions take the form of a 5-point Likert scale measuring the participants' levels of agreement with each item, ranging from (1) strongly disagree to (2) disagree, to (3) don't know, to (4) agree, and to (5) strongly agree.

The scales used to measure both workplace incivility and organisational commitment are previously validated scales (pre-existing instruments) to measure the constructs. Kamaruddin, Ismail, and Hamid (2021) confirmed the validity and reliability of the workplace cyber incivility scale, which was found to be relevant in gathering data on cyber incivility. Wilson, Bakkabulindi and Sempebwa (2016) discovered that the items of each construct of organisational commitment were valid and reliable measures using Cronbach alpha and confirmatory factor analysis. Similar studies have used the organisational commitment scale, whose Cronbach alpha values are greater than 0.70 and have demonstrated high levels of reliability (Meyer and Allen, 1991).

Data analysis

The R-Software Package for statistical computing and graphics (R-4.2.3 version) was used to analyse the collected quantitative data gathered. Descriptive statistics was used to describe the collected data (Sekaran and Bougie, 2013). The relationships between the variables under study were determined using Pearson-product moment correlations. Schober, Boer and Schwarte (2018) asserted that Pearson-product

moment correlation is used to measure a monotonic association between two variables.

RESULTS AND DISCUSSION

Descriptive statistics

Workplace cyber incivility

The descriptive statistics in relation to workplace cyber incivility is summarised in Table 2. In interpreting the results in relation to nurses' exposure to workplace cyber incivility, all incidents reported by more than 50% as never occurred are regarded as not prevalent among nurses' cyber incivility experiences.

Table 2: Workplace cyber incivility descriptive statistics

	Never	Rarely	Occasionally/Sometimes	Often	Very Often
Said something hurtful to you through online platform (e.g. WhatsApp, Facebook, and Twitter).	63 (62%)	17 (17%)	19 (19%)	2 (2%)	(0%)
Used the internet/online platform to say unkind stuff about you that they wouldn't say in person.	77 (76%)	16 (16%)	7 (7%)	1 (1%)	(0%)
Made rude comments about you online.	77 (76%)	18 (18%)	6 (6%)	(0%)	(0%)
Inserted sarcastic or mean comments on online platform.	71 (70%)	16 (16%)	11 (11%)	3 (3%)	(0%)
Put you down or belittled you in some way through an online platform.	69 (68%)	19 (18%)	11 (11%)	2 (2%)	(0%)
Sent you emails/messages using an impolite tone.	71 (70%)	20 (20%)	9 (8%)	1 (0%)	(0%)
Used CAPS to shout at you online.	79 (78%)	16 (16%)	4 (4%)	2 (2%)	(0%)
Not replying at all to your messages send via online platform.	36 (36%)	34(34%)	21 (21%)	7 (7%)	3 (2%)
Ignored a request (e.g. schedule a meeting) that you made through online platform.	33 (33%)	28 (28%)	30 (30%)	7 (7%)	3 (2%)
Replied to your online platform message but did not answer your queries.	33 (33%)	26 (26%)	25 (25%)	15 (15%)	2 (1%)
Used online platform for time sensitive messages (e.g., cancelling or scheduling a meeting on short notice).	32 (31%)	20 (19%)	29 (28%)	15 (15%)	6 (6%)
Paid little attention to a statement made by you through online platform or showed little interest in your opinion.	36 (36%)	34(34%)	21 (21%)	7 (7%)	3 (2%)
Not acknowledging receipt of a message you sent via online platform.	33 (33%)	26 (26%)	25 (25%)	15 (15%)	2 (1%)
Used online platform for discussions that would require face-to-face dialogue.	63 (62%)	17 (17%)	19 (19%)	2 (2%)	(0%)
TOTAL AVERAGE	55 (54%)	22 (22%)	17 (17%)	6 (6%)	1 (1%)

The results show that in general, nurses are to a certain extent exposed to cyber incivility at their workplace although their exposure is slightly minimal. The overall nurses' responses show that 54% of the nurses who participated in this study were never exposed to incidents related to cyber incivility. The item analysis shows that among the 14 items that were used to measure workplace cyber incivility, 6 items were reported by more than 50% of nurses to be the cyber uncivil behaviours they experienced from their colleagues or superiors during the past year.

The reported cyber incivility incidents experienced by the nurses include not replying at all to one's messages sent via an online platform; ignoring a request such as scheduling a meeting made through an online platform; replying to the online platform message but did not answer the queries; using an online platform for time sensitive messages such as cancelling or scheduling a meeting on short notice; paying little attention to a statement made through an online platform or showed little interest in one's opinion; and not acknowledging receipt of a message sent via an online platform. These results show that nurses do experience challenges related to workplace cyber incivility to a certain extent, which requires attention. This supports the findings of the study conducted in Korea by Kim *et al.* (2020b), which discovered that clinical nurses encounter cyber incivility in their online communication with other nurses and healthcare providers.

Organisational Commitment

The descriptive statistics in relation to organisational commitment is summarised in Table 3. In interpreting the results in relation to nurses' level of commitment, all responses with the ratings of agree and strongly agree by more than 50% are regarded as reflecting the nurses' commitment in relation to the item. Among the 18 items that were used to measure organisational commitment, the nurses' responses show commitment on 11 items as reported by more than 50% of them. The overall nurses' responses show that nurses are generally committed to their organisation as on average, 54% of them agreed with statements that reflect on their levels of commitment (42% agreed and 12% strongly agreed).

The analysis of items that measured each of the three dimensions of organisational commitment (affective, continuance and normative) reveals differences in terms of nurses' commitment with regards to each dimension. Affective commitment was

measured by 6 items but nurses' reported commitment in relation to only one item, which is about their organisation having a great deal of their personal meaning. On average, nurses' affective commitment is lower as only 41% (32% agreed and 9% strongly agreed) reported their affective commitment to their organisation, which implies that the nurses tend to show emotional detachment from their organisation (Mazahreh, 2021).

Table 3: Organisational commitment descriptive statistics

Affective commitment (AC)	Strongly Disagree	Disagree	Don't Know	Agree	Strongly Agree
I would be glad to spend the rest of my career in this organisation.	4 (4%)	19 (19%)	28 (28%)	36 (35%)	14 (14%)
I feel as if this organisation's problems are my own.	17 (17%)	40 (39%)	10 (10%)	31 (31%)	3 (3%)
I do feel like I am part of this organisation.	16 (16%)	58 (57%)	8 (8%)	14 (14%)	5 (5%)
I feel emotionally attached to this organisation.	16 (16%)	52 (51%)	4 (4%)	24 (24%)	5 (5%)
This organisation has a great deal of personal meaning for me.	2 (1%)	12 (12%)	5 (5%)	58 (58%)	24 (24%)
I feel a strong sense of belonging to this organisation.	17 (8%)	40 (39%)	10 (10%)	31 (31%)	3 (3%)
AC Average	12 (12%)	37 (36%)	11 (11%)	32 (32%)	9 (9%)
Continuance commitment (CC)	Strongly Disagree	Disagree	Don't Know	Agree	Strongly Agree
It would be very hard for me to leave my job at this organisation right now even if I wanted to.	2 (1%)	12 (12%)	5 (5%)	58 (58%)	24 (24%)
Too much of my life would be disrupted if I leave my organisation.	8 (8%)	17 (17%)	19 (19%)	46 (46%)	10 (10%)
Right now, staying with my job at this organisation is a matter of necessity as much as desire.	4 (4%)	19 (19%)	28 (28%)	36 (35%)	14 (14%)
I believe I have too few options to consider leaving this organisation.	4 (4%)	24 (23%)	2 (1%)	58 (58%)	13 (12%)
One of the few negative consequences of leaving my job at this organisation would be the scarcity of available alternative elsewhere.	12 (12%)	34 (34%)	5 (2%)	42 (42%)	16 (16%)
One of the major reasons I continue to work for this organisation is that leaving would require considerable personal sacrifice.	2 (1%)	12 (12%)	5 (5%)	58 (58%)	24 (24%)
CC Average	5 (5%)	19 (19%)	11 (10%)	49 (49%)	17 (17%)
Normative commitment (NC)	Strongly Disagree	Disagree	Don't Know	Agree	Strongly Agree
I do feel obligated to remain with my organisation.	16 (16%)	52 (51%)	4 (4%)	24 (24%)	5 (5%)
Even if it were to my advantage, I do not feel it would be right to leave.	4 (4%)	24 (23%)	2 (1%)	58 (58%)	13 (12%)

I would feel guilty if I left this organisation now.	7 (7%)	31 (31%)	7 (7%)	50 (50%)	5 (5%)
This organisation deserves my loyalty.	8 (8%)	17 (17%)	19 (19%)	46 (46%)	10 (10%)
I would not leave my organisation right now because of my sense of obligation to it.	2 (1%)	12 (12%)	5 (5%)	58 (58%)	24 (24%)
I owe a great deal to this organisation.	8 (8%)	17 (17%)	19 (19%)	46 (46%)	10 (10%)
NC Average	7 (7%)	26 (26%)	9 (9%)	47 (47%)	12 (11%)
OC AVERAGE	19 (19%)	19 (19%)	8 (8%)	42 (42%)	13 (12%)

Continuance commitment was measured by 6 items and nurses' reported commitment in relation to five items. Thus, on average, nurses' continuance commitment is higher as 66% (49% agreed and 17% strongly agreed) reported their continuance commitment to their organisation. This implies that the majority of the nurses remain committed to their organisation because of the cost associated with leaving their organisation (Anwar and Abdullah, 2021). Normative commitment was measured by 6 items and nurses' reported commitment in relation to five items. On average, nurses' normative commitment is higher, as 58% (47% agreed and 11% strongly agreed) reported normative commitment to their organisation. This means that the nurses perceive that they have a moral obligation to remain loyal to their organisation (Mazahreh, 2021).

In a nutshell, the results show that nurses are committed to their organisation. However, their commitment differs in relation to the three dimensions of organisational commitment. The nurses tend to show high continuance commitment and normative commitment while affective commitment is lower. This supports the findings of a study conducted by Al-Haroon and Al-Qahtani (2020), which discovered that nurses agreed more with the continuance commitment and the normative subscales than the affective commitment subscales.

Hypotheses testing

The results in relation to the relationship between workplace cyber incivility (WCI) and organisational commitment (OC) are summarised in Table 4. The results show that workplace cyber incivility has a strong negative correlation with organisational commitment (-0.703). This means that as workplace cyber incivility increases, organisational commitment decreases. This supports the findings of a study by Rehman *et al.* (2022), which found that there is a negative relationship between workplace incivility and organisational commitment among nurses. Thus, if workplace

norms and values are ignored, whereby employees are exposed to cyber incivility at work, it will eventually lead to negative results in the form of decreased levels of commitment to their organisation.

The results also show that negative correlations exist between workplace cyber incivility and the three dimensions of organisational commitment, affective commitment (-0.576), continuance commitment (-0.289) and normative commitment (-0.464), which is consistent with previous findings (Han *et al.*, 2021; Mahmood *et al.*, 2023). A stronger negative correlation is evident between affective commitment and workplace cyber incivility, which implies that increased exposure to workplace cyber incivility tends to reduce nurses' emotional attachment to their organisation.

Table 4: Correlational results

Constructs/ Dimensions	WCI			
Organisational Commitment	-0.703			
Affective Commitment		-0.576		
Continuance Commitment			-0.289	
Normative Commitment				-0.464

CONTRIBUTIONS AND LIMITATIONS

The study does not only add to the existing body of knowledge in relation to employee behaviour but undoubtedly contributes to the dearth of literature in relation to the effects of workplace cyber incivility on organisational commitment, especially among nurses (Kim *et al.*, 2020b). Uncivil behaviours have been found to negatively affect employees' emotional well-being, leading to reduced commitment (Rehman *et al.*, 2022). Given the pivotal role nurses play in providing primary health care services, understanding the relationship between incivility and commitment is crucial, especially in the African context which is characterised by multiple health-related problems (Bongmba, 2018).

The study highlights the contemporary challenge of digital-era workplace incivility and its potential to further undermine nurses' commitment. These findings have significant consequences for public health care organisations as they rely on dedicated nurses to provide great patient care. The negative association between workplace cyber incivility and organisational commitment emphasises the importance of addressing

and mitigating uncivil digital behaviours. Fostering a courteous and supportive working environment is critical not just for improving employee well-being but also for encouraging better levels of commitment, which are critical for organisational success (Chanana, 2021).

This study is however not immune to limitations. The small sample size, the use of convenient sampling and the focus on a single hospital may not adequately represent the broader population of nurses. Thus, the findings may not be generalised to other contexts or healthcare settings. The quantitative approach used in this study does not offer as much detail about the nature, causes and consequences of workplace cyber incivility and subjective experiences of cyber incivility as a qualitative approach would. The reliance on a pre-existing scale to measure workplace cyber incivility made it impossible to examine cyber incivility in all its forms in terms of how it is instigated, experienced, and witnessed specifically by nurses. Furthermore, the reliance on self-reported scales for workplace cyber incivility and organisational commitment could have introduced response biases. It is therefore recommended for future research to assist in filling these gaps.

RECOMMENDATIONS

A rising Africa requires people who are committed to the growth of the continent, and provision of proper health care services could also assist in addressing the millennium development goals (MDGs) 4, 5 and 6 (reducing child mortality and improving maternal health as well as combating HIV/AIDS, malaria and other diseases) (Hulme, 2009). It is therefore important for public health care organisations to create a more positive and supportive work environment in order to effectively deal with negative consequences of cyber incivility at the workplace. It is recommended for public health care organisations in Africa to:

- Communicate about behaviours appropriate to their working environments.
- Investigate nurses' problems in relation to workplace cyber incivility.
- Develop workplace cyber incivility educational programs informed by the latest technology.
- Conduct continuous awareness programmes in relation to workplace cyber incivility.

- Create clear channels of communication to report workplace cyber incivility incidents.
- Develop and continuously amend workplace cyber incivility policies in line with the advancing technology.

CONCLUSION

The world of work is continuously changing as new technology is introduced. Any newly introduced technology has its advantages and disadvantages. Although the use of the latest technology can result in efficiency and effectiveness, its disadvantages such as workplace cyber incivility should not be overlooked. The findings show that nurses experience uncivil cyber behaviours from their colleagues or superiors, which was found to negatively associate with organisational commitment, especially their affective commitment. Thus, addressing challenges related to workplace cyber incivility may assist in increasing organisational commitment.

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Enhancing financial inclusion for small and medium-sized enterprises in South Africa through digital finance

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ABSTRACT

This research delves into the transformative role of digital finance in augmenting financial inclusion for small and medium-sized enterprises (SMEs) in South Africa. The primary aim is to scrutinise how digital finance contributes to enhancing financial inclusion for SMEs in the South African context. Employing a positivist paradigm, this study adopts a quantitative methodology. The data collection process entails purposeful sampling of 321 SME owners from a total pool of 700, with the sample size determined using the Cochran formula. The study's results underscore the potential of digital finance to boost financial inclusion for SMEs by facilitating access to financial services, curbing transaction costs, and streamlining financial transactions. Nevertheless, persistent challenges, including limited digital infrastructure, inadequate financial literacy levels, and regulatory impediments, necessitate attention to facilitate the widespread adoption of digital finance among SMEs. In conclusion, the study recommends fostering collaboration among key stakeholders such as financial institutions, technology companies, and government agencies. This collaborative approach aims to establish a conducive ecosystem that supports the adoption of digital finance among SMEs, ultimately advancing financial inclusion in South Africa.

Keywords: financial inclusion, SMEs, digital finance, mobile banking, financial literacy, digital technology, financial services

JEL codes: G20, G21, O16

BACKGROUND

Small and medium-sized enterprises (SMEs) are an essential component of the South African economy, as they are responsible for around 60% of the country's employment⁶⁹ and 34% of its GDP (Msomi & Maharaj, 2022). Yet, access to financing continues to be a significant obstacle for SMEs, especially those located in underserved and distant locations (Prieger, 2023). Due to the high transaction costs and the perceived higher level of credit risk, the conventional banking industry has been sluggish to offer financial services to SMEs (Abereijo & Fayomi, 2005; Georgios, 2019; Msomi, Yearwood & Msomi, 2022). Because of this, a significant fraction of SMEs now participate in the informal sector. These businesses do not have access to formal financial services, which inhibits their expansion and reduces their overall contribution to the economy (Klapper, Miller & Hess, 2019). To solve these problems that SMEs are having in South Africa, financial inclusion has been suggested as a possible solution (National Treasury, 2020; World Economic Forum, 2017; World Bank, 2018). In the context of the formal financial sector, the term "financial inclusion" describes the process of providing accessibility to formal financial services to those who have historically been excluded from the formal financial sector⁷⁰. The government of South Africa has recognised the significance of the financial inclusion of SMEs in fostering economic development and bringing about a reduction in levels of poverty, and as a result, it has instituted several laws and programs designed to foster financial inclusion (National Treasury, 2020).

The expansion of digital finance presents an opportunity to expand access to financial services for SMEs in South Africa (Mpofu & Mhlanga, 2022). The provision of financial services via the use of digital technology, such as mobile phones and the internet, is referred to as "digital finance." SMEs will have an easier time gaining access to financial services if digital finance is implemented since it can lower transaction costs, boost convenience and accessibility, and improve risk assessment (Yao & Yang, 2022). The growth of digital finance provides an opportunity to reduce transaction costs, increase accessibility, and improve risk assessment, making it easier for SMEs to access formal financial services. Digital finance and financial inclusion pose a

⁶⁹ <https://connectspace.co.za/blog/the-importance-of-smes-in-south-africa/#:~:text=With%20the%20formal%20sector%20continuously,60%25%20of%20the%20work%20force>

⁷⁰ <https://www.worldbank.org/en/topic/financialinclusion/overview>.

challenge for SMEs due to the presence of several obstacles that hinder the full utilisation of technology to increase access to financial services (Al-Smadi, 2022). These barriers comprise insufficient financial literacy, restricted access to technology, a lack of confidence in digital finance, limited financial product availability, and inadequate regulatory frameworks (Hasan, Yajuan & Khan, 2022). As a result, SMEs' adoption of digital finance is impeded, curtailing their capacity to obtain financial services and expand their businesses. In addressing these challenges, it is imperative to ensure that digital finance can be utilised as an effective tool for promoting financial inclusion for SMEs and supporting their growth and development.

Despite the potential advantages of digital finance and financial inclusion for SMEs, the adoption of digital finance among SMEs in South Africa remains low, and there is insufficient empirical evidence on its impact on financial inclusion (World Economic Forum, 2017; OECD, 2018; National Treasury, 2020; Mpofu & Mhlanga, 2022). There is a growing body of research on the potential for digital finance to improve financial inclusion for SMEs in developing nations such as South Africa, as well as other countries. Unfortunately, there is a dearth of available empirical research on the current state of digital finance implementation and its effect on financial inclusion for SMEs in South Africa. Therefore, the objective of this study is to investigate the role of digital finance in enhancing financial inclusion for SMEs in South Africa. The study aims to explore the potential benefits of digital finance in addressing the financial exclusion of SMEs and identifying the obstacles that need to be overcome to facilitate its adoption.

LITERATURE REVIEW

Digital finance and financial inclusion for SMEs

SMEs often face significant challenges in accessing financial services, which can hinder their growth and sustainability (Abor & Quartey, 2010). Digital finance has emerged as a potential solution to address the financing gap for SMEs and promote their financial inclusion (National Treasury, 2020; World Economic Forum, 2017; World Bank, 2018). The concept of financial inclusion refers to the process of ensuring access to financial services and products at an affordable cost to all members of society, including the underserved and excluded populations. Digital finance refers to the use of digital technologies to deliver financial services (Al-Smadi, 2022). The

emergence of digital finance has provided an opportunity to extend financial services to underserved and unbanked populations, including SMEs (Klapper, Miller & Hess, 2019). One of the key benefits of digital finance is its potential to reduce transaction costs. Traditional financial institutions often require significant fees and documentation to open and maintain an account, making it difficult for low-income individuals and SMEs to access financial services (Abereijo & Fayomi, 2005; Georgios, 2019). Digital finance can provide a lower-cost alternative by enabling transactions to be conducted through mobile phones or other digital devices (Mhlanga, 2020). This can increase convenience and accessibility, particularly for those in rural or remote areas. Digital finance also has the potential to improve risk assessment and increase the availability of credit (World Economic Forum, 2017; Mpofu & Mhlanga, 2022). Traditional financial institutions often rely on collateral-based lending, which can be difficult for SMEs and individuals without significant assets (OECD, 2018; National Treasury, 2020; Mpofu & Mhlanga, 2022). Digital finance platforms can use alternative data sources, such as transaction histories and social media activity, to assess credit risk and provide loans to those who may not have access to traditional credit. SMEs have been found to face significant barriers to accessing finance, including lack of collateral, limited credit history, and high transaction costs. Digital finance, which refers to the use of digital technologies to deliver financial services, has been seen as a potential solution to address these challenges. Digital finance offers a range of services, including mobile payments, digital wallets, online lending, and crowdfunding. These services have the potential to reduce transaction costs, increase efficiency, and expand access to finance.

According to a report by the World Bank (2014), digital finance has the potential to transform financial inclusion by reducing costs, increasing efficiency, and expanding access to financial services. Digital finance allows SMEs to access financial services such as loans, insurance, and savings through their mobile phones or other digital devices, reducing the need for physical infrastructure and increasing convenience. Several studies have investigated the impact of digital finance on SMEs' financial inclusion. For instance, a study by Ngaruiya (2014) found that digital finance services such as mobile banking and mobile money have a positive impact on SMEs' access to finance, leading to increased business growth and profitability. Similarly, a study by Chale and Mbamba (2015) found that digital finance has improved financial inclusion

for SMEs by providing them with access to credit, savings, and insurance services. However, while digital finance has the potential to enhance financial inclusion for SMEs, there are also challenges that need to be addressed. For instance, a book by Sahay, von Allmen, Lahreche, Khera, Ogawa, Bazarbash and Beaton (2020) found that SMEs face challenges such as limited digital literacy, lack of trust in digital finance providers, and regulatory barriers. Addressing these challenges will require a coordinated effort by policymakers, financial institutions, and digital finance providers.

Empirical review

Research literature provides evidence on the role of digital finance in enhancing financial inclusion for SMEs. Shofawati (2019) conducted an empirical review on the role of digital finance in strengthening financial inclusion and the growth of small and medium-sized enterprises in Indonesia. The author used a qualitative approach in conducting the study. Data were collected through a literature review of previous studies, reports, and policy documents related to digital finance and financial inclusion in Indonesia. The study found that digital finance can contribute to the growth of SMEs in Indonesia by providing access to finance and other financial services. Digital finance platforms such as mobile banking, e-wallets, and peer-to-peer lending can reach SMEs that are underserved by traditional financial institutions. These platforms can also provide more efficient and cost-effective financial services compared to traditional banks, which can benefit SMEs by reducing transaction costs and increasing their profitability. The study also found that digital finance can promote financial inclusion by reaching out to underserved communities, such as those living in rural areas. However, the study also highlighted some challenges in promoting digital finance in Indonesia. These challenges include the lack of infrastructure and technology, regulatory barriers, and the lack of trust and awareness among SMEs and consumers about digital finance.

The study conducted by Thathsarani and Jianguo (2022) aimed to investigate the relationship between digital finance, the Technology Acceptance Model (TAM), financial inclusion, and SME performance. The study used a quantitative research approach and collected data through a survey of 290 SMEs in Indonesia. The authors analysed the data using structural equation modeling. The study found a positive relationship between digital finance, TAM, financial inclusion, and SME performance.

The authors argued that digital finance can improve financial inclusion and SME performance by increasing access to finance, reducing transaction costs, and improving financial literacy. Moreover, the authors found that TAM can be used to explain the acceptance of digital finance by SMEs, which can further strengthen financial inclusion and SME performance.

Rasheed, Siddiqui, Mahmood, and Khan (2019) examined the role of digital micro-financial services in promoting financial inclusion for small and medium-sized enterprises. The authors argued that SMEs face significant challenges in accessing finance and that digital micro-financial services can help overcome these challenges. The study identified a few barriers that SMEs face in accessing finance, including a lack of collateral, limited financial literacy, and a lack of access to formal financial institutions. They also noted that SMEs are often forced to rely on informal sources of finance, which can be expensive and unreliable. The study argued that these services can help overcome some of the barriers faced by SMEs by providing them with access to affordable and convenient financial services. The study highlighted several examples of digital micro-financial services, including mobile money, digital lending platforms, and peer-to-peer lending platforms.

Ekong and Ekong (2022) investigated the role of digital currency in promoting financial inclusion in Nigeria. The study argued that digital currency has the potential to promote financial inclusion by providing affordable and convenient financial services to underserved and unbanked populations. The study drew on both primary and secondary data to provide an empirical analysis of the impact of digital currency on financial inclusion in Nigeria. The primary data was collected through a survey of 300 respondents, while the secondary data was obtained from the Central Bank of Nigeria, the Nigerian Stock Exchange, and other relevant sources. The study found that digital currency has the potential to promote financial inclusion in Nigeria by providing access to affordable and convenient financial services. The survey results indicated that digital currency can help overcome some of the barriers to financial inclusion, including a lack of physical access to banks and a lack of documentation required to open a bank account. However, the study also identified a few challenges that need to be addressed to fully realise the potential of digital currency in promoting financial inclusion. These challenges include regulatory issues, cybersecurity concerns, and a lack of public awareness and trust in digital currency.

Wyman (2017) explored the potential of digital finance to accelerate financial inclusion in Southeast Asia. The author argued that digital finance has the potential to overcome many of the barriers to financial inclusion that have historically hindered the region's development. The conducted interviews included the stakeholders involved in digital finance initiatives in Southeast Asia. The author identified several factors that have historically hindered financial inclusion in the region, including a lack of physical access to financial services, high transaction costs, and a lack of trust in formal financial institutions. The author then turned to the potential of digital finance to overcome these barriers. The author highlighted several examples of digital finance initiatives in Southeast Asia, including mobile money platforms, peer-to-peer lending platforms, and online payment systems. The author argued that these initiatives have the potential to overcome many of the traditional barriers to financial inclusion by providing affordable and convenient financial services to underserved populations.

Sahay *et al.* (2020) examined the potential of fintech to promote financial inclusion in the post COVID-19 era. The authors argued that the pandemic has highlighted the importance of financial inclusion as a means of promoting economic stability and resilience, and that fintech has the potential to overcome many of the barriers to financial inclusion that have historically hindered the development of inclusive financial systems. The article draws data and analysis from the International Monetary Fund (IMF) and other sources. The authors identified several factors that have historically hindered financial inclusion, including a lack of physical access to financial services, high transaction costs, and a lack of trust in formal financial institutions. The authors then turned to the potential of fintech to overcome these barriers. The authors highlighted several examples of fintech initiatives that have been successful in promoting financial inclusion, including mobile money platforms, digital credit scoring, and blockchain-based financial systems.

Theoretical model

Theory of financial innovations: The theory was proposed by Schumpeter (1934), who argued that financial innovations are essential for economic growth and development (Schumpeter & Nichol, 1934; Gubler, 2011). The theory of financial innovations provides a framework for understanding the critical role that financial innovations play in promoting economic growth and development (Qamruzzaman &

Jianguo, 2017). By enhancing the efficiency, accessibility, and convenience of financial services, financial innovations enable firms to access financing more easily and cost-effectively, which promotes investment and growth. The theory of financial innovations has been influential in shaping the modern financial system and continues to guide the development of new financial products, services, and technologies. The theory of financial innovations provides a useful framework for understanding the role of digital finance in enhancing financial inclusion for SMEs in South Africa. By leveraging digital technologies, digital finance has significantly reduced the barriers to accessing financial services, enabling SMEs to access funding and other resources quickly and easily. As such, digital finance has played a critical role in promoting financial inclusion and supporting the growth and development of SMEs in South Africa.

Conceptual framework



Figure 1. Conceptual framework on the role of digital finance in enhancing financial inclusion for SMEs.

Source: Authors' Design (2023)

METHODOLOGY

A positivist paradigm was employed since this investigation was conducted using a quantitative research approach. The data collection process included a closed-ended questionnaire using a Likert scale of five points. The owners and managers of all SMEs in the eThekweni area that fall under the jurisdiction of the Durban Chamber of Commerce and Industry (DCCI) were the target. SMEs include a very wide variety of businesses, including those in manufacturing and the retail sector. Since there are so many SMEs in KwaZulu-Natal, the manufacturing and retail sectors made up the population that was targeted. More than 700 SMEs in the province of KwaZulu-Natal are members of the DCCI and SEDA. Both of these agencies work with Durban's small businesses (Olawaju & Msomi, 2021a). This study concentrated on SMEs in the

Central Business District (CBD) of KwaZulu-Natal in Durban. SMEs that employ between 10 and 200 employees were chosen to examine the role of digital finance in enhancing financial inclusion for SMEs. In this investigation, the Cochran formula was employed to justify the sample size used. As per Hoaglin's (2016) observations, the formula suggests that the target group under consideration is either too large or unknown. Nonetheless, Msomi and Olarewaju (2021b) have stated that the audience consisted of 700 small and medium-sized enterprises located in Durban, KwaZulu-Natal. The study, however, gathered data from only 321 SMEs. A sample size of around 321 people was chosen using a strategy known as purposive sampling which has been determined to be acceptable since it enables the researcher to exercise his or her own discretion in selecting an appropriate representation of the company owner. Due to the fact that some SMEs are run by their owners while others are run by managers, respondents were owners or managers. Questionnaires were used to gather the primary data for this study. These questions were sent out to respondents who were found in the DCCI database using the software QuestionPro. Emails were sent out and each email had a link to the questionnaire that was accessed online. It was requested of the responders that they complete the survey by clicking on the link that was supplied. The researcher wrote letters of reminder which were to be sent in the event of an unsatisfactory answer or if a week had passed after the delivery of the questionnaire with no response being received. A total of 321 individuals filled out the questionnaire that was given to them. There were 321 respondents who filled out and returned the questionnaire. Out of them, 21 of the surveys were invalid because they were not correctly filled out. For this research, the remaining 300, which accounted for 93% of the response rate, were assigned codes and evaluated. Since a questionnaire was used to collect primary data for this investigation, the information was initially entered into a spreadsheet created with Microsoft Excel, and then it was transferred to a computer running Statistical Package for the Social Sciences (SPSS) to be coded and analysed. The use of SPSS was permissible because it made it simple to comprehend how changes in interest rates affected the credit available to small and medium-sized enterprises.

RESULTS AND DISCUSSION OF DATA ANALYSIS

Descriptive analysis

Table 1: Digital Finance Adoption

Table 1 reflects the findings of the adoption and usage of digital financial services. The responses were presented in frequency and percent from the scale of strongly disagree (SD), disagree (D), neutral (N), agree (A) and strongly agree (SA).

Digital Finance Adoption	Strongly disagree	Disagree	Agree	Strongly agree	Strongly disagree
I am currently using digital financial services for my business transactions.	4 (1.3%)	12 (4%)	3 (1%)	160 (53.5%)	120 (40.1%)
I learned about digital financial services through various channels, such as online search, friends or family, financial institutions, social media, or by other means	2 (7%)	0	10 (3.3%)	168 (56.2%)	119 (39.8)
I adopted digital financial services because they are convenient, timesaving, cost-effective, safe and secure, or for other reasons.	2 (7%)	0	17 (5.7%)	201 (67.2%)	79 (26.4%)

This data is related to the adoption and usage of digital financial services. The respondents were asked to rate their level of agreement or disagreement with various statements related to digital finance adoption, challenges, and financial inclusion. In terms of digital finance adoption, 53.5% of respondents strongly agree that they are currently using digital financial services for their business transactions, while 40.1% strongly disagree or disagree. This indicates that a significant proportion of respondents have adopted digital financial services for their business transactions. Regarding the sources of information about digital financial services, many respondents (56.2%) learned about them through various channels such as online search, friends or family, financial institutions, social media, or by other means. This indicates that digital financial services are being actively promoted through various channels and that people are becoming more aware of them. When it comes to the

reasons for adopting digital financial services, 67.2% of respondents agree that they are convenient, timesaving, cost-effective, safe and secure, or for other reasons. This indicates that people are motivated to use digital financial services for various benefits they offer. Overall, the data suggests that digital financial services are becoming more widely adopted, and people are increasingly recognising their convenience, cost-effectiveness, safety, and security. However, there are still some challenges related to digital financial service adoption, such as poor network connectivity, high transaction fees, limited digital financial service providers, and lack of trust in digital finance.

Table 2: Financial Inclusion

Table 2 reflects the findings on the impact of digital finance on financial inclusion.

Financial Inclusion	Strongly disagree	Disagree	Agree	Strongly agree	Strongly disagree
Digital finance has increased my access to financial services.	6 (2%)	14 (4.7%)	17 (5.7%)	143 (47.8%)	119 (39.8%)
Digital finance has increased financial inclusion for SMEs in general.	3 (1%)	15 (5%)	7 (2.3%)	145 (48.5%)	129 (43.10%)
Digital finance has increased my financial literacy.	2 (7%)	0	13 (4.3%)	218 (72.9%)	66 (22.1%)
Digital finance has increased my opportunities for growth	2 (7%)	11 (3.7%)	15 (5%)	217 (72.6%)	54 (18.1%)

These are responses to a survey on the impact of digital finance on financial inclusion. "Digital finance has increased my access to financial services": 47.8% strongly agree, 39.8% agree, 10.7% disagree or strongly disagree. This suggests that most respondents feel that digital finance has had a positive impact on their access to financial services. "Digital finance has increased financial inclusion for SMEs in general": 48.5% strongly agree, 43.1% agree, 6.3% disagree or strongly disagree.

This indicates that most respondents believe that digital finance has had a positive impact on the financial inclusion of SMEs. "Digital finance has increased my financial literacy": 72.9% agree or strongly agree, 4.3% disagree. This suggests that many respondents feel that digital finance has helped them improve their financial knowledge. "Digital finance has increased my opportunities for growth": 72.6% agree or strongly agree, 18.1% disagree. This indicates that many respondents believe that digital finance has provided them with more opportunities for growth. Overall, these results suggest that digital finance has had a positive impact on financial inclusion, access to financial services, financial literacy, and opportunities for growth, at least among the respondents of the survey.

Table 3: Challenges of Digital Finance Adoption

Table 3 reflects the findings of individuals regarding the challenges of digital finance adoption.

Challenges of Digital Finance Adoption	Strongly disagree	Disagree	Agree	Strongly agree	Strongly disagree
Poor network connectivity has been a challenge in my adoption of digital financial services.	16 (5.4%)	01 (3%)	6 (2%)	136 (45.5%)	140 (46.8%)
High transaction fees have been a challenge in my adoption of digital financial services.	17 (5.7%)	01 (3%)	11 (3.7%)	159 (53.2%)	111 (37.10%)
Limited digital financial service providers have been a challenge in my adoption of digital financial services.	04 (1.3%)	0	08 (2.7%)	211 (70.6%)	76 (25.4%)
Lack of trust in digital finance has been a challenge in my adoption of digital financial services.	04 (1.3%)	0	04 (1.3%)	249 (83.3%)	42 (14.0)

The data represents the responses of individuals regarding the challenges of digital finance adoption. Regarding poor network connectivity, 45.5% of the respondents agreed that it has been a challenge in their adoption of digital financial services. Concerning high transaction fees, 53.2% of the respondents agreed that it has been a challenge in their adoption of digital financial services. Regarding limited digital financial service providers, 70.6% of the respondents agreed that it has been a challenge in their adoption of digital financial services. In terms of trust in digital finance, 83.3% of the respondents agreed that it has been a challenge in their adoption of digital financial services. The data suggests that network connectivity, transaction fees, limited-service providers, and lack of trust are significant challenges to the adoption of digital financial services. Addressing these challenges can encourage more individuals to adopt digital financial services.

Pearson's correlation coefficient analysis

To examine the relationship between digital finance and SMEs financial inclusion, Pearson's correlation coefficient was used, and the results are presented in Table 4 below.

Table 4 Digital finance and SMEs Financial Inclusion

Construct A	Construct B	Pearson's correlation (r)	p -value
Digital finance	SMEs Financial Inclusion	.612**	<.001

**Correlation is significant at the 0.01 level (2-tailed)

Table 4 presents the findings of the study's Pearson's correlation analysis, which showed a strong and significant positive relationship ($r = 0.650$, $P < 0.001$) between digital finance and SMEs financial inclusion. This leads us to believe that there is a connection between these two variables, and that if the use of digital finance becomes more widespread, SMEs in South Africa will have a greater chance of being financially involved.

The results of this study are consistent with previous research in the field. For instance, Wyman (2017) conducted a study in Southeast Asia and found that digital financial services significantly impact the financial inclusion of SMEs. The study highlights the importance of digital finance in reducing the financing gap for SMEs and promoting

their financial inclusion. Similarly, Rasheed *et al.* (2019) found that digital financial services are vital in enhancing the financial inclusion of SMEs. The study revealed that digital finance provides access to credit, improves financial literacy, and facilitates transactions, thereby promoting financial inclusion for SMEs. In another study conducted by Thathsarani and Jianguo (2022) in Indonesia, digital financial services were found to contribute significantly to the financial inclusion of SMEs. The study highlights the role of digital finance in promoting financial innovation, enhancing access to finance, and improving financial inclusion for SMEs. Additionally, Shofawati (2019) conducted a study in Indonesia and found that digital financial services play a crucial role in enhancing the financial inclusion of SMEs. The study underscores the importance of digital finance in increasing access to finance, reducing transaction costs, and promoting financial inclusion for SMEs. Collectively, these studies provide compelling evidence to support the argument that digital finance plays a crucial role in promoting financial inclusion for SMEs.

Linear regression analysis

To assess the extent of influence between the two constructs, a linear regression was carried out and the findings are presented in Table 5.

Table 5 Linear regression

Variables in the equation	B	Beta	T	p-value	R ²	F	df	pvalue
Constant	7.495		7.520	<.001	.375	177.945	1; 297	<.001
SMEs Financial Inclusion	.791	.612	13.340	<.001				

a) DV – SMEs Financial Inclusion

b) Predictor – Digital finance

The findings from the regression analysis presented in Table 5, reveal that SMEs' financial inclusion can account for 37.5% of the variation in digital finance, as indicated by the R² value of 0.375. This suggests a significant linear relationship between the two variables, where an increase in digital finance is associated with an increase in

SMEs financial inclusion. The F-statistic (1.297) was found to be 177.945, and the p-value was less than 0.001, indicating that the independent variable (digital finance) is a significant predictor of the dependent variable (SMEs financial inclusion). Specifically, the coefficient for the independent variable was estimated to be $B = 612$, with a p-value of less than 0.001, which provides evidence to support the notion that digital finance can help increase financial inclusion for SMEs in South Africa. These findings suggest that digital financial services play a crucial role in promoting financial innovation, enhancing access to finance, reducing transaction costs, improving financial literacy, and bridging the financing gap for SMEs. The use of digital finance has been found to significantly influence the financial inclusion of SMEs, thereby facilitating their growth and development. As such, policymakers and stakeholders in the financial sector should promote and invest in the adoption of digital finance to enhance the financial inclusion of SMEs and promote sustainable economic development.

CONCLUSION AND RECOMMENDATIONS

Based on the summary of findings, the regression analysis revealed that SMEs' financial inclusion can account for 37.5% of the variation in digital finance, as indicated by the R^2 value of 0.375. This suggested a significant linear relationship between the two variables, where an increase in digital finance is associated with an increase in SMEs' financial inclusion. While Pearson's correlation analysis showed a strong and significant positive relationship ($r = 0.650$, $P < 0.001$) between digital finance and SMEs' financial inclusion. This leads us to believe that if the use of digital finance becomes more widespread, SMEs in South Africa will have a greater chance of being financially involved. In conclusion, this study highlights the crucial role of digital finance in enhancing financial inclusion for SMEs in South Africa. Despite the challenges facing the adoption of digital finance among SMEs, including limited digital infrastructure, low levels of financial literacy, and regulatory barriers, digital finance holds tremendous potential in promoting financial inclusion, improving access to finance, and reducing transaction costs for SMEs. Based on the findings of this study, the following recommendations are provided to promote the adoption of digital finance and enhance financial inclusion for SMEs in South Africa:

- Policymakers should invest in digital infrastructure, particularly in rural areas where digital connectivity is limited.
- Financial literacy programs should be implemented to improve the understanding and knowledge of SME owners regarding digital finance.
- Regulatory barriers should be addressed to facilitate the adoption of digital finance, particularly for informal SMEs.
- Collaboration among stakeholders, such as financial institutions, technology companies, and government agencies should be promoted to create a supportive ecosystem for digital finance adoption among SMEs.
- Transaction costs associated with digital finance services should be reduced to make them more affordable and accessible to SMEs.
- Digital finance services should be designed to meet the unique needs of SMEs, such as flexible repayment schedules and smaller loan amounts.
- Digital finance services should be designed to increase access to credit for SMEs, particularly those that have been excluded from traditional financial services.
- Efforts should be made to expand the reach of digital finance services to rural areas, where SMEs are often excluded from financial services.

The study recommends further research to explore the potential of digital finance in enhancing financial inclusion for SMEs in other regions of South Africa and other developing countries. By implementing these recommendations, policymakers and stakeholders can promote financial inclusion and foster the growth of SMEs through digital finance in South Africa.

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Fraud mitigation practices and profitability of insurance companies in South Africa

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ABSTRACT

The objective of this study was to evaluate how measures taken to prevent fraud impact the profitability of insurance companies operating in South Africa. The study adopted a descriptive research approach and surveyed a sample of 70 licensed insurance companies in the country. Primary sources of data were obtained by engaging claims managers in each of the firms, and descriptive and inferential statistics were used to analyse the data. The results of the study revealed that fraud mitigation measures significantly affect the profitability of insurance companies in South Africa. The implementation of fraud prevention, detection, and response measures had a positive impact on the profitability of these firms. Based on the findings, the study recommends that the Insurance Regulatory Authority establish regulations that mandate all insurance providers to collect and report statistics on fraud. Insurance firms should provide their employees with comprehensive training on fraud management and implement strict penalties and disciplinary measures for employees involved in fraudulent activities, as they can undermine the effectiveness of the fraud mitigation process.

Keywords: fraud, profitability, insurance companies, South Africa, fraud mitigation measures

JEL codes: G22, K42, L25

BACKGROUND

The insurance industry in South Africa plays a vital role in the country's economy, providing individuals and businesses with financial protection against unforeseen events and risks (Msomi & Nzama, 2023). However, the industry faces several challenges, including the issue of insurance fraud (Nizamuddin & Abugabah, 2021). Insurance fraud is a growing concern for insurance companies in South Africa, leading to financial losses and affecting the industry's overall performance⁷¹. The South African insurance industry is grappling with a surge in fraudulent claims, as reported by the Association for Savings and Investment South Africa (ASISA), revealing over 4,200 detected fraudulent and dishonest claims in 2021, amounting to R787.6 million⁷². The Insurance Crime Bureau estimates that up to 20% of the R35 billion paid out on short-term insurance claims in 2019 may have been fraudulent⁷³. Intentionally misleading an insurance company for financial gain constitutes insurance fraud (Al Rawashdeh & Al Singlawi, 2016), and it can occur at any stage of the claims process, involving applicants, policyholders, third-party claimants, as well as professionals providing services to claimants. In-house employees and brokers are also potential perpetrators. Common fraudulent activities include "padding" or inflating claims, submitting false information on insurance applications, presenting fabricated damages and injury claims, and staging incidents.

In recent years, insurance fraud has become increasingly sophisticated, with fraudsters employing advanced technology and tactics to defraud insurance companies (Abiodun, 2020). These fraudulent activities can include staged accidents, false claims, and fake policies, among others (Majhi, Bhattacharya, Pradhan & Biswal, 2019). Insurance fraud has evolved from individual fraudulent claims to collusion among market players, aiming to deceive and gain undeserved profits (Okumu, 2017). This has led to significant cash flow disruptions in companies, with unwarranted claims being paid, posing liquidity risks and threatening the survival of firms (Insurance Regulatory Authority, 2018). The impact of insurance fraud is significant, resulting in substantial financial losses for insurance companies, increased premiums for customers, and a decline in the industry's reputation (Nizamuddin & Abugabah, 2021). To mitigate the impact of insurance fraud, insurance companies in South Africa have

⁷¹ <https://www.fanews.co.za/article/fraud-crime/5/general/1094/insurance-fraud-on-the-uptick-but-financial-sector-educational-institutions-and-brave-individuals-are-fighting-back/36786>.

⁷² <https://www.asisa.org.za/media-releases/life-insurers-uncover-record-numbers-of-fraudulent-and-dishonest-claims-in-2021/>

⁷³ <https://www.fanews.co.za/article/fraud-crime/5/general/1094/insurance-fraud-on-the-uptick-but-financial-sector-educational-institutions-and-brave-individuals-are-fighting-back/36786#:~:text=The%20Insurance%20Crime%20Bureau%20estimates,to%20replace%20old%20household%20appliances.>

implemented various fraud mitigation practices. These practices include fraud prevention, detection, and response. However, the effectiveness of these practices in mitigating fraud and safeguarding profitability varies (Dhieb, Ghazzai, Besbes & Massoud, 2020).

Fraud imposes substantial settlement costs on insurers, straining resources and eroding client trust, especially when claims are not fulfilled promptly as per policy terms. This strained relationship results in reduced revenue as fewer clients choose to underwrite with the insurer, ultimately impacting the financial performance of the insurance firm. Despite the implementation of fraud mitigation practices, studies indicate a rise in both the sophistication and volume of fraudulent claims over the years, particularly in electronic fraud. Consequently, insurance companies must prioritise effective risk mitigation practices to combat this issue; otherwise, the negative consequences on the firm's performance are likely to persist.

Previous research by Grima and Bezzina (2018) explored risk management techniques in European financial institutions, but the contextual differences limit the generalisation of results to other regions. Chifwelu (2020) examined how risk management affected the profitability of insurance firms in Zambia, introducing contextual gaps for extrapolating findings to the South African context. Despite various studies on risk management and financial performance, there is limited evidence regarding the impact of fraud mitigation practices on the financial performance of insurance firms in South Africa. Understanding this relationship is critical for insurance companies in South Africa to protect their profitability and reputation from the detrimental effects of insurance fraud. Additionally, insights gained from this examination can assist regulatory authorities in developing more effective regulatory frameworks to address the issue of insurance fraud in the country.

LITERATURE REVIEW

Theoretical Framework

The inception of the Fraud Triangle Theory traces back to the work of criminologist Cressey in 1953 (Homer, 2020). Cressey posited that behind every fraudulent act lies a motivating factor. His research, involving interviews with 250 criminals, led him to categorise the reasons for committing fraud into pressure, opportunity, and rationalisation. According to Cressey, at least one of these three factors must be

present for an individual to engage in fraud. Pressure can manifest as internal struggles or external factors such as debt, drug addiction, or the pursuit of personal goals. Additionally, some individuals resort to fraud when presented with an opportunity that allows them to go undetected or face minimal consequences if caught. Rationalisation plays a role as individuals justify their actions, often citing insufficient compensation for their efforts or feeling undervalued by the organisation.

Despite widespread acceptance in the accounting and auditing field, the Fraud Triangle Theory has faced criticism. Critics argue that the theory lacks rigorous scientific testing and may not be universally applicable across diverse societies. Another critique is the omission of a focus on the personality traits of offenders, potentially biasing results, as the theory primarily tested known criminals. Detractors also contend that the theory underplays the crucial role of rationalisation in the decision to commit fraud, emphasising its significance in understanding the motives behind fraudulent activities.

Nevertheless, the theory remains valuable in understanding the motivations for fraud. Organisations seeking to mitigate fraud can address these motivations by ensuring fair remuneration for employees, establishing robust internal control mechanisms to prevent opportunistic fraud, and implementing measures to address personal challenges faced by employees. However, implementing such fraud mitigation practices comes with significant costs, and businesses must strike a balance to prevent fraud without escalating operational expenses, thereby safeguarding the profitability of the firm.

Empirical literature review and hypotheses development

Fraud mitigation practices and profitability

Preventive measures in fraud mitigation aim to reduce instances of fraud and misconduct at their core. These encompass the establishment of robust internal controls, the development of ethical frameworks and principles, due diligence, employee communication and training, and procedural implementation. Saeed, Suayyid, Al-Ghamdi, Al-Muhaisen and Almuhaideb (2023) assert that structured risk assessment is fundamental for preventing and detecting fraud, addressing genuine risks based on the business's mission, product line, market, complexity, size, and susceptibility to network attacks. The assessment evaluates the type, likelihood, and

potential cost of threats in a typical expected value framework, enabling the modification of program efforts to mitigate costs effectively.

Understanding how employees, particularly senior management, interact with organisational resources is crucial for assessing fraud threats, considering their incentives and opportunities, as highlighted in the fraud triangle. A meticulous risk assessment process is necessary, explicitly outlining how specific roles interact with controls, rules, and procedures, given that risks may originate internally or externally, especially in highly networked and data-dependent processes (Khan, Yin, Mustafa & Anning, 2021). Kulmie (2023) advocates for fraud prevention over detection, emphasising the use of the same policies and controls for both purposes, such as duty segregation. A culture of fraud awareness, comprehension of norms and practices, a secure environment for informants, and continuous communication from top management about the importance of fraud prevention are integral components of a prevention strategy.

Tasiou's research in 2019 identifies unique financial management challenges faced by insurance businesses, proposing controls like internal controls, service adequacy, prudential management standards, external oversight, and transparent financial reporting methods to address these issues. On the other hand, fraud detection involves activities that swiftly identify fraud before significant losses occur. It utilises statistical monitoring applications to uncover fraudulent behaviour and assess changes in employees' behaviour indicative of potential fraud (Bishop, 2022). Detection helps prevent severe financial losses by identifying ongoing fraud or fraud trials, making it crucial for companies to maintain profitability.

Responsive fraud management focuses on implementing corrective measures and repairing damage caused by fraud. Line management evaluates the internal control environment and implements necessary changes, aiming to prevent future instances of fraud (Li & McMurray, 2022). Internal audit services, as suggested by Ali (2022), play a key role in providing unbiased auditing and consulting to ensure effective controls, ethical practices, and operational improvements. Additionally, internal audit services contribute to fraud management by offering advice on fraud risk and implementing monitoring and preventive strategies (Kamara, 2023). A well-executed internal audit strategy is indispensable in this regard.

Fraud prevention and profitability in insurance firms

Fraud prevention is therefore a crucial aspect of risk management for insurance firms. Insurance companies use various fraud prevention techniques, such as data analytics, artificial intelligence, and machine learning algorithms, to detect and prevent fraudulent activities (Goswami, Asokan & Arunasalam, 2022). These techniques enable insurers to identify patterns and anomalies in data, which can help them to detect fraudulent claims and prevent losses (Sadgali, Sael & Benabbou, 2019). Research has shown that fraud prevention is positively related to profitability in insurance firms. A study by Dionne (2000) found that fraud prevention has a significant positive effect on profitability, return on assets, and return on equity in insurance firms. Similarly, a study by Chen and Wu (2022) found that fraud prevention has a significant positive effect on profitability in Chinese insurance firms. However, the effectiveness of fraud prevention techniques can vary depending on the type and complexity of the fraud. For instance, some frauds, such as identity theft, are more challenging to detect and prevent than others. Therefore, insurers need to continuously update and improve their fraud prevention techniques to stay ahead of fraudulent activities. Research has shown that profitability in insurance firms is positively related to fraud prevention. A study by Agwor (2017) found that companies that invest in fraud prevention tend to have higher profitability and better profitability than those that do not. It also found that fraud prevention has a significant positive effect on profitability. In conclusion, fraud prevention is a crucial aspect of risk management for insurance firms, and it has a significant positive effect on profitability. However, the effectiveness of fraud prevention techniques can vary depending on the type and complexity of the fraud, and insurers need to continuously update and improve their fraud prevention techniques to stay ahead of fraudulent activities.

Fraud detection and profitability in insurance firms

Due to the fact that fraudulent actions may result in considerable financial losses as well as harm to an insurance company's reputation, fraud detection is a crucial component of risk management for insurance companies. To uncover fraudulent activity, insurance firms use a variety of fraud detection strategies, including data analytics, artificial intelligence, and machine learning algorithms (Baesens, Höppner and Verdonck, 2021). With these methods, insurers can examine enormous volumes

of data and spot trends as well as anomalies that may point to fraudulent actions. There is a significant correlation between the identification of fraud and the financial success of insurance companies, according to research. According to the findings of research that was conducted by Sadgali, Sael and Benabbou (2019), insurance businesses that invest in fraud detection have a greater tendency to have higher profitability and better profitability than those that do not. In a similar vein, Chen and Wu (2022) discovered that the identification of fraud had a considerable and favourable influence on the profitability of Chinese insurance companies.

Unfortunately, the success of various strategies for detecting fraud is highly variable and dependent on the kind and degree of fraud being committed. To provide one example, detecting some types of fraud, such as identity theft, is more difficult than detecting other types. Hence, in order to keep one step ahead of fraudulent actions, insurance companies need to continually update and enhance the methods that they use to identify fraud. According to the findings of several studies, the identification of fraudulent activity in insurance companies is favourably correlated with financial success. According to the findings of research that was conducted by Amara, Amar and Jarboui (2013), insurance businesses that invest in fraud detection have a greater tendency to have higher profitability and better profitability than those that do not. Furthermore, it was discovered that the identification of fraud had a considerable and favourable influence on the profitability of insurance companies. In conclusion, the identification of fraudulent activity is a vital component of risk management for insurance companies, and it has a large positively impacting effect on profitability. Nevertheless, the efficiency of fraud detection strategies might vary depending on the nature and complexity of the fraud. In order to keep one step ahead of fraudulent actions, insurers need to continually update and enhance their fraud detection systems.

Fraud response and profitability in insurance firms

Fraud response is an integral part of risk management for insurance firms, as it helps insurers to mitigate losses and prevent future fraudulent activities. Insurance companies use various fraud response techniques, such as investigations, recovery efforts, and legal actions, to respond to fraudulent activities (Tennyson & Salsas-Forn, 2002). These techniques enable insurers to mitigate losses and recover funds that

may have been fraudulently obtained. Research has shown that fraud response is positively related to profitability in insurance firms. A study by Chepkoech and Rotich (2017) found that insurance companies that invest in fraud response tend to have higher profitability and better profitability than those that do not. Similarly, a study by Ajemunigbohun, Isimoya and Ipigansi (2019) found that fraud response has a significant positive effect on profitability in Nigerian insurance firms. However, the effectiveness of fraud response techniques can vary depending on the type and complexity of the fraud. For instance, some frauds, such as identity theft, may be difficult to recover funds from. Therefore, insurers need to continuously update and improve their fraud response techniques to mitigate losses and prevent future fraudulent activities.

Research has shown that profitability in insurance firms is positively related to fraud response. A study by Kristiana and Hatta (2022) found that insurance companies that invest in fraud response tend to have higher profitability and better profitability than those that do not. In conclusion, fraud response is an essential aspect of risk management for insurance firms, and it has a significant positive effect on profitability. However, the effectiveness of fraud response techniques can vary depending on the type and complexity of the fraud, and insurers need to continuously update and improve their fraud response techniques to mitigate losses and prevent future fraudulent activities.

Empirical review

Several studies have investigated the relationship between fraud mitigation practices and firm performance in various industries. The literature suggests that fraud can have a significant negative impact on the profitability and sustainability of firms. Therefore, the implementation of effective fraud mitigation practices is critical to safeguarding firm performance. In the context of the insurance industry, research has shown that insurance fraud can lead to increased costs, reduced profitability, and reputational damage for insurance companies. For instance, a study by Dionne (2000) found that fraudulent claims in the insurance industry resulted in a decrease in insurers' profits. Therefore, insurance companies have implemented various fraud mitigation practices to address this issue, including the use of advanced technology and analytics to detect fraudulent activities and the establishment of dedicated fraud investigation units.

However, the effectiveness of these fraud mitigation practices in improving firm performance varies. A study by Abdallah, Maarof and Zainal (2016) examined the relationship between fraud prevention and detection practices and firm performance in the insurance industry. The study found that firms that implemented fraud prevention and detection practices had a higher level of profitability than those that did not. Similarly, a study by Tunji, Adewale and John (2016) found that firms that implemented internal controls to mitigate fraud had a positive impact on their profitability.

The study by Akomea-Frimpong, Andoh and Ofosu-Hene (2016) aimed to identify the causes and effects of insurance fraud in Ghana and to evaluate the effectiveness of fraud deterrence measures implemented by insurance companies in the country. The study used both qualitative and quantitative research methods, including surveys and interviews with insurance industry professionals and consumers. The findings of the study indicate that the most common causes of insurance fraud in Ghana were financial difficulties, greed, and lack of trust in insurance companies. The effects of insurance fraud included increased insurance premiums, reduced profitability of insurance companies, and decreased consumer confidence in the insurance industry. The study also found that insurance companies in Ghana had implemented various fraud deterrence measures, including fraud awareness campaigns, fraud investigation units, and the use of technology to detect fraudulent activities.

Insurance companies in Kenya were the focus of research by Nyongesa (2017), who looked at their financial management practices and profitability. Effective procedures in claims management were shown to have a positive and statistically substantial effect on the profitability of South African insurers. It has been demonstrated that corporate characteristics contribute to the connection between insurance firms in South Africa's claims management techniques and their profitability. The current study concentrates on financial management methods, whereas the previous research focused on fraud risk prevention. This creates a conceptual chasm.

Gachuru (2020) investigated the significance of internal reconciliation processes in preventing fraud in publicly traded insurance companies in Nairobi City County. A total of 147 participants from the mentioned insurance companies were included in the analysis. The information was collected using a structured survey. The research found that there was a positive, substantial, and statistically significant relationship between

internal reconciliation strategies and fraud prevention. This research aimed to address a void in the literature by comparing fraud mitigation measures to profitability, instead focusing on how internal reconciliation procedures improved fraud prevention in the insurance industry.

The study by Fakunmoju and Olukayode (2021) aimed to investigate the impact of fraud management practices on the non-profitability of selected deposit money banks in Lagos State, Nigeria. The study used a survey questionnaire to collect data from 200 employees of six selected deposit money banks in Lagos State. The study found that fraud management practices had a significant positive impact on the non-profitability of deposit money banks in Lagos State. Specifically, the study found that fraud prevention practices, fraud detection practices, and fraud response practices had positive effects on the non-profitability of the banks. Furthermore, the study found that the level of adoption of fraud management practices differed among the selected deposit money banks.

The study by Morley, Ball, and Ormerod (2006) examined the detection of insurance fraud by insurance investigators in the UK. The study aimed to investigate how the detection of insurance fraud succeeds and fails, and the factors that influence the success or failure of fraud detection. The study used a mixed-methods approach, with data collected from interviews with insurance investigators, observations of their work, and a review of case files. The study found that successful detection of insurance fraud relied heavily on the investigator's intuition and experience, as well as the availability and quality of information. In addition, the study identified several factors that hindered the successful detection of insurance fraud, including lack of resources, lack of cooperation from witnesses, and lack of legal enforcement.

Conceptual model

Figure 1 portrays the connection between fraud mitigation practices (independent variables) and profitability of insurance companies (dependent variable).

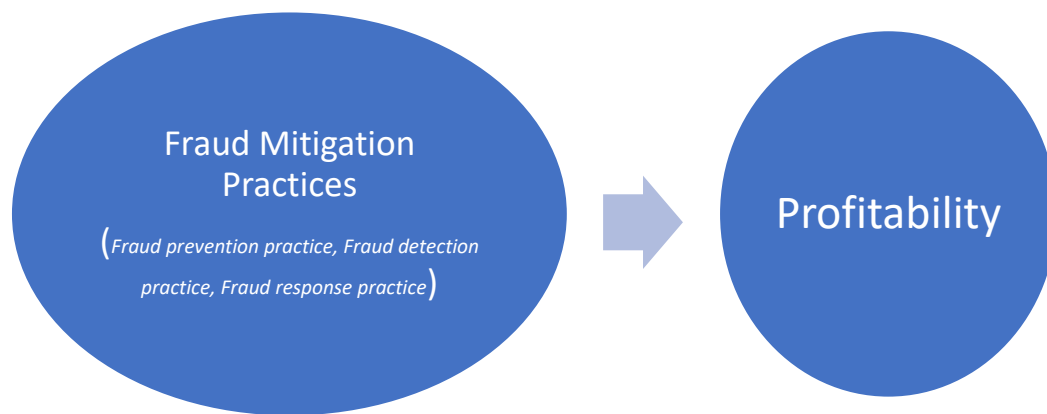


Figure 1. Conceptual framework to establish the link between Fraud Mitigation Practices and Profitability of Insurance Companies.

Source: Authors' Design (2023)

RESEARCH METHODOLOGY

According to the Financial Sector Conduct Authority (FSCA), the regulating agency for insurance companies in South Africa, there are around 74 registered insurance companies functioning in the country as of the year 2021⁷⁴. The research was conducted with all 70 insurance companies that have licenses in South Africa. The study included collecting data from each of South Africa's 70 formally recognised insurance companies. The research on the correlation between fraud mitigation practices and the profitability of insurance companies relied on primary sources for data acquisition. Employing key data collection methods enabled the gathering of information concerning fraud mitigation practices. Specifically, a questionnaire was utilised to collect data on various methods employed to prevent fraud. Participants in the research were claims managers from each of the participating insurance companies. The researcher sent the questionnaire to the people in charge of claims at the insurance companies, and the data was gathered by sending out emails to all the potential participants who were listed on the insurance companies' websites and in the FSCA databases. Using the software QuestionPro, emails containing these inquiries were sent to responders who had previously provided their contact information in the database. A link to the online questionnaire that could be filled out by respondents was included in each of the emails that were sent out. It was required

⁷⁴

https://www.fsca.co.za/MagicScripts/mgrqispi.dll?APPNAME=Web&PRGNAME=List_Of_Registered_Insurers.

of the individuals who participated in the survey that they complete it by clicking on the URL that was provided. The researcher drafted letters of reminder that were to be sent if an unacceptable answer was provided or after a week had gone after the transmission of the questionnaire with no response being obtained. These letters were to be sent to the individuals who had not responded. The claims managers were chosen because they are the ones who are in charge of assessing and anticipating risks, and as a result, they have the necessary information about the prevention of fraud. The surveys featured closed-ended questions with Likert scale style questions.

The completed questionnaires were sorted, edited, and coded for easy inputting in the computer system for analysis. SPSS computer package was used in the analysis. Descriptive statistics were used for the analysis and presentation of data. This included standard deviations, proportions, means, and frequencies. The results were presented in tables and interpreted based on the study objectives. In addition to descriptive statistics, inferential statistics were employed to evaluate the relationship between the variables. Multiple regression analysis was used to assess the connection, as shown in the illustrations below.

$$Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \varepsilon_i$$

Whereas

Y= profitability- was determined by return on Assets.

β_0 = Constant

$\beta_1, \beta_2,$ and β_3 are coefficients of $X_1, X_2,$ and X_3 respectively.

X_1 symbolises the fraud prevention practice that was found using a 4-point Likert scale from the questionnaire.

X_2 symbolises the fraud detection practice that was found using a 4-point Likert scale from the questionnaire.

X_3 symbolises the fraud response practice that was found using a 4-point Likert scale from the questionnaire.

ε_i is the error term.

RESULTS AND DISCUSSION OF DATA ANALYSIS

Descriptive analysis

Table 1: Years of existence

Table 1 reflects the findings of the research aimed at determining the duration of the organisation's operation.

	Frequency	Percentage
Below 5 years	3	4.3
6-10 years	9	12.9
11-20 years	19	27.1
Over 20 years	39	55.7
Total	70	100

Table 1 shows the frequency and percentage distribution of the years of existence of the organisation. The results indicate that 55.7% of the organisations have been in operation for over 20 years, while 27.1% have been in operation for 11-20 years. Only 4.3% of the organisations have been in operation for less than 5 years.

Table 2: Firm exposure to fraud

The purpose of the research was to determine how exposed fraud is at the company. Table 2 displays the results.

	Frequency	Percentage
Small extent	27	38.6
Moderate extent	30	42.9
Large extent	13	18.6
Total	70	100

The Table 2 above presents data on the extent to which respondents believe that insurance fraud is prevalent in the industry. The data shows that out of the 70 respondents, 38.6% believe that insurance fraud is prevalent to a small extent, 42.9% believe it is prevalent to a moderate extent, and 18.6% believe it is prevalent to a large extent.

Table 3: Fraud prevention in Insurance Companies

The analysis of the survey response on Fraud prevention in Insurance Companies is presented below. The responses were presented in frequency and percentage from the scale of strongly disagree (SD), disagree (D), agree (A) and strongly agree (SA).

Fraud prevention in Insurance Companies	Strongly disagree	Disagree	Agree	Strongly agree
The company have play an important role in preventing fraud in the insurance industry	3 (4,29%)	7 (10%)	39 (55,71%)	21 (30%)
Fraud prevention is a critical aspect of insurance company operations	5 (7,14%)	6 (8,57%)	19 (27,14%)	40 (57,14%)
The company have adequate measures in place to prevent fraudulent activities.	3 (4,29%)	11 (15,71%)	23 (32,86%)	33 (47,14%)
The company routinely undertakes fraud risk assessments.	11 (15,71%)	12 (17,14%)	23 (32,86%)	24 (34,29%)
There is an effective fraud detection and reporting systems.	8 (11,43%)	9 (12,86%)	27 (38,57%)	26 (37,14%)
There is sufficient resources to investigate and prosecute cases of fraud	6 (8,57%)	10 (14,29%)	26 (37,14%)	28 (40%)
The company have policies in place to sanction employees involved in fraudulent activities.	7 (10%)	10 (14,29%)	18 (25,71%)	35 (50%)
The company have adequate measures in place to ensure the privacy and security of customer information.	9 (12,86%)	13 (18,57%)	21 (30%)	27 (38,57%)
The company should collaborate with other stakeholders to improve their fraud prevention measures	6 (8,57%)	5 (7,14%)	17 (24,29%)	42 (60%)
The company provide adequate training to their employees on fraud prevention measures	4 (5,71%)	11 (15,71%)	34 (48,57%)	21 (30%)
The company have a system to regularly assess the effectiveness of their employee training programs on fraud prevention measures	13 (18,57%)	10 (14,29%)	33 (47,14%)	14 (20%)

Fraud prevention is a critical aspect of insurance company operations. According to the survey, 55.71% of respondents agreed with this statement. With the increasing complexity of insurance products and the rise of digitalisation, the insurance industry is becoming more vulnerable to fraudulent activities. Fraudulent claims and other fraudulent acts can have a significant impact on the insurance industry, leading to loss of revenue, reputation damage, and increased premiums for policyholders. Therefore,

it is crucial for insurance companies to have adequate measures in place to prevent fraudulent activities. One of the key measures insurance companies should have in place is an effective fraud detection and reporting system. As per the survey, 38.57% of respondents agreed with this statement. An effective fraud detection and reporting system can enable insurance companies to identify and report fraudulent activities promptly. This system can include the use of data analytics tools to detect unusual patterns and behaviours, as well as internal and external reporting mechanisms. Moreover, insurance companies should conduct regular fraud risk assessments to identify potential areas of vulnerability. The survey showed that 32.86% of respondents agreed with this statement. Fraud risk assessments can help insurance companies to proactively identify potential areas of vulnerability and develop measures to mitigate those risks. This can include the development of fraud prevention policies, procedures, and controls.

Another critical aspect of fraud prevention in insurance companies is employee training. As per the survey, 48.57% of respondents agreed that the company provides adequate training to their employees on fraud prevention measures. Employees are the first line of defence against fraudulent activities, and therefore, they should be trained on how to identify and report suspicious activities. Additionally, insurance companies should have a system in place to regularly assess the effectiveness of their employee training programs on fraud prevention measures. Insurance companies should also have sufficient resources to investigate and prosecute cases of fraud. As per the survey, 37.14% of respondents agreed with this statement. Investigations into fraudulent activities can be complex and time-consuming and require specialised skills and resources. Insurance companies should, therefore, be adequately resourced to investigate and prosecute cases of fraud. Lastly, insurance companies should collaborate with other stakeholders to improve their fraud prevention measures. As per the survey, 24.29% of respondents agreed with this statement. Collaboration with other stakeholders such as law enforcement agencies, regulators, and industry associations can help insurance companies to share information and best practices on fraud prevention. In conclusion, fraud prevention is a critical aspect of insurance company operations. Insurance companies should have effective fraud prevention policies, procedures, and controls in place to prevent fraudulent activities. They should also have adequate resources to investigate and prosecute cases of fraud and

collaborate with other stakeholders to improve their fraud prevention measures. By doing so, insurance companies can protect their reputation, revenue, and the interests of their policyholders.

Table 4: Fraud detection in Insurance Companies

The analysis of the survey response on Fraud detection in Insurance Companies is presented below.

Fraud detection in Insurance Companies	Strongly disagree	Disagree	Agree	Strongly agree
The company have a responsibility to detect and prevent fraudulent activities	5 (7,14%)	10 (14,29%)	33 (47,14%)	22 (31,43%)
Fraud detection is a critical aspect of insurance company operations	12 (17,14%)	7 (10%)	35 (50%)	16 (22,86%)
The company have measures in place to prevent and detect insider fraud by employees.	9 (12,86%)	14 (20%)	21 (30%)	26 (37,14%)
The company executes the necessary reconciliations for the authentication of financial reporting.	7 (10%)	13 (18,57%)	33 (47,14%)	17 (24,29%)
Audits conducted both internally and outside identify any instances of fraud.	3 (4,29%)	11 (15,71%)	19 (27,14%)	37 (52,86%)
The company use data analytics and other advanced technologies to detect potentially fraudulent activities.	8 (11,43%)	5 (7,14%)	22 (31,43%)	35 (50%)
The company use data analytics and other advanced technologies to detect potentially fraudulent activities	9 (12,86%)	13 (18,57%)	21 (30%)	27 (38,57%)
The company increase their efforts to raise employee awareness about fraud detection measures.	6 (8,57%)	5 (7,14%)	17 (24,29%)	42 (60%)

The table above presents the results of a survey on fraud detection in insurance companies. The first statement suggests that the majority of respondents (78.57%) agree or strongly agree that insurance companies have a responsibility to detect and prevent fraudulent activities. The second statement indicates that almost three-quarters of the respondents (72.86%) agree or strongly agree that fraud detection is a critical aspect of insurance company operations. Regarding measures in place to prevent and detect insider fraud by employees, 67.14% of respondents agree or strongly agree that the company has such measures. Furthermore, almost three-quarters of the respondents (71.43%) agree or strongly agree that the company executes necessary reconciliations for the authentication of financial reporting. The

results show that audits conducted both internally and outside identify any instances of fraud according to the majority of respondents (80%). Additionally, the use of data analytics and other advanced technologies to detect potentially fraudulent activities is viewed positively by most of the respondents (81.43%). The last two statements in the table suggest that a majority of the respondents (68.57% and 84.29% respectively) agree or strongly agree that the company increases their efforts to raise employee awareness about fraud detection measures.

Table 5: Fraud response on Insurance Companies

The analysis of the survey response on Fraud response on Insurance Companies is presented below.

Fraud response on Insurance Companies	Strongly disagree	Disagree	Agree	Strongly
The company have a responsibility to promptly respond to suspected fraudulent activities	4 (5,71%)	11 (15,71%)	34 (48,57%)	21 (30%)
A quick and effective fraud response is critical to the success of an insurance company	13 (18,57%)	10 (14,29%)	33 (47,14%)	14 (20%)
The company have effective processes in place to investigate suspected fraudulent activities	3 (4,29%)	7 (10%)	29 (41,43%)	31 (44,29%)
The company is promptly to report suspected fraudulent activities to the relevant authorities.	5 (7,14%)	6 (8,57%)	19 (27,14%)	40 (57,14%)
The company provide timely communication to customers regarding suspected fraudulent activities affecting their policies.	8 (15,71%)	9 (12,86%)	27 (38,57%)	26 (37,14%)
The company have measures in place to recover losses due to fraudulent activities.	6 (8,57%)	10 (14,29%)	28 (40%)	26 (37,14%)
The company provide support to customers affected by fraudulent activities, including counseling and guidance on how to avoid future occurrences.	10 (14,29%)	7 (10%)	35 (50%)	18 (25,71%)
The disciplinary committee hears cases of employees accused of or connected to fraud.	5 (7,14%)	6 (8,57%)	40 (57,14%)	19 (27,14%)
When deficiencies are found in how the company works, work instructions are revised to fix them.	7 (10%)	3 (4,29%)	29 (41,43%)	31 (44,29%)

The table shows the responses of participants on the fraud response in insurance companies. The first statement indicates that 48.57% of the participants agreed that insurance companies have a responsibility to promptly respond to suspected fraudulent activities, while 30% strongly agreed. The second statement shows that 47.14% of participants agreed that a quick and effective fraud response is critical to the success of an insurance company, while 20% strongly agreed. The third statement demonstrates that 41.43% of participants agreed that insurance companies have effective processes in place to investigate suspected fraudulent activities, while

44.29% strongly agreed. The fourth statement shows that 27.14% of participants agreed that insurance companies promptly report suspected fraudulent activities to the relevant authorities, while 57.14% strongly agreed. The fifth statement indicates that 38.57% of participants agreed that insurance companies provide timely communication to customers regarding suspected fraudulent activities affecting their policies, while 37.14% strongly agreed. The sixth statement shows that 40% of participants agreed that insurance companies have measures in place to recover losses due to fraudulent activities, while 37.14% strongly agreed. The seventh statement demonstrates that 50% of participants agreed that insurance companies provide support to customers affected by fraudulent activities, including counselling and guidance on how to avoid future occurrences, while 25.71% strongly agreed. The eighth statement shows that 57.14% of participants agreed that the disciplinary committee hears cases of employees accused of or connected to fraud, while 27.14% strongly agreed. Lastly, the ninth statement indicates that 41.43% of participants agreed that work instructions are revised to fix deficiencies found in how the company works, while 44.29% strongly agreed. Overall, the responses suggest that participants generally agree on the importance of fraud response in insurance companies, with a significant number of them strongly agreeing on some of the statements.

Table 6: Fraud response on profitability of insurance companies

The analysis of the survey response on the degree to which fraud mitigation practices have improved profitability is presented below.

Profitability	Strongly disagree	Disagree	Agree	Strongly agree
Improved return on asset	3 (4,29%)	6 (8,57%)	19 (27,14%)	42 (60%)
Boosts Profits and Expands Market Share	5 (7,14%)	8 (11,43%)	21 (30%)	36 (51,43%)
Reduced expenditures	2 (2,86%)	7 (10%)	20 (28,57%)	41 (58,57%)
Enhanced the rate of return on investment	5 (7,14%)	6 (8,57%)	16 (22,86%)	43 (61,43%)
Enhanced the profit-to-loss ratio	6 (8,57%)	7 (10%)	29 (41,43%)	28 (40%)

Improved asset profitability	4 (5,71%)	5 (7,14%)	18 (25,71%)	43 (61,43%)
Boosts Profits and Expands Market Share	1 (1,43%)	3 (4,29%)	20 (28,57%)	46 (65,71%)

This table above aims to assess the degree to which fraud mitigation practices have improved profitability. One of the ways fraud mitigation practices have been thought to improve profitability is by increasing asset profitability. According to the data presented in the table, 60% of respondents strongly agree that fraud mitigation practices have improved asset profitability. This result implies that most businesses have experienced a positive impact on their profitability by implementing fraud mitigation practices. This improvement can be attributed to the fact that fraud mitigation practices help identify and prevent fraudulent activities, which consequently reduces financial losses and improves asset profitability. Another way fraud mitigation practices have been thought to improve profitability is by boosting profits and expanding market share. The data presented in the table shows that 51.43% of respondents strongly agree that fraud mitigation practices have boosted profits and expanded market share. This result is significant because it highlights the importance of fraud mitigation practices in creating a competitive advantage for businesses. By reducing fraud risks, businesses can gain the trust of customers and investors, which ultimately leads to higher profits and increased market share.

To boosting profits, fraud mitigation practices have been thought to reduce expenditures. The data presented in the table shows that 58.57% of respondents strongly agree that fraud mitigation practices have reduced expenditures. This result is essential because it highlights the financial benefits of implementing fraud mitigation practices. By reducing expenditures, businesses can free up resources that can be allocated to other areas of the business, such as research and development or expansion. Furthermore, fraud mitigation practices have been thought to enhance the rate of return on investment. The data presented in the table shows that 61.43% of respondents strongly agree that fraud mitigation practices have enhanced the rate of return on investment. This result is significant because it indicates that businesses have experienced a positive impact on their bottom line by implementing fraud mitigation practices. By reducing fraud risks, businesses can improve the efficiency of

their operations, which ultimately leads to higher returns on investment. Lastly, fraud mitigation practices have been thought to enhance the profit-to-loss ratio. The data presented in the table shows that 40% of respondents strongly agree that fraud mitigation practices have enhanced the profit-to-loss ratio. This result is essential because it highlights the financial benefits of implementing fraud mitigation practices. By improving the profit-to-loss ratio, businesses can increase their profitability and reduce the risk of financial losses. In conclusion, the data presented in the table strongly suggests that fraud mitigation practices have had a positive impact on profitability. Businesses that implement fraud mitigation practices have experienced improved asset profitability, boosted profits and expanded market share, reduced expenditures, enhanced the rate of return on investment, and improved the profit-to-loss ratio. As such, it is essential for businesses to continue investing in fraud mitigation practices to improve their profitability and gain a competitive advantage in the market.

Regression Analysis

A multiple linear regression analysis was carried out in order to investigate the extent to which fraud mitigation practices are linked to financial success of insurance firms in South Africa.

Table 7: Model Summary

Model	R	R-Square	Adjusted Square	R-	Std. Error of the Estimate
1	.785a	.614	.604		.38940
a. Predictors: (Constant), fraud prevention, fraud detection, fraud response					

Table 7 shows that the R-squared value of the model summary is 0.614, indicating that 61.4% of the variation in the profitability of insurance businesses in South Africa can be attributed to fraud mitigation practices. However, there are other variables that were not accounted for in the research model, which account for the remaining 38.4% of the variance in the profitability of insurance businesses in South Africa.

Table 8: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1					30.036	.000b
	Regression	41.47		13.79		
	Residual	21.551	47	0.459		
	Total	62.941	50			

a. *Dependent Variable: Profitability*

b. *Predictors: (Constant), fraud prevention, fraud detection, fraud response*

According to the ANOVA table, the model used to assess the relationship between fraud mitigation practices and the profitability of insurance enterprises in South Africa was found to be significant, with an F-value of 30.036 and a p-value less than 0.05. This indicates that the model is appropriate for analysing the relationship between these variables.

Table 9: Coefficients

	Unstandardised Coefficients		Standardised Coefficients		
	B	Std. Error	Beta	t	Sig.
1 (Constant)	0.855	0.34		2.545	0.012
Fraud Prevention	0.409	0.115	0.453	3.533	0.001
Fraud Detection	0.237	0.083	0.208	2.941	0.001
Fraud Response	0.304	0.102	0.32	3.041	0.012

a. *Dependent Variable: Profitability*

The regression equation that clearly reflects the conclusions drawn from the study is as follows:

$$Y = 0.855 + 0.409X_1 + 0.237X_2 + 0.304X_3$$

The results of the regression analysis indicate that fraud prevention, fraud detection, and fraud response have a positive and significant impact on the profitability of insurance companies in South Africa. Specifically, the regression coefficients show that an increase in fraud prevention by one unit leads to a 0.409-unit improvement in profitability, an increase in fraud detection by one unit leads to a 0.237-unit improvement in profitability, and an increase in fraud response by one unit leads to a

0.304-unit improvement in profitability. These findings suggest that implementing effective measures to prevent, detect, and respond to fraud can significantly benefit the profitability of insurance firms in South Africa. The p-values for each coefficient were found to be less than 0.05, indicating that the results are statistically significant.

The study findings indicate that fraud prevention measures had a favourable and significant impact on the profitability of insurance companies operating in Kenya, which aligns with previous research by Ohando (2015) that established a correlation between preventive and detective fraud risk management and profitability. The companies conduct due diligence in their operations to prevent fraudulent activities, as corroborated by Rahman and Anwar (2014) who highlighted the importance of due diligence in fraud prevention. Moreover, the results revealed that fraud detection measures had a positive and statistically significant effect on the profitability of Kenyan insurance firms, consistent with Mwangi and Ndegwa (2020) study that found fraud detection to have a favourable impact on the performance of insurance companies in the country. The companies employ various tactics such as internal and external audits, surveillance and monitoring systems, reconciliations, and fraud profiling mechanisms to detect fraudulent activities. Ndichu (2019) found that fraud risk management practices resulted in an overall increase in the performance of insurance firms, also it is emphasised the importance of periodic system updates and an active fraud response strategy to respond to fraudulent activities. The study also found that suspected or linked employees faced disciplinary committees, and new controls were implemented, and existing ones were modified to curb fraudulent activities.

CONCLUSION AND RECOMMENDATIONS

The study's main finding is that fraud prevention measures significantly impact the profitability of insurance companies in South Africa. Specifically, prevention, detection, and response strategies all positively influence financial outcomes. To prevent fraud, insurance companies regularly conduct fraud risk assessments and comprehensive pre-employment screenings. In terms of detection, companies perform financial reconciliations and employ surveillance and monitoring systems, as well as fraud profiling mechanisms. When fraud is suspected, the companies have clear risk response strategies and disciplinary committees to handle employees linked to fraud. Furthermore, to minimise the risk of fraud, insurance companies implement new

controls and revise existing systems. Based on the findings of the study, the following recommendations are suggested to improve the fraud risk management practices and profitability of insurance companies:

- The Insurance Regulatory Authority should enact rules requiring all insurance companies to collect and report fraud data to the government so that it can better understand the scale of the problem. This might help inform the development of legislation for use in situations of fraud.
- Insurance companies should provide their employees with comprehensive training on fraud management. The training should include techniques for detecting and preventing fraud, as well as the consequences of engaging in fraudulent activities.
- Insurance companies should have strict penalties and disciplinary actions for any employee linked to fraud since such employees could be a major loophole in the fraud mitigation process. This will deter employees from engaging in fraudulent activities and will also send a strong message to others in the company.
- Due diligence should be conducted in the organisation's operations to prevent fraudulent activities. Insurance companies should implement comprehensive fraud prevention measures such as fraud profiling, internal controls, external oversight, and transparent financial reporting methods.
- Insurance companies should periodically update their systems to ensure they are equipped with the latest technology and practices in fraud management. This will ensure that the systems are effective in detecting and preventing fraudulent activities.

The present study's findings offer an opportunity for future research to investigate the effects of various factors on the fraud prevention methods and financial outcomes of insurance firms in South Africa. Such research could reveal best practices for minimising fraud and improving profitability in the insurance industry. Furthermore, conducting a longitudinal study could assess the durability of fraud prevention practices' effectiveness over time, evaluating whether their implementation has a lasting impact on South African insurance companies' profitability.

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A critical and in-depth analysis of entrepreneurship as the instrumental tool for addressing youth unemployment: A case of KwaZulu-Natal

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ABSTRACT

Youth unemployment is both a provincial and national issue, further it is also a matter of global concern. Generally, unemployment primarily affects the youth who have graduated in various academic fields from different institutions of higher learning. However, government at all levels have organised different summits but still there is not much change regarding the best approach of dealing with unemployment. Therefore, this study is aimed at critically analysing entrepreneurship as one of the tools that can be used to combat and deal with youth unemployment as a contemporary issue. The study is situated within the province of KwaZulu-Natal, considering that this province has the highest number of people who are unemployed and youths in particular. This study argues that entrepreneurship is the most effective weapon that can be used to reduce the alarming rate of unemployment for the youth of KwaZulu-Natal. A qualitative approach and purposive sampling were employed in this study with a bank of data that was gathered from secondary sources and literature. Data was analysed through thematic analysis. Results show that some youths have acquired skills but ironically those skills are not in demand, they lack entrepreneurial knowledge and youths show no interest in business related activities. While nepotism, bribery and centralised youth based-services are the factors that contribute to youth unemployment in this province. There is also a lack of mentorship and a shortage of industry in the province. Also the conflict between skills required by employers and supply of graduates by the institutions exacerbates unemployment. The study recommended that youths should be equipped with the necessary entrepreneurial

skills, training and education so that they will be able to start their own businesses and be job creators rather than expecting to be employed.

Keywords: youth unemployment, entrepreneurship, KwaZulu-Natal

INTRODUCTION

Entrepreneurship as a tool to reduce youth unemployment cannot be ignored. It has been noted that entrepreneurship is seen as a powerful antidote to the scourge of unemployment and the pervasive social ill effects among young people (Sowole, Hogue & Adeyeye, 2018:1). Entrepreneurship and the education of it are often seen as the solution to this socio-economic problem (Mbuya & Schachtebeck, 2016:228). The exercise of entrepreneurship through business formations and expansions is regarded as a vehicle for job creation and output expansion (Mahadea, Ramroop & Zewotir, 2011:66). Entrepreneurship is essential because it creates the required manpower and skills necessary for accelerated growth, reduced unemployment and alleviates poverty (Jacob & Ehijiele, 2019). The aim of this study therefore is to analyse entrepreneurship as a tool to combat youth unemployment in KwaZulu-Natal.

PROBLEM STATEMENT

KwaZulu-Natal is one of the nine provinces in South Africa with the highest number of young people who are unemployed. The above statement has been confirmed by Statistics South Africa (2023). Therefore, to mitigate the above-mentioned crises affecting KZN, this study analyses entrepreneurship as a tool to mitigate youth unemployment.

LITERATURE REVIEW

What is unemployment?

According to Statistics South Africa (2023), the term 'unemployment' is defined in two parts, namely the official definition and the expanded definition of unemployment.

The official definition of unemployment according to Statistics South Africa is defined as follows:

Unemployed person according to the official definition are those aged 15-64 years who:

- i. were not employed in the reference week; and
- ii. actively looked for work or tried to start a business in the four weeks preceding the survey interview; and
- iii. were available for work, i.e. would have been able to start work or a business in the reference week; or
- iv. had not actively looked for work in the past four weeks but had a job or business to start at a definite date in the future and where available.

Unemployed persons according to the expanded definition are those (aged 15-64) who:

- i. were not employed in the reference week; and
- ii. were available to work but did not look for work either because they are discouraged from looking for work or did not look for reasons other than discouragement.

Generally, youths are those people who are aged 18-35.

De Lannoy, Swartz, Lake & Smith (2015) have shown the possible ways to address youth unemployment in South Africa including developing a stronger evidence base, strengthening support for young people who do not access formal post-secondary education, targeting young people as they exit school, increasing demand for young workers, creating work opportunities for young people still at work, supporting the livelihood efforts of young people and helping young people access work opportunities. However, the aforementioned strategies have not yielded any positive results in South Africa in fighting unemployment. On the issue of youth unemployment, Jubane (2020) has indicated that one of the reasons why youth are the most impacted by unemployment is because employers require skills that most youth lack. Taking the global situation as a starting point, Buheji (2019) suggests that solving the unemployment problem should be based on empirical learning and an industry-friendly approach that ensures policy development. On the other hand, Tshabalala (2014) showed that unemployment contributes to higher crime rates in KwaZulu-Natal. The results also show that low education levels contribute to high crime and unemployment rates.

One study, based on the situation in KwaZulu-Natal, looked at internships used by the government to combat youth unemployment. Their results showed that the number of graduates who completed a 12-month internship programme and have been exposed to the working environment have increased chances of finding employment after the internship (Mchunu & Mutereko, 2020). The survey also highlighted concerns about the length of internship programs in the public sector. Like other South African provinces, internships are being used as one of the youth unemployment strategies. However, this strategy is temporary because it accommodates youths only for 24 months or less. And also, the internship program is discriminatory as it only accepts and accommodates graduates without considering that KZN youths unemployment consists of high school dropouts, non-graduates and graduates. Therefore, youth unemployment should be tackled with a holistic approach.

Key factors contributing to youth unemployment in KwaZulu-Natal

Corruption and nepotism

Nepotism and corruption have been found to be the root causes of youth unemployment in KwaZulu-Natal. According to Rapanyane, Sethole, Tirivangasi & Mugambiwa (2022), nepotism is defined as all the procedures that have to do with favouritism, such as cases in which families are hired because they are related to the authorities. The above scholars further stated that the practice of nepotism is often produces unearned promotions and positions in the government and the private sector. The reviewed articles confirmed that most people are appointed on the basis of political standing or favouritism, rather than merit. Therefore, young people suitable for these job openings are not considered. In some cases, the hiring process is not done properly. The above statement relates to the findings of Van der Merwe (2006) who found that KZN public sector corruption is both a supply-driven (government-led) and demand-driven (private-led) phenomenon. For example the employment irregularities was at 11.8% in (2019) and bribery was at 14.7% in (2018) (Corruption Watch, 2019) as cited by Rapanyane *et al.*, (2022). Based on the above given figures, it would be worth noting that the issue of corruption and nepotism remains a leading contributing factor for the youths in securing employment in particular in the public sector where accountability is lacking.

Youth attitudes and beliefs about entrepreneurship

Most unemployed young people wait patiently for paid employment offers, as opposed to other forms of employment such as self-employment. Among young people, entrepreneurship is downgraded and self-employment is shown to those who consider themselves to be of lower status, based on popular opinion and belief. Some of these young people had graduated from various universities and therefore believed they deserved an employer-oriented occupation. This has led to unemployment, especially among young people living in KwaZulu-Natal. Young people have a negative attitude towards entrepreneurship. They believe that entrepreneurship is indeed confined to certain individuals. They don't see entrepreneurship as an alternative form of employment. However, the findings of the study are unparalleled with the results by Nkomo, Obadire & Mudau (2015:441) showing that most unemployed youths venture into entrepreneurship because of job scarcity. However, this study was based in a Limpopo context. Therefore, it is impossible to equate it to the KZN context. Regrettably, the unemployed youth attitudes towards entrepreneurship is seen as unsatisfactory not only in KwaZulu-Natal context but even beyond the regional context, as Ndebele, Ndlovu & Thusi (2022:24) indicated that the level of youth entrepreneurship remains insufficient despite several government-led initiatives, particularly in township districts.

Discrepancies between skills demand and supply (skills mismatch)

The conflict is seen between the youths who have skills and the demand of industry. However, this is not only a provincial issue or factor to youth unemployment, as Jubane (2020) indicated that youth unemployment is structural (skills mismatch) and demand deficient in nature and is a country factor. This was supported by these studies e.g. Habiyaemye, Habanabakize & Nwosu (2022:800) and Mateus, Allen-Ile & Iwu, (2014) revealed that skills mismatch among rural youth remains an important factor of structural unemployment not only in provinces but in South Africa. Ironically, one of the quotes from Asher Bohbot shows that 'South Africa isn't short of jobs-in reality, it has a shortage of work-ready skills'. As much as this study is situated in KZN, one would argue that skills shortage is a South African issue that needs to be addressed at the national level to combat youth unemployment at the provincial level. This is contributing to youth unemployment because, as much as some youths are diploma and degree holders but the skills they have acquired are not ones required by the industries or employers which causes both conflict and unemployment. However,

some universities maintain good partnerships with industry, for example, the University of Zululand (Faculty of Science, Agriculture and Engineering) was recognised and commended for newly developing engineering programs including electrical and mechanical engineering to meet the needs of industries such as Foskor, Richards Bay Minerals and Richards Bay Coal Terminal (RBCT). This makes graduates more likely to be employed in these industries.

A recent survey found that most of the unemployed youth in KwaZulu-Natal are graduates. But these young people are unemployed because the skills they possess are not in demand in the labour market and not what employers want. But this finding is linked to the national outcry and is not limited to the provincial level. As I have discovered, this suggests that most young people have taken the same courses. However, the results showed that young people lacked both technical and social skills, leading to unemployment (Shava, & Clementine, 2016; Lennox & Roos, 2017). The above suggestions have been endorsed by Marumo & Sebolaaneng (2019) through indication that institutions of higher learning (see for example: University of Zululand, University of KwaZulu-Natal, Durban University of Technology and Mangosuthu University of Technology as these mentioned institutions are housed within KwaZulu-Natal) must establish close ties with secondary schools so that the two work together and establish adequate career guidance in order to avoid oversupply of graduates with skills that are not mostly demanded in the labour market. However, Ijeoma & Ndedi (2021) have acknowledged that many South African universities have embarked on programmes in entrepreneurship and one can already study for a Bachelor's, Master's and Doctorate degree in Entrepreneurship. These results have been consistent with those that have been found in the study that was set in a South African context (see for example: more people enter the working age as contrasted to the number of jobs that become available in the labour market (Jubane, 2020b:4) which may be categorised as labour demand and supply mismatch.

Centralised youth services and programs

Considering that KwaZulu-Natal is a rural-based province, most of the youths do not have access to certain services such as information-based institutions, funding agencies or training organisations. Given that organisations such as Seda who is responsible for providing support services including business information and

business training and NYDA who is responsible for helping young people access mentorship, skills development, training and entrepreneurial development are stationed in certain urban areas, which makes it difficult for the unemployed to reach those branches and offices because they lack a source of income for transport fares.

Most of the youths who are unemployed are those who are inhabitants of rural and township areas. In the case of KwaZulu-Natal this is highly observed and notable since KZN is characterised by many townships and deep rural communities. Ironically, most of the services of which are primarily targeting the youths are situated in a centralised environment or settings which are far from where the youths reside. For example, the NYDA offices are found in towns. Generally, it is costly especially to someone like a young person to reach and get all services there. Therefore, this is contributing to youth unemployment. There is also too much paper work and processes to be followed before receiving help. This is synonymously referred to as red tape by Radebe (2019), who indicated that red tape and burdensome regulations are barriers to youth entrepreneurship. As a result, those burdensome factors lead them to a disheartening attitude that is caused by these processes which make them to give up and remain unemployed.

To ease the above mentioned and raised argument, Zwane *et al.*, (2021:23) are of the view that policymakers should be encouraged to implement laws and regulations that will create a favourable environment for businesses to operate, encourage youth participation in entrepreneurship activities and allow businesses to grow. Furthermore, entrepreneurship is a valuable tool for poverty alleviation, job creation and developing one's economy.

Lack of industries

Ironically, KwaZulu-Natal is one of South Africa's largest provinces, yet it lacks industries and businesses that can provide adequate employment for its population, including its residents and young people. As a result, most young people remained unemployed. The state's problem of industrial shortages has a long history, dating back to the last 20 years when coal mines and other businesses were closed and relocated to other states such as Gauteng and international countries such as Germany. During the 1990s, coal mines operating in central KwaZulu-Natal, including Glencore, Dundee and Newcastle, were reported to have closed for a variety of

reasons (Nel, Hill, Aitchison & Buthelezi, 2003). Other stores remain closed, following the looting incident that took place in this province in July 2021. Therefore, the government is the sole employer in many areas. Unfortunately, the number is increasing rather than decreasing, and it seems that the government cannot afford to hire this many people. As a result, some young people may have to relocate to major cities such as Pretoria, Johannesburg and Cape Town, as practiced by young people from Khayelitsha, in the Western Cape of South Africa (Gwija, Eresia-Ekse & Iwu, 2014). On the contrary, Jubane (2020) has confirmed that youth unemployment is a result of geographical migration across provinces in South Africa, as many youths leave their hometowns in search of better opportunities in large cities like Johannesburg, Cape Town and Pretoria. Jubane (2020) further stated that it is imperative that local economic development programmes be developed in remote areas of all provinces to stimulate economic growth that will result in a reduction of provincial migration. In addition, a shortage of industries, enterprises and businesses is a national problem, but it does not particularly affect young people in KwaZulu-Natal. In the context of KZN, there are only a few industries that can absorb and offer any jobs to unemployed youth. Considering the closure of the mining industry, which was creating jobs for many people, therefore this was a big blow and a big loss for KZN.

Lack of entrepreneurial knowledge

Lack of entrepreneurial literacy has been identified as a factor in youth unemployment in KwaZulu-Natal. Given that entrepreneurship is not part of the school curriculum youths are not informed about the opportunities that are available in entrepreneurship that would change their minds about the stigma of being unemployed or waiting for employment. This result may be equated to Lebambo & Shambare (2017:330) who indicated that entrepreneurship policies as well as capacity development institutions, have limited power to promote rural entrepreneurship owing to a general lack of knowledge of rural entrepreneurship processes, dynamics and even challenges. Therefore, youths in rural areas are the victims who are most affected by the lack of knowledge. In the national context, Ngcobo & Khumalo (2022: 98) pointed out that the key challenge facing entrepreneurship in South Africa is the lack of entrepreneurial skills both at formal and informal levels. On a similar note as the above, Ngcobo (2022) indicated through recommendations that information about entrepreneurship should

be communicated through talks and seminars to drive home the importance of business.

Lack of mentorship and role models

From a general perspective, a role model can be defined as anyone an individual comes into contact with, either directly or indirectly, with the potential to influence decisions and behaviours (Knowles & Lorimer & Shanmugam, 2017:108). In the context of this study, it has been reported that due to the lack of mentoring from successful entrepreneurs, unemployed youths in KwaZulu-Natal are less direct about the process to follow if they want to become entrepreneurs. Apparently, the successful entrepreneurs are self-centred and unapproachable. This discourages young people from reaching out to them. The above-mentioned result may be associated with those that have been reported by Yiannakaris (2021) as shown that the youths felt that in their childhood there had been few positive role models who could offer mentorships, knowledge or contacts to assist with steps to take towards a better future. However, it should be acknowledged that the results as reported by Yiannakaris (2021) were based on a larger context (i.e. South Africa), therefore, may not adequately fit this study or taken as a standalone reference or point of departure.

RESEARCH APPROACH, METHODS AND SETTING

A qualitative research approach was adopted in this article and thematic content analysis was used in this study. Data was collected by analysis using a literature survey. Notwithstanding that this research was primarily a non-empirical study, in which the data was banked on the secondary sources of literature and sampling of documents was based on purposive sampling since all documents used were grounded on the youths, unemployment and entrepreneurship literature. In supplementing and enlightening the above-mentioned information, the study was based on the situation of KwaZulu-Natal, which was reported to have one of the highest youth unemployment rates.

Research objective

The main objective of this study is to critically analyse 'entrepreneurship' as the most useful and possible tool that can be used to combat youth unemployment in KwaZulu-Natal.

Research findings and discussions

Major theme: **Entrepreneurship as a possible solution to youth unemployment in KwaZulu-Natal.**

Given the rising rate of youth unemployment in KwaZulu-Natal, the study found that entrepreneurship is the best way to combat youth unemployment in the province. One might ask how entrepreneurship can be used as a tool to combat youth unemployment in KwaZulu-Natal. At first glance, entrepreneurship is not a novice tool for tackling youth unemployment. As Yiannakaris (2021) revealed that entrepreneurship has long been trumpeted as a solution to economic marginalisation and a realistic strategy for alleviating youth unemployment. Similarly, in global contexts such as Botswana and Nigeria (see for example: Diraditsile & Maphula, 2018; Awogbenle & Iwuamadi, 2010) entrepreneurship has been used as a tool to reduce youth unemployment, which has also yielded positive results.

The rhetorical question is how entrepreneurship can tackle the youth unemployment crisis in KwaZulu-Natal? The answer is simple and clear and follows a three-step approach.

Short-term response to youth unemployment in KwaZulu-Natal

Unemployed youth should be subcontracted for entrepreneurship programs. These young people should be recruited and mentored using a subsidised, semi-structured approach. Ironically, provision of the mentorships should be deliberately offered by both formal and informal business owners to the unemployed youths. As one of the study's results revealed that parents played a huge role in instilling the entrepreneurship culture as one of the strategies of dealing with youth unemployment. As the results further show that some youths are being inspired by their parents to venture into entrepreneurship. As parents stimulate entrepreneurial thinking through the role they played in the adverse circumstances these youth experienced growing up. On the other hand, results revealed that parents' side or informal survivalist businesses meant that participants saw having their own business as a way out of poverty. However, on a temporarily basis context, Mashau & Houghton (2015) argue that informal businesses are very important for economic growth and development, as well as job creation, which will begin to alleviate the unemployment problem.

Once deemed ready, it should be given the opportunity to proceed to the second phase of the operation, which may be related to the medium response described below. Concurrently, see the above point where it is reported that unemployed youths lack mentorship from successful entrepreneurs.

Middle-term response to youth unemployment in KwaZulu-Natal

A database and system of all unemployed youth in the province should match all young people according to their entrepreneurial interests. Funds can be made available and be financed within five business days. Given that the issue of funds is still a dominant challenge and factor to the unemployed youths to have access to funds in order to start their own businesses (see for example; Ndedi, 2013; Ngcobo, 2022; Radebe, 2019). And all these small businesses should be monitored daily on functioning ability. In fact, many cooperatives and SMMEs in KwaZulu-Natal have gone bankrupt due to lack of funds.

Long-term responses to youth unemployment in KwaZulu-Natal

The entrepreneurial spirit of the long-term basket can be harnessed if the schools can adopt it and incorporate it into their curricular, from the foundation phase up to the tertiary level. In a school context, teachers can engage entrepreneurial potential as part of the teaching and learning process. Thus, when learners reach adulthood, they may appear well-informed about entrepreneurship of which may also give them a range of opportunities either of venturing into business or formal employment. The above-mentioned solution of which is entrepreneurship in dealing with youth unemployment at the school levels, was seconded by Thobejane & Thaba-Nkadimene (2017) & Radebe (2019) through the suggestion that adding entrepreneurship to curriculum in basic education and foundation phase till further education and training phases can help inculcate within the South African children basic entrepreneurial skills that are required for their future economic participation in the business and labour market. Thobejane & Thaba-Nkadimene (2017) further concurred that entrepreneurship education has a role to play in addressing the problem of youth unemployment.

Based on the study that was located on a national context, titled, 'Is youth entrepreneurship key to addressing youth unemployment?' results revealed that

entrepreneurship education has been identified as the best solution to curb youth unemployment. The study results have further shown that the improvement of the educational system is key and the exposure of students to entrepreneurship should start at an early stage to equip them with an entrepreneurial mind-set and culture (Zwane, Radebe & Mlambo, 2021). As much as the above results were obtained from the national level context (i.e. South Africa), they are still relevant to the provincial context as one would argue that KwaZulu-Natal province has the highest cohort of unemployed youths who contribute significantly to the national figures more so than the other provinces and also taking into consideration that the general consensus shows that KZN has been categorised as the province with the second largest population following Gauteng (Statistics South Africa, 2023).

Secondly, unemployment should be tackled through a collective effort approach; involving all relevant stakeholders including government, the private sector, entrepreneurs and individuals, politicians, celebrities, non-governmental organisations, religious organisations and others. The government alone cannot win this battle. In support of the above-mentioned statement, Mashau & Houghton (2015) have agreed that youth unemployment is a problem that requires different diagnoses from different stakeholders.

Figure 1: Discussion of the key role stakeholders can play in dealing with youth unemployment within an entrepreneurial landscape

Stakeholders	Responsibilities
Government (in the context of this study, the focus is on both local and provincial government level) Due to the nature and content of the study.	In a historical context, there are many integrated intervention programmes and government-led policies that have been implemented in dealing with youth unemployment (see below: Figure 2). However, some of the below mentioned programmes were initiated at the national level. Unfortunately, approximately 90% of the below-mentioned programmes have not yielded positive results: <i>Figure 2: (Sequence and timelines of the government interventions on youth unemployment)</i>

EARLY 1990s	1994-1995	1996-2003	2004-2007	2008-2016
Policy debates on overcoming apartheid legacies	Reconstruction and development	Focus on macroeconomic instability	First and second economy, War on Poverty	Overcoming triple threat of unemployment, poverty and inequality
Discussion Document on Economic Policy, Ready to Govern, RDP	RDP White Paper Special Poverty Relief Allocation	GEAR Jobs Summit	AgGA, JPSA Growth and Development Summit	National Growth Path, National Development Plan
				Employment Tax Incentive Jobs Fund
Special employment creation programmes	National Public Works Programme, Working for Water		EPWP	
			National Youth Service Policy Framework	Kh Ri Gade, Masepabela, NARYSEC
National Training Strategy	South African Qualifications Authority Act	National Skills Act, Skills Development Act	Department of Higher Education and Training, Department of Basic Education	Green and white papers on post-school education and training
Education Renewal Strategy and Curriculum Model for South Africa	White Paper on Education and Training	Further Education and Training Act	Revised National Curriculum Statement	Curriculum Assessment and Policy Statement
	South African Schools Act, National Education Policy Act	Outcomes-based education/Curriculum 2005		National Skills Accord, Basic Education Accord, Youth Employment Accord
	Labour Relations Act (LRA)	Basic Conditions of Employment Act (BCEA), Employment Equity Act	Employment Services of South Africa	Amendments to BCSALA, etc. Public Employment Services Act
		BEE Commission Report	B-BBEE Act	B-BBEE Amendment Act
National Youth Development Forum	Umsobomvu Youth Fund		National Youth Commission	
				National Youth Development Agency
Small Business Development Corporation	White Paper on a National Strategy for the Development and Promotion of Small Business in South Africa	Ntshaka Enterprise Promotion Agency, Khula Enterprise Finance	Small Enterprise Development Agency, Small Enterprise Finance Agency	Department of Small Business Development, Youth Enterprise Development Strategy

(Adapted from Adetiba & Qwabe,2020:170)

Based on the above results whereby the national government has failed dismally in tackling the issue of youth unemployment despite having enough capacity in areas such as resources and funds. This study has argued that since the local government has a duty of local economic development, (LED), therefore, this sphere must be given all powers and a mandate to provide unemployed youths with entrepreneurial training in collaboration with the youths' council of the affected local municipalities and be certificated upon the completion of those trainings as proof of the competency and be involved in practical trainings as well. In addition, training should also incorporate both theory (10%) and practical (90%). The LED should be functional and active especially to the municipalities that are situated in deep rural areas.

The provincial government should take the responsibility of providing unemployed youths with access to finance, since most of these young

	people as much as they have passion, but processes are prolonged and tiring which are regarded as red tape (as confirmed from the above discussion: see for example: Ndedi, 2013; Ngcobo, 2022; Radebe, 2019) Undoubtedly, the local government sector can play a critical role in addressing youth unemployment (Ndebele <i>et al.</i>, 2022), provided that the support system is in place. The government should deal with youth unemployment through scrapping off the experience requirement in entry level jobs such as those of a receptionist. Equitably and based on this study, barriers to the labour market for unemployed graduates' results revealed the lack of relevant work experience (Graham, Williams & Chisoro, 2019).
<i>Private sector</i>	Based on the notion that the employment level in an economy will increase if there are employers (private sector led), which implies an increase in the development of business and business start-ups through which employers can create job opportunities (Mashau & Houghton, 2015). Therefore, the private sector should take the initiative by providing the unemployed youths with employment owing to the fact that the government alone cannot afford to provide each of the unemployed individuals with employment. And, private-public partnerships should be encouraged. The private sector needs to have a targeted and certain percentage of dealing with youth unemployment in KZN, through corporate social responsibility. The private sector should offer entrepreneurial training to the local communities in which their firms are located. This sector may combat youth unemployment through prioritising the youths in entry level vacancies.
<i>Entrepreneur</i>	Entrepreneurs may be involved in creating youth entrepreneurs through role modelling the youth since they are successful in their respective businesses. Entrepreneurs should mentor the youth about all the necessary processes of becoming a successful entrepreneur.

	At a household level, parents need to be viewed outside from the parental role or parenting perspective, who just need to take care of their families. Based on the context of this study, parents should be educated about the importance of entrepreneurship as a breakthrough to socioeconomic issues as this will nurture and develop an entrepreneurship culture among the youth (Zwane <i>et al.</i>, 2021b). Little research has revealed that survivalist entrepreneurs do not seem to create more employment opportunities and improve the economy and alleviate poverty (Iwu & Opute, 2019). However, the above findings as reported may not be fixed or restricted on a negative aspect only since some of the survival entrepreneurs do create jobs for the youth through informal trading as revealed by the following researchers (i.e. Iwu & Opute, 2019). However, on a temporarily basis, Mashau & Houghton (2015) show that informal businesses are very important for economic growth and development, as well as job creation, which will begin to alleviate the unemployment problem. Big businesses in the municipality result in knowledge spill overs and this supports the role of local successful business in addressing youth unemployment, this involvement could take the form of mentorship, since existing businesses are employers (Mashau & Houghton, 2015)
<i>Politicians</i>	Despite the fact that young people generally feel that politics is ‘full of corruption’ and they refer to politics as a ‘dirty game’, ‘a waste of time’, a ‘joke’, ‘disappointing’, and as something they do not want to get involved in (Tracey, 2016:19), some unemployed youths are joining political organisations as a way of escaping from youth unemployment (Adetiba & Qwabe, 2020). Therefore, politicians should integrate the importance of entrepreneurship into their campaigns and some youths may view the entrepreneurship with a positive eye. Others may consider to venture into it.
<i>Non-governmental organisations</i>	De Lannoy, Swartz, Lake & Smith (2015:54) revealed that non-governmental organisations (NGOs) have played a significant role in developing policies, programmes and interventions to address the

	challenge of youth unemployment. Therefore, this study strongly believes that NGOs have some capacity to address youth unemployment in KZN. They can motivate youths and cultivate their minds through entrepreneurship, as others have lost hope and esteem, given that unemployment remains the biggest thief of hope amongst young people (Cloete, 2015).
<i>Religious organisations e.g. Churches</i>	Notably, there is currently a renewed global awareness of the role of religion and its significance in the contemporary world (Swartz, Rocher, Green & Erasmus, 2010). From a theological perspective, Van der Westhuizen & Swart (2015:751) stated that for members of congregations to become active citizens, they should be empowered through sustainable networks, there should be opportunities to develop knowledge and skills to attend to real and felt needs and sufficient communication and information to develop a clear vision of their congregations' role in the community where they are situated. Therefore, in the context of this study, as part of combating youth unemployment, it is arguable that the churches should be made imperative for them to present sermons that are biblically-entrepreneurship integrated in order to promote and instil the culture of entrepreneurship amongst the youths. This responsibility should be fulfilled by all members of the church who have been given a platform: pastors, apostles, student priests and bishops, and evangelists. However, Cloete (2015), concluded that churches' role in social critique is still in question when it comes to a social challenge like unemployment.

(Author's diagram)

The above findings that were discussed in a tabled and paragraph form was supported by Ngcobo & Khumalo (2022) who have indicated that entrepreneurship can be used as a strategic approach to curb youth unemployment and restore economic growth in communities and rural areas. This finding is consistent with the views of Nkomo, Obadire & Mudau (2015) who found that youth entrepreneurship is the solution to youth unemployment. The result has been aligned with those who have been outsourced from the international context, such as Chinonso (2022) who noted that

entrepreneurship is a gateway to youth empowerment and sustainable economic growth. On a positive note, entrepreneurship has been adopted globally as a strategic approach to promoting youth economic participation (Nsahlai, Zolgl, Lawa & Dlamini, 2020). In addition to the above-discussed statement there are lessons that can be drawn from other countries who have adopted entrepreneurship as one of their mechanisms for alleviating and reducing unemployment amongst the youths (Diraditsile & Maphula, 2018; Awogbenle & Iwuamadi, 2010). Therefore, this study is over-confident that indeed entrepreneurship can be used as one of the tools in fighting with youth unemployment in KwaZulu-Natal and beyond. Given that studies have shown that the issue of the youth unemployment cannot only be dealt with and limited to the regional level but also in the whole South African context nor even be stretched to the global level. As the below studies have investigated the strategies for dealing with youth unemployment with a focus on national context which shows that indeed unemployment is a serious issue that has affected all spheres (see for example: Habanabakize & Nwosu, 2022; Marumo & Sebolaaneng, 2019; Ngcobo, 2022; De Lannoy, Graham, Patel & Leibbrandt, 2018; Ngcaweni, 2016; Graham & Mlatsheni, 2015; & Yu, 2013).

RECOMMENDATIONS

After a thorough investigation about the issue of youth unemployment in KwaZulu-Natal. It was recommended that:

- The funding agencies and their services should be decentralised and made available to the community and that processes should be reviewed to simplify processes rather than focus on red tape.
- HR departments must be monitored and supervised to ensure that all recruitment processes, including selection, shortlisting and interviews are performed correctly without resorting to nepotism or bribery.
- Successful and active entrepreneurs must act as mentors to unemployed youth.
- The government should form public-private partnerships and an alliance with industries so that they will invest in this province, as a result some employment may be created.

- The private sector should be consulted in advance when designing the academic programs offered by the universities so that the private sector will have a say in the curriculum designing phase to avoid the skills mismatch.
- Career guidance should be provided to the schools.

CONCLUSION

The study analysed entrepreneurship as a tool to address youth unemployment in KwaZulu-Natal. The study found a number of factors contributing to youth unemployment in this province. The factors considered were nepotism and corruption, lack of entrepreneurial knowledge and lack of industries. However, the study concluded with a hopeful and persuasive tone, stating that entrepreneurship is the most appropriate means of addressing youth unemployment, especially in KwaZulu-Natal and beyond. Considering that many tools that have been previously implemented have failed miserably in addressing youth unemployment in KwaZulu-Natal, one of the recommendations was to revitalise, encourage and instil a culture of entrepreneurship from the early-childhood to adulthood.

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Enhancing youth empowerment and socio-economic development through social entrepreneurship: Perspectives from Kwazulu-Natal

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ABSTRACT

The study examines social entrepreneurship as a tool for enhancing socio-economic development and youth empowerment, while eradicating unemployment and poverty. Today, throughout the world, social entrepreneurship is a mantra treated as an answer for economic development, employment, and poverty reduction. To some degree this is valid. However, in South Africa there is something awry since, despite over two decades of democracy and a glamorised position in Africa's entrepreneurial development, the country continues to grapple with the dilemma of unemployment, inequality, and poverty. Upon gaining office in 1994, the ruling party committed to the social, economic, and political transformation and development of South Africa, and to addressing the imbalances of the past. However, to date, progress in transforming South Africa's society and economy has been diverse.

The study adopted a qualitative research approach that characteristically involves the processes of collecting and analysing non-numerical data to understand concepts, opinions, or experiences. A case study research method was adopted and applied to KwaZulu-Natal. The available literature indicates that social entrepreneurship is a newly introduced topic in South Africa, with its framework and terms becoming popular

in our society. It became evident during the study that social entrepreneurship makes a remarkable contribution to components of youth entrepreneurial development. However, the working paradigm of this practice has been experienced as a challenge, in the sense that social entrepreneurship is not yet recognised by the South African youth and government.

The study argues that social entrepreneurship should be recognised as an answer to socio-economic issues. Overcoming social problems in South Africa will require a delicate review of entrepreneurship development policies to validate the significance of social entrepreneurship and youth entrepreneurial development.

Keywords: social entrepreneurship, youth development, inequality, unemployment

INTRODUCTION

Social Entrepreneurship (SE) is a concept promoted as a solution in the form of economic growth, employment, and poverty reduction all over the world. This is true to some extent. However, something is amiss in South Africa. Despite the government and private sector's intensive efforts to empower and promote youth entrepreneurship development, the results have been devastating. Various governmental and private projects have been established to support youth entrepreneurship development, as is evident from the Global Entrepreneurship Monitor (GEM) 2021 annual report. However, while strategies to promote youth entrepreneurship development are incredibly beneficial in other developing countries, such as China, India, Malaysia, Indonesia, Brazil, Mexico, and Russia (Eze and Omanukwue, 2022), nonetheless, the same cannot be said of South Africa.

The greatest challenge at global, national, and local levels necessitates the development of new methods and equipment to effectively address the social challenges (Dees, 2016). The market and the state, as it appears, are unable to manage and address all challenges on their own. Innovative methods should be applied to address key social problems, particularly in the face of governments' systematic withdrawal from the provision of public goods in the face of new political ideologies that demand national independence and give priority to market-driven welfare models. The study believes that the need for the government to provide excellent quality services to the public should be treated as a matter of priority since that forms part of becoming a trusted service provider. Improved skills and reliability

among young people ultimately impact social change, regardless of the sphere of government (Lamio and Sebillo, 2022). If public needs are not addressed, a conflict in the broad community is possible.

To enhance possible means of alleviating public problems, while understanding the convergence of social entrepreneurship and public assistance, the study aims to determine whether youth social entrepreneurship development provides a better opportunity to empower the youth in a way that positively addresses socio-economic challenges in their communities, while also growing the South African economy. Without a doubt, social entrepreneurs have assisted in the resolution of public issues; however, little research has been conducted on articulating the intersection between social entrepreneurship and public assistance, as well as enhancing youth empowerment through social entrepreneurship in the South African context.

Using a qualitative research approach, data collection methods, and analysis, this study was done on 12 participants. Interviews were adopted to obtain the data that is relevant to the study objectives and research questions. Semi-structured interviews were conducted in KwaZulu-Natal to gather qualitative data inspired by the motivation for the study. The institutional basis was reviewed on what routes to follow to conduct proper research. The following subsection focuses on the available literature on the phenomenon under investigation.

LITERATURE REVIEW

In general, entrepreneurship and Social Entrepreneurship (SE) share three major characteristics: opportunities, entrepreneurial entities, and innovation. SE is defined as the "creative use of resource combinations to seek opportunities aimed at the formation of organisations and/or activities that provide long-term social benefits" (Mair and Noboa, 2006:122 *cited in* Saebi, Foss, and Linder, 2019). According to economic historian Fritz Redlich (1892-1978), many hundreds of years ago, the concept of entrepreneurship initially developed in the sixteenth century, when German military officials routinely mercenaries for armed excursions across Europe. Recent approaches, however, have been concentrating on economic value, the entrepreneur's nature, and the entrepreneurial process (Audretsch and Lehmann, 2022). According to Bergner, Palmer, Devaney, and Kruse (2022), SE is the process

of introducing something new [creativity] and something different [innovation] with the intent of developing income for the individual and contributing value to the community.

Mthembu and Barnard's (2019) description helps to explain why social entrepreneurs, who are committed to making a positive impact on society, may be found in a variety of sectors, ranging from non-profit, social enterprises functioning as companies to those in the profitability realm. Karamti and Abd-Mouleh (2022), concluded that entrepreneurship is a mixture of lucrative opportunities and the endeavours of entrepreneurs. A French economist Jean-Baptiste Say, defined an entrepreneur as someone who can produce positive outcomes by changing economic resources from low-productivity resources to higher-productivity resources (Costa, 2022). Nearly a century later, Austrian economist Joseph Schumpeter expanded on the concept of value creation, which is probably the most important part of entrepreneurship (Costa, 2022). The author identified that an entrepreneur accelerates economic growth; without entrepreneurs, economies would stagnate and eventually deteriorate.

An entrepreneur, according to Vass (2022), is a change agent who can recognise economic opportunities and establish enterprises through which products or services can be provided. Entrepreneurs innovate radically, making existing products and services irrelevant (Costa, 2022). Entrepreneurship and Social Entrepreneurship (SE) are multifaceted processes that have comparable qualities such as the set of personal traits and characteristics required to discover and pursue opportunities, a context, resourcefulness, and eventually, the creation of value (Kwong, Cheung, Bhattarai and Fieldhouse, 2022).

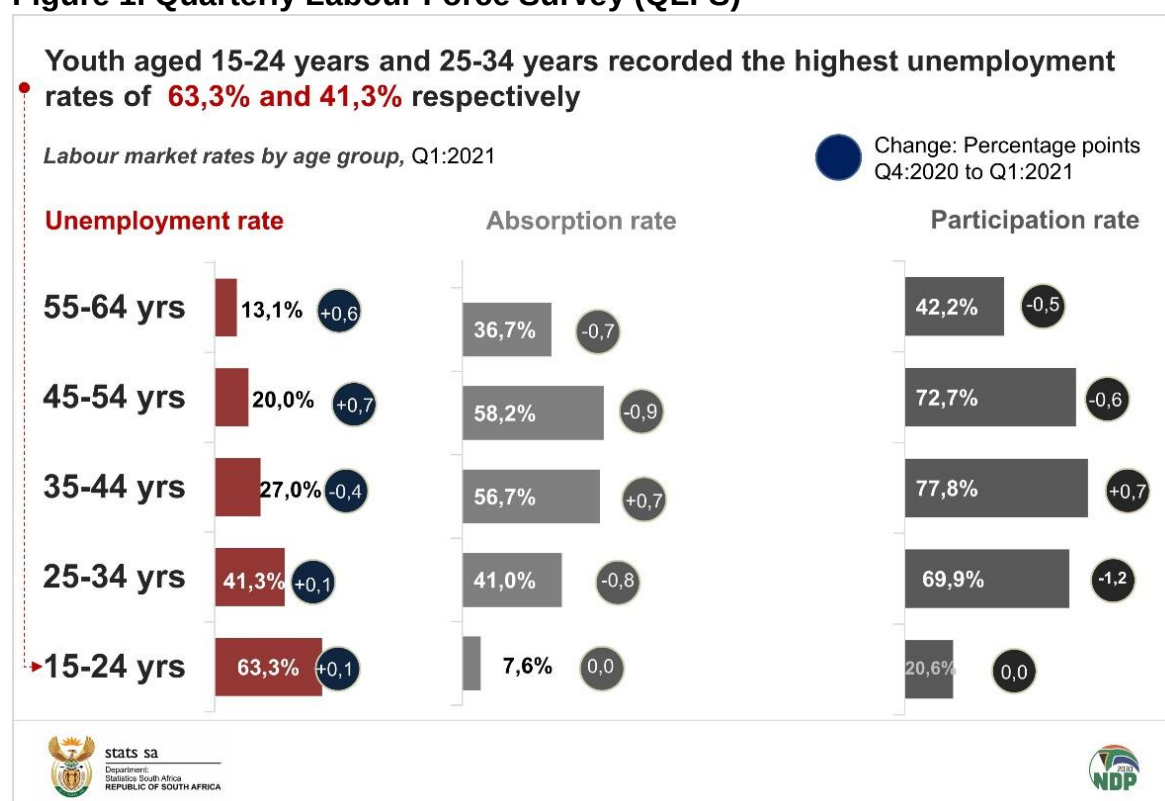
The present situation of social entrepreneurship

Apartheid's legacy in terms of schools of thought, policies, and strategies has had an impact on the intensifying social and economic issues that many young people face today, particularly those who were born free of our history. However, it is necessary to ask, "How free are these young people in South Africa today?" In addressing this issue, one must question the fundamental institutional sense of freedom in today's society in light of the lived reality of far too many young South Africans who are affected by high unemployment, inequality, and poverty.

Unemployment among the youth

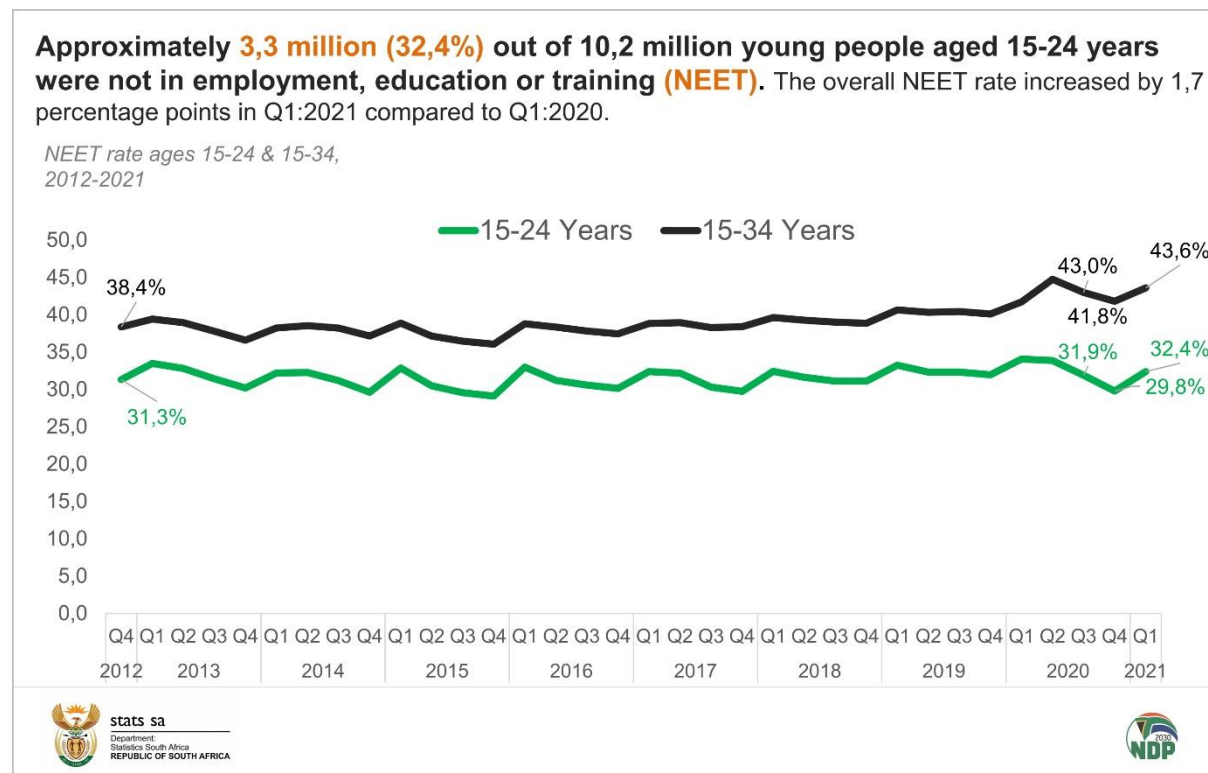
The performance of the South African labour force has been poor. According to Statistics South Africa's second-quarter 2021 numbers, the South African unemployment rate, which includes persons who have stopped seeking work, increased to 44.4% in the second quarter (refer to Figure 1 below) (Statistics South Africa, 2021a). KwaZulu-Natal is one of the poorest performing provinces in terms of unemployment and job losses, having lost over 33,000 jobs in the first quarter of 2021 (Statistics South Africa, 2021b).

Figure 1. Quarterly Labour Force Survey (QLFS)



Most of these youths have become discouraged from joining the workforce, and they are also not improving their skill sets through education and training – they are not in the labour market, education, or training (NEET). Moreover, of the 10,2 million people aged 15–24 years, 32,4% (about 3,3 million) were not in employment, education, or training, meaning that nearly one in every three young South Africans between the ages of 15 and 24 were unemployed in the first quarter of 2021. The NEET rate, when combined with unemployment rates of more than 60%, shows that young people in South Africa have great difficulty participating in the labour market.

Figure 1.1 The overall NEET rate



Furthermore, when Q2:2021 (Quarter 2 of 2021) group statistics by age are compared to the same time in previous years (as shown in Figure 1.1 above), they show an overall percentage rise in NEET rates. According to the empirical data, all age groups had a disturbing increase in this quarter, this may be due to the global Covid-19 pandemic. The weak labour market leads to low job absorption rates but, more crucially, the gaps between job seekers' abilities and industry demands, as well as the absence of rising business development, are relevant concerns and genuine issues for this study.

Overall, the labour force is not reacting positively to the increasing population of graduating youth. The unemployment situation is continuing to grow, as depicted in Figure 1, and soon – if not already – South Africa will be dealing with an uncontrollable youth unemployment problem. It is no secret that there is an urgent need for enormous amounts of money and large-scale intervention is required to address this problem.

The significance of youth entrepreneurship development

Entrepreneurship is recognised by significant empirical studies in the field of economic development globally as an important economic contributor to a country's capacity to

achieve positive economic growth over time (Mill, 1848; Schumpeter, 1949; Baumol, 1993). Furthermore, the South African Economic Development Strategic Plan, 2011/12 to 2015/16, recognises sustainable growth and development as strategic imperatives towards confronting South Africa's high levels of unemployment and poverty. It indicates that developing youth entrepreneurship has a vital role to play in accomplishing this goal. When assessing the rising issues of unemployment in South Africa, it is apparent that this perspective is shared by Entrepreneurship Education in South Africa.

According to a GEM (Global Entrepreneurship Monitor) (2023), there is an urgent need for young people to be taught and educated in the field of entrepreneurship. According to the Social Profile of Youth, 2012–2021 study, the youth population accounts for 60% of the total number of unemployed people in South Africa, significantly impacting the 'high poverty prevalence'. Empowering young South Africans to establish enterprises will offer "new job opportunities and contribute to the country's economic prosperity" (Statistics South Africa, 2021). The Global Entrepreneurship Monitor (GEM) 2019/2020 annual report states that significant emphasis on South Africa's development policies would encourage sustainable and inclusive growth to generate broad employment and eliminate poverty.

Herrington and Kew (2016) find the ability of the Small Medium Enterprise (SME) sector to provide job opportunities to be critical. All of these authors above argue and attest to the fact that entrepreneurship development, particularly amongst the youth, provides a credible way to address unemployment and poverty in South Africa, while also contributing to economic growth.

Youth entrepreneurship as a career opportunity in South Africa

An exploratory study of students attending comprehensive universities in KwaZulu-Natal, conducted by Rugbeer, Rugbeer and Naidoo (2020), investigated the perception of entrepreneurship as a career option for these students. The study claimed that the entrepreneurial perception of young South Africans at the time of the study had improved considerably since 'independence' in 1994, and it provided a persuasive argument that the participants in the study demonstrated an overall "positive outlook towards self-employment as a potential career preference" (Rugbeer *et al.*, 2020). Mahadea *et al.* (2011) did a similar study among a population of students

in a different geographic region, namely Pietermaritzburg in KwaZulu-Natal. This study, which supports the findings of Rugbeer *et al.* (2020), investigates the likelihood of high-achieving students from comprehensive universities becoming entrepreneurs, by examining the socio-economic characteristics displayed by these students, through an assessment of the students' perceptions and proclivity toward entrepreneurship.

According to the authors of this study, it is critical to cultivate an entrepreneurial spirit among the youth, to push the borders of poverty back and create work opportunities for them in South Africa (Mahadea *et al.* 2011:67). Both these studies suggest that participating youth may be encouraged and supported to pursue entrepreneurship as a potential career option. However, the views presented in Herrington and Kew's (2016) Global Entrepreneurship Monitor (GEM) South Africa 2015/2016 annual report indicate wide differences in the authors' perspectives on the perceptions and preferences of entrepreneurship as a potential career option. As a result, further research is needed to gain a better understanding of the subject. According to GEM annual report, South Africans, in general, obtained a score below average when analysing the extent to which a country endeavours to motivate its people to take entrepreneurial risks – a feature believed to be crucial to the growth of entrepreneurship in most of the literature reviewed. This is most likely the source of the low levels of entrepreneurial intention despite rather optimistic opportunity perceptions. Furthermore, the research emphasised the need for creating a "friendly environment" that fosters optimism while also equipping students with the required entrepreneurial skills across the South African educational system (including primary, secondary, and higher education). This might be seen as a crucial component in promoting entrepreneurship as a feasible career option for young individuals, as well as a way to improve entrepreneurship development, involvement, and economic growth.

This perception is further verified when reviewing and studying the most recent Global Entrepreneurship Monitor (GEM) annual report issued in 2021. The analysis confirms that "the overall prevalence of entrepreneurial activity in the youth is following overall GEM trends." It arrives at this conclusion when examining the probability of youths in South Africa aged 18-35 years participating in entrepreneurial activities. However, the percentage of 18-35-year-olds in South Africa who are participating in initial entrepreneurial activity is substantially lower than the African average, which is

approximately twice the South African rate for this age group (Herrington *et al.*, 2017:7). As a result, it is fundamental to actively promote entrepreneurship as a viable career option for the South African youth.

Within the framework of social entrepreneurship, it is important to find innovative approaches to nurture a culture and ecosystems that are fair by nature. This will encourage entrepreneurship development and growth among the youth.

PROBLEM STATEMENT

Major emphasis has been placed on the development efforts of governments in developing economies to meet people's fundamental needs, particularly the poor (National Development Plan, 2030). This is largely due to the recognition that the benefits of previous policy interventions have not reached the disadvantaged. The basic-needs concept of development focuses on the development's objectives (United Nations Report, 2022). This should constitute a direct attack on poverty and unemployment by supplying the most basic human necessities to the poorest members of society.

The demographic profile, the historical importance of social entrepreneurship, and the perspectives of the surveyed participants have all been represented in this study. It tells the tale and shows the scope of the social issues that young people face while pursuing financial independence and participating in the economy. The authors are concerned about the high rates of youth unemployment, inequality, and poverty. These issues have guided the whole scope of the study, which aims to present answers and ideas that will ideally bring the youth closer to experiencing better opportunities for youth entrepreneurial growth over time.

AIM AND OBJECTIVES

To ensure that the study's intent is not outshone by the topic's complexity, it is necessary to state that the overall goal of this research is to determine whether, in practice, youth social entrepreneurship development provides a better opportunity to empower youth in a way that positively addresses socio-economic challenges in their communities while also growing the South African economy. The following are the objectives of this study.

Research objectives

- Exploring the link between social entrepreneurship and public assistance while understanding the background and contributing variables that lead to youth development, youth empowerment, and socio-economic development.
- To determine the significance of social entrepreneurship in the promotion of youth development and enhancing youth empowerment and socio-economic development in Kwazulu-Natal as well as the relevance of entrepreneurship education, training, and development.
- Examining social entrepreneurship as a development tool and the perspective that social enterprises can create employment to eradicate social problems such as youth unemployment and poverty.
- To proffer and recommend the most effective strategies for enhancing social entrepreneurship, youth development, youth empowerment, and socio-economic development.

Research questions

The primary research question that this study sought to address was: 'In what way can youth social entrepreneurship development be used to empower the youth and create employment opportunities in KwaZulu-Natal?'

The following research questions will be explored in pursuit of fresh insights to support the argument of this study, based on the research objectives and literature review presented:

- What is the relationship between social entrepreneurship and public assistance in solving public problems, given the contributing factors that give rise to youth development, youth empowerment, and socio-economic development?
- What is the significance of social entrepreneurship in the promotion of youth development while enhancing youth empowerment and socio-economic development in Kwazulu-Natal as well as the relevance of entrepreneurship education, training, and development?
- How can social entrepreneurship and social enterprises create employment to eradicate social problems such as youth unemployment and poverty?
- In what way can the social entrepreneurship, youth development, youth empowerment, and socio-economic development be greatly supported?

RESEARCH METHODOLOGY

The study was conducted in South Africa within the province of KwaZulu-Natal, where youth, social entrepreneurship organisations and specialists in social entrepreneurship were selected for this study. Moreover, data was collected from the National Youth Development Agency (NYDA), King Cetshwayo District Municipality (KCDM) and eThekweni Metropolitan Municipality (ETH). The participants in this study are classified into three categories (see Table 1 below).

Table 1. Study participants in three categories

Categories	Description
Class 1	Specialists in the field of Social Entrepreneurship and Social Ventures
Class 2	A District Municipality and Metro Municipality in KwaZulu-Natal
Class 3	NYDA and KZN Youth

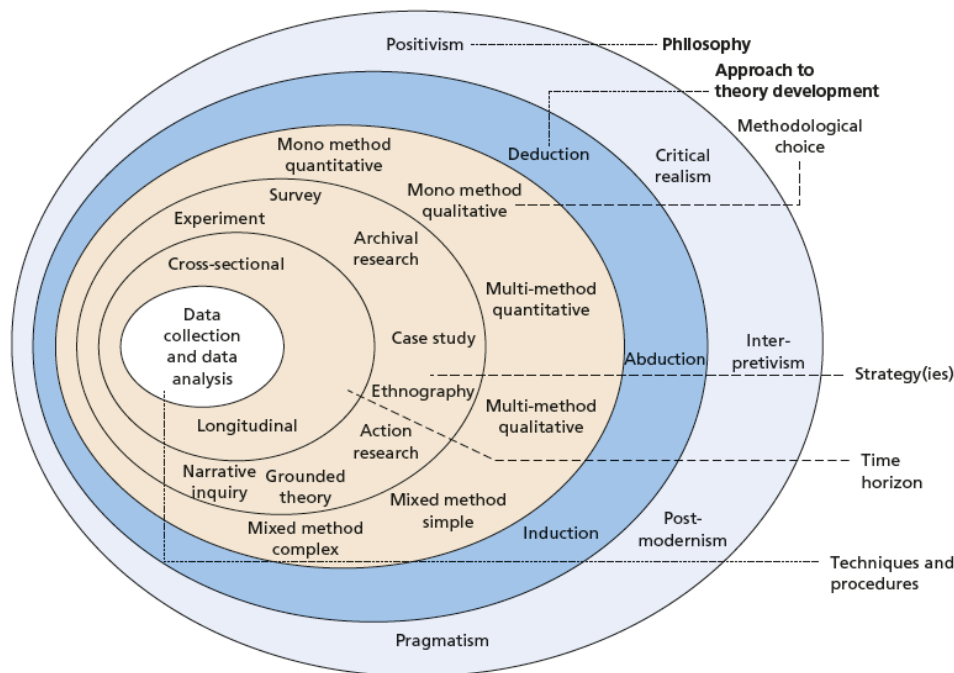
Data source: Own compilation

The population of this study also includes: for-profit, non-profit, and hybrid businesses that define their ventures as a form of social entrepreneurship. KwaZulu-Natal (KZN) is used as a case study to generate a body of knowledge in line with the objectives of the study as stated in chapter one. According to Biyane (2017), research contains two primary stages: one is the phase of organising and the other is the phase of usage. In the organising phase, the researcher builds an outline and an appropriate plan for the research, and within the second phase, information is gathered and reviewed.

According to Myers (2019), the research method is a strategy of query, which changes from the essential expectations to research design and data collection. This study adopted a qualitative research approach in which the primary data was collected using interviews. In this way, the study explores the convergence of social entrepreneurship and youth entrepreneurship development, while analysing social entrepreneurship as a tool to enhance socio-economic development and eradicate unemployment in South Africa. The qualitative method plays a steady part in exploring the aspects of primary information and gives more prominent knowledge into the findings.

The phenomena used within this study fall under the umbrella of management/social sciences research, particularly in the areas of entrepreneurship, management, marketing, and networking for social enterprises. This study adopted a research philosophy in line with Saunders, Lewis and Thornhill (2015) which is known as the research 'onion' (see Figure 2 below).

Figure 2. The research onion



Data source: © 2015 Mark Saunders, Philip Lewis and Adrian Thornhill

The research onion illustrates the stages that must be covered when developing a research strategy. When viewed from the outside, each layer of the onion describes a more detailed stage of the research process (Saunders *et al.*, 2015). The research onion provides an effective progression through which a research methodology can be designed. For this study, the research onion's usefulness lies in its adaptability for this type of research methodology and can be used in a variety of contexts in any study (Bryman, 2012). This study examined and described the different stages. The research onion is used in explaining the research methodology utilised for this study. The approach chosen for this framework is to move from the outer layer to the inner layer of the research onion. The following section explains the sampling strategy and sample size.

SAMPLING STRATEGY

As indicated by Creswell (2016), "sample sizes that are greater than ten (10) and not more than five hundred (500) are reasonable for most research" (2016). Observing these restrictions and considering data saturation, the sample size comprised of 12 participants. These participants were recruited for interviews.

The researcher finds it fitting for this study to describe the participants of this study in the form of a table (see Table 1 below)

Table 1: The number of the study participants

Entity	Number of Participants
Specialist in SE	2
Social Ventures	2
KCDM	2
ETH	2
NYDA	2
KZN YOUTH	2
Total	12 (Participants)

Data Source: Own compilation

Moreover, these participants comprise youth, social entrepreneurs who are 18 years and above, and more importantly members of social enterprises in the province of KwaZulu-Natal South Africa. The data was stored in a locked cabinet as well as on the cloud electronically, and will be subsequently deleted and shredded after 5 years. As mentioned previously, this study focuses on social entrepreneurship in KwaZulu-Natal. The next section focuses on the presentation of data, analysis, and interpretation.

DATA ANALYSIS AND INTERPRETATION

Data were generated in the study through interviews and were analysed using thematic analysis. The information gathered through the interviews was tape-recorded and interpreted into an inscription. The researcher studied what is anticipated as large amounts of transcribed material to identify patterns and inconsistencies. This analysis led to the delineation of categories into which the data was fitted. A careful study of these categories led to the building of broad themes, and relevant sub-themes (that address the key research concerns). A critical analysis of these themes alongside the

key literature allowed the researcher to begin the process of theory-building. The researcher looked for connections and inconsistencies within the literature – new, original insights, and arguments. Thus, thematic analysis shaped the presentation of empirical data and aided the process of developing a theoretical framework. The findings of this study will be discussed next.

FINDINGS AND DISCUSSIONS

Developing themes

The link between social entrepreneurship and public assistance

One of the study objectives was to explore the link between social entrepreneurship and public assistance while understanding the background and contributing variables. During a recession, entrepreneurship and innovation can provide solutions to economic woes without relying on public resources. The reality is shocking and appalling, with a lack of education, climate change, medical insufficiency, hunger, and poverty. Although aid programs created in the last decades by non-profit and international organisations that address the challenges might be seen as weak, ineffectual or even pessimistic (Fueglistaller *et al.*, 2016). However, these challenges have been turned into social entrepreneurs' entrepreneurial opportunities. Both scholars and practitioners have retained focus and debate on the actual definition of social entrepreneurship. There are several definitions in which social entrepreneurship is concurrently presenting features from the commercial, public, and non-profit sectors (Wolk, 2007; Dees, 2001). Social entrepreneurship is therefore viewed as a multi-dimensional concept that crosses different intersections between the public, private and social sectors (Wolk, 2007; Nicholls, 2006). "Social entrepreneurs cannot answer to all social issues alone." – Participant C

Contrary to the findings from the Eurofund (2016) whose study tried to find out if the relationship between government and social entrepreneurship will increase the likelihood of Small Micro Medium Enterprises (SMMEs) obtaining finance, social enterprises tend to do better when integrated with the community, where their activity develops and their social impact is seen. Other findings also outline the initial research that succeeded in building the case studies to probe the success and impact of social ventures on youth entrepreneurship development and the role of the social entrepreneur. However, the study found scholars to be more focused on the contextual

factors that influence social entrepreneurship and its practice (Santos, 2012; Ormiston and Seymour 2011). According to the findings from the participant who noted that social entrepreneurs alone cannot respond to all social issues, there is therefore the need for meaningful interaction between all social and economic elements as suggested by Fueglistaller *et al.* (2016), such as traditional entrepreneurs, NGOs, governments and global organisations. A specialist in SE stated that, *"Many of the world's important social problems have such deep roots and spread that they cannot be resolved alone by governments and traditional non-profit groups. The commercial and governmental sectors must cooperate, using diverse methods to address these challenges"*. Participant E. Consequently, to mitigate the current social problem, Villis *et al.* (2013), suggested that new models are thus being developed in the field for the connection between the business idea and social aims and the social and private sector. According to the Villas study, social firms fall halfway between regular non-governmental organisations and profitable companies.

The findings from the research objective in this section of the study attempt to discuss the relationship between social entrepreneurship and public assistance while understanding the background and contributing variables that lead to the development of social entrepreneurship and show how social entrepreneurship has developed at the intersection of the private, public, and non-profit sectors. Findings outline key trends in social entrepreneurship and highlight successful entrepreneurial initiatives that address social issues. The participant also indicated how government can use social entrepreneurship to benefit society and improve people's lives. The findings indicate that the government and social entrepreneurs share a common goal of resolving social problems effectively and efficiently.

A specialist in social entrepreneurship stated that *"in theory, there should be a link between social entrepreneurship and public assistance since generation Z and parts of generation Y are fundamentally driven by sustainability orientation, which implies that they care about the environment, the society in which they live, as well as the interconnection that occurs with profit"*. Participant B. Generation Z have a higher tendency toward social entrepreneurship than baby boomers and the older group of generation Y, based on a trait they demonstrate. For instance, the people who were born around 1980. Notwithstanding, very little research has been conducted on this relationship. Findings in this study emphasise the need for government to support

social entrepreneurial initiatives in a variety of ways, to encourage social entrepreneurs to innovate and to create enabling environments for their efforts to solve societal problems. Globally, the field of social entrepreneurship has seen tremendous growth in recent years, with increasing recognition from the public, private, and non-profit sectors, as well as researchers, academics, and policymakers (Wolk, 2007).

Impact of education on the social entrepreneurial ecosystem

According to the Global Entrepreneurship & Development Institute (GEDI) (2017:32) report, "South Africa works best where it counts: the pillars that contribute to economic success including entrepreneurial aspirations, innovation, high economic growth, globalisation, and risk capital." The report also states, however, that start-up skills in South Africa are the lowest contributing factor in assessing the entrepreneurial ecosystem and links this weakness to the two main factors: the poor education system and perception of abilities and skills (Global Entrepreneurship and Development Institute, 2017). According to participants of this study, *"Youth entrepreneurial development initiatives should concentrate, in the short term, to overcome the start-up skills deficit (possibly outside educational systems), and in the long term on inclusive education policies that would deal with inequality in the education system and develop a curve to develop an inclusive business ecosystem.,"* – Participant I.

The above findings are in line with Broadbent (2016:54), who perceives youth entrepreneurial development as an unmistakable practice supported by theories. To overcome the start-up skills deficit, the suggestion from participants can be considered as key measures for reducing the unfavourable impact on the entrepreneurial environment of the existing education system. This is particularly true for unemployed youths, who are less likely to succeed when starting new companies since their start-up capabilities are compromised. The theory of development in this area, is seen to be pivotal given that youth entrepreneurial development is required to build up youth-centred models to legitimise what they do (Commonwealth Secretariat, 2014).

Perspectives on social entrepreneurship as a development tool

To understand the perspectives on Social Entrepreneurship (SE) as a development tool scholars like Sassmannshausen and Volkmann (2018) pointed out that the debate over social entrepreneurship is currently being expanded owing to its effect and they think that prior social entrepreneurship research largely focused on conceptualisation.

The origins of social entrepreneurship are largely in private sector developments (Tiwari *et al.*, 2017a). One of the wider issues in social entrepreneurship is how a social business may be defined and differentiated from a profit-based company (Lubberink *et al.*, 2018).

There are certain important regions in the province (KZN) where it is generally acknowledged that we are having difficulties. The problems with education are some of the most well-documented difficulties. *“We need to ask ourselves what kinds of talents are low level skills, and how can social entrepreneurs solve this issue?”* – Participant A. One cannot keep sending every single child to university for programs that do not contribute to productive sectors of the economy since this only increases the number of individuals looking for employment. South Africa has precisely the abilities that are required, including various types of artisans and boilermakers which are in short supply not only within South Africa but also outside of national borders.

“We are also considering the likelihood that South American nations could produce some of their highest export revenues from the money they receive from the diaspora community” – Participant H. There is a good opportunity at stake to show off South African skills to the world. If we consider these areas to be the arts in South Africa, we are very far behind, the creative industries, such new musical genres like AMAPiano that have gained international attention. This demonstrates that there is local expertise that can be exported, as you may be aware, when these artists travel abroad, most of the revenue they earn is actually spent within South Africa's borders.

“Many graduates struggle to find employment locally or opt to teach English abroad in countries like China, Korea, Taiwan, etc.” – Participant D. At the end of each month, graduates send money back to South Africa, where it is used to support the local economy. If training were provided in line with both South Africa's demands and the needs of the entire world, it is possible to export skills. *“A significant amount of money will be earned by the export of skills that can be used locally. It is saying what might happen if the economy is upskilled in areas like artisans?”* – Participant D.

Several of the tasks that, for instance, neighbouring nations of South Africa are asking China to execute skills that may really be carried out by South Africans there, generating income for the country's economy. If that is the case, then that is the only way our nation can exist in a sustainable manner. *“Donald Trump, for his widely*

acknowledged poor governance, got something right. When he first took office, he questioned why American taxpayer money should support companies that are decreasing employment worldwide.” Nonetheless, the country's unemployment rate continues to rise. Hence, this explains why some companies closed in South Africa. This is basically what we are saying: “let us start doing more stuff in South Africa's nine provinces that we can market to the rest of the globe to lower things like unemployment.” – Participant J.

Several of the problems we face, like crime, will also fade away once the levels of poverty start to drop. This indicates that for social entrepreneurship to thrive and be able to deliver all these results, we really need to have strategies that are likely to be enabling entrepreneurship. *“How can social entrepreneurship be encouraged in addition to the funding from the FIS Funds Network and a percentage of some of the earnings that are obtained from the private sector? How, exactly, can we have private institutions that train artisans? With money obtained from both the public and commercial sectors for and as subsidies.” – Participant L.* The most effective methods for making it happen and manage it are not sophistry. Hence, from an academic perspective, we are looking at a social competence as a society.

It is important to get together and ask what role we can each play in meeting social needs while simultaneously assuring financial success. It is how we can truly assist social economic development and entrepreneurship. *“If, theoretically, we were to list 10 societal difficulties that exist in a province or throughout South Africa, how would we prioritise them and determine which of the 10 is the most urgent problem? Well, in my opinion, South Africa must develop a knowledge-based economy.” – Participant K.* If countries like South Korea are instances of knowledge economies, where their shipping sector creates, their ship-building industry generates billions of dollars, then South Africa will benefit greatly from one as well.

The above findings agree with Cornwall and Wallace (2016), who identify social entrepreneurs as business people in the business of making profits and by extension who take on social responsibility to improve their communities. In this context, they are social entrepreneurs. On the other hand, the new revival of social entrepreneurship is a regeneration of a spirit, promoting the roots of the non-profit sector, independence and the duty of individuals to act to change social issues (Mair et al., 2006).

The above findings from participants is contrary to the concept of social entrepreneurship that has been given extra accentuation by the acknowledgement of non-governmental organisations (NGOs). The concept generally is supported by donations and not driven by making a profit. These have been fruitless in the eradication of poverty (Rametse and Shah, 2013). More findings from the participants indicated that the youth are not willing to adopt the concept of social entrepreneurship, since the development of private enterprises are for profit making. *"No, I would reject the use of social entrepreneurship concepts. The development of a private enterprise is geared toward profit and personal interests, thus it is difficult to imagine how private enterprises may contribute to social objectives."* – Participant E. Exacerbating this issue is that contributors, who customarily subsidised these non-profit organisations, are progressively experiencing "investor problems" (Smith, Cronley and Barr 2012). Likewise, the findings from some participants in this regard, show that they do not see the benefits of adopting the concepts of social entrepreneurs for social development. Other participants noted that they would have to fend for their welfare first before contributing to others' social wellbeing. *"No, I cannot see any advantage in doing so since I have to cope with my own life before I try to help others"* – Participant G. According to Lubberink *et al.*, (2018), the academic topic of social entrepreneurship nevertheless takes centre stage, and the main aspect of social entrepreneurship is the production of social value (Smith-Hunter, 2011). According to Bruin and Lewis (2015), the social entrepreneurship setting is broad as well as complicated. Tiwari *et al.* (2017b) say that social enterprises are offering the economically-disadvantaged segment of society an inventive notion of delivering goods, services and profitability. Baporikar (2017) has expressed the view that social entrepreneurs are like corporations. They also make wealth, but their primary focus is on society through the resolution of society's demands.

Challenges facing social entrepreneurship development

Although the field of social entrepreneurship has much potential to help countries deal creatively with their most pressing problems, it faces many challenges that hamper it. Social entrepreneurship operates in diverse cultures, and geographical areas and so addresses a whole range of social issues (Sud *et al.*, 2009). Several desirable practices and regulations on both the academic and the practical fronts are therefore difficult to define. From the findings, it was noted that some students enrol in youth

development programs to receive the stipend that comes with them. Hence, this learning process is not then transformed into practical activity. As a result, resources are not being used effectively. After all, what good is teaching a skill if you never check to see how the students are putting it to use? Whether it is the public or private sector giving the youth development initiatives, there needs to be follow-through. Hence, if longitudinal research could be used as an analogue, it would say that XYZ was trained in this program. *“Probably select 100 individuals, with the goal that, perhaps, in five years, we would have 100 entrepreneurs or, alternatively, 100 social entrepreneurs.”* – Participant F. Assessing the developments from the first to the fifth year would aid in understanding the progression from each financial year. *“How many of the 100 people who responded to the initial call went on to create their own businesses or become social entrepreneurs?”* – Participant F. Throughout it is ideal to discover that a cohort that has successfully started their own business (become entrepreneurs) when you review and follow-up. Nonetheless, there is also a cohort that has not started a business – this means you can potentially draw knowledge from both groups that will improve policymaking in the now and the future.

The proverb *“If you throw money at a problem, it will go away”* is quite old. This is obviously inaccurate given that the youth unemployment rate in the nation is almost 60%. It could be beneficial to examine the percentage of young people who make up 60% of the unemployed who have had some exposure to entrepreneurship during their academic careers. Communities in their immediate vicinity may begin to doubt their methods. Looking at the nations that the Global Economic Monitor (GEM) examine will help to evaluate the prevalence of youth entrepreneurship in the various countries in the world. Research on how other countries may have similar features to our own country can help to develop a better entrepreneurial framework.

If you are an avid reader, perhaps look at “Clem Sunter scenario planning” (2001), to learn more about what is happening in South Africa right now. This book provides an analysis of the mind of a fox and identifies questions one must ask before committing to action. The authors have constructed a matrix around these questions, which assists in identifying the rules of the game; assess the key uncertainties; paint scenarios; evaluate realistic options; and thereby make effective decisions.

Several of these writings are, at least thirty years old. In addition, some of the things he described are happening currently. Perhaps we would be in a better situation if we had looked into such topics. There are many situations where different elements of society are continually feuding, and you realise that the unrest is truly motivated by poverty. In most situations, if one cannot support oneself, one must find a better means to support oneself, which then leads to crime and other similar activities.

Additionally, within the study, the following response was apparent; *"The field has to address water and hunger problems in one nation and misogyny in another country."*

– Participant A. Given the above assertion, this broad range of social problems represents a huge challenge for academics or practitioners theoretically and in the real world. Many participants pointed out that financing for social companies is by far the greatest obstacle. In addition, literature found that most social companies had not secured start-up financing. This is because most social entrepreneurs are individual entities, thus at the outset, it is hard to gather sufficient capital. However, some companies grow over time, but the great majority of companies struggle to preserve their existence and sustainability because of capital or continuing income streams.

"Traditional avenues for support such as – banks or financial organisations that encourage social business growth are rare compared to trade companies." –

Participant C. The social ventures are understood to be organisations that exchange for income and put their surpluses into the business or the community to seek social intentions (Department of Trade and Industry, 2018). Community social ventures are appealing as a direct result of suppositions that they will expand on inert action within communities, such as neighbourhood practices of common help and casual help (Gibson and The Community Economies Collective, 2017). In this manner, people – and the connections between them – are re-imagined as "social resources" that can be utilised for development purposes, a view which resonates with understandings of the third sector as established on the benefits of thinking about others and addressing social needs (Amin, 2009; Pearce, 1993).

CONCLUSION AND RECOMMENDATIONS

Agencies and institutions for youth development are an important source of knowledge of social entrepreneurship and are increasingly regarded as a useful element for the development and promotion of social entrepreneurship as a concept. Practically many

studies have proved, for example, that youth development agencies are a significant factor in the creation, development, and expansion of social enterprises in terms of accessibility to resources.

The results of this study reveal that social entrepreneurship and public assistance are connected. Given that in Quarter 1, 2021, approximately 10,2 million young people between the ages of 15 and 24 were not participating actively in business activities, 32,4% of which were not employed, educated or trained (Statistics South Africa, 2021). This implies that the capacity to teach and develop unemployed young people must be improved urgently to have valuable skills and practical experience. This would allow them to establish companies or to successfully get jobs at an accelerated pace and must be carried out to an extent without sacrificing the quality of such education. Ideally, we must establish capacity for the development of 10.2 million South African young people and expand the current labour markets to accommodate these educated youths rapidly. It is not a feasible aim from a national economic viewpoint alone.

From a simply humanitarian point of view, however, many people can benefit if we take transformation and inclusive economic growth seriously in South African countries. Innovative means of capacity-building should be a priority at every level of education, business, and government to counter the inequalities, poverty and unemployment that are constantly impacting South African youth negatively.

Novelty and contribution to the body of knowledge

The main contribution of this study was to analyse the convergence of social entrepreneurship and youth entrepreneurial development in alleviating social problems such as unemployment. Furthermore, by offering a conceptual definition of social entrepreneurship, this study contributes to the new knowledge base and will serve as a guideline for social entrepreneurs and social entrepreneurship researchers in South Africa.

This study deepened the understanding of social entrepreneurship in young people and outlined the difficulties that prevent young people from starting businesses in KwaZulu-Natal. The research focuses mostly on youth entrepreneurial development due to rising youth unemployment. This study contributes to building literature on the significance of youth development agencies that assist social entrepreneurship. This

research highlights the necessity of youth development agencies to minimise business failure and promote entrepreneurship.

This study offers insight into how important it is to improve social entrepreneurship as a career management choice for young people, especially higher education graduates. This research emphasised that institutions must become centres or hubs for innovative social enterprises. This also emphasises the necessity of skills development programmes within development agencies to alleviate youth unemployment.

Policymakers, government officials, and various social ventures need to address unemployment and poverty reduction. The study contributes to the literature on entrepreneurship development among young people. In the sense that social entrepreneurship theory in this study is applied, this study contributed also to the development of theory. The author was determined to contribute to the current knowledge gap on youth entrepreneurship, social entrepreneurship, and youth development agencies' roles in strengthening their contribution to the creation of employment and alleviating both unemployment and poverty. The study will contribute to research output by publishing papers in accredited journals and conferences. In conclusion, a copy of this paper will be submitted to the University of Zululand Library Institutional Repository for public access to all researchers in South African Institutions.

Recommendations (effective strategies for supporting youth entrepreneurship development)

The researcher concludes that development agencies should be motivated to consider issues related to the development of compatibility, the development of youth interconnections, vulnerability management, listening to untold stories, or paying attention to the social impact of education.

The study further recommends that a drop in the constraints in access to funding, with greater access to credit, would encourage the emergence of new social enterprise ventures and thereby reduce the potential for budgetary uncertainty and reliance on public grants and assistance, as reported in the report for enterprise enterprises with economic goals.

The following are further recommendations therefore made in this study.

Linking social entrepreneurship with education and excluding invariable National Development Policies

The study revealed that the growth of higher education's social entrepreneurship will have more influence on society. In collaboration with university authorities and the community, social entrepreneurship becomes a necessary lesson or university course for students who study and apply it to real life. The standard learning process will make it easier for educators and students to study and learn through the learning method. It might shift their viewpoint and encourage individuals to focus on social entrepreneurship and provide additional insight to support entrepreneurial developments.

The study also revealed that there are national policies that restrict the processes of young people starting businesses. For instance, these policies may come from the Department of Labour which needs a particular waiting period for consideration, a fee-forwarded document, or some certificate. This research advises that social entrepreneurs should make a provision for social entrepreneurs that may require documentation fees, and certification. This reduces the challenges slowing down the development of youth entrepreneurship. This will encourage involvement and participation in entrepreneurship ventures amongst youth.

Conduct additional research in the field of youth social entrepreneurial development

The results in this study relate to the concept that may be referred to as the cost of acquiring jobs. This suggests that there are concrete costs of getting jobs while unemployed young people are looking for jobs. The cost of the interview, the expenses associated with preparing and posting CVs or mailing them to potential employers, and the cost of the appropriate interviews apparel are examples of such costs. The general impact of the combined costs necessary for employment should be observed and understood by empirical evidence demonstrating the scope and magnitude of the problem.

Theoretically, these statistics will provide greater opportunities for innovating and supporting young people, especially unemployed ones. The associated expenditures are frequently mentioned in the literature and are covered by the NGO sector and in some cases by local authorities. However, a quantitative study would be

recommended to establish the average worth per individual seeking employment. Understanding the actual magnitude of employment costs might perhaps enable the government, commercial sector, and non-governmental organisations to better serve the youth.

Attaining an in depth understanding of individual population groups and a cultural inclination to social entrepreneurship

South Africa's culture is rich and diverse, while celebrating its diversity, it also adds complexity for studying specific fields of research, particularly the effects of culture on social entrepreneurship phenomena. A general study such as this one, which examines a demographic profile and observes certain patterns among the students and the unemployed young people in a specific geographic location, is fundamentally constrained since, by design, it generalises across cultures.

Studies on a single demographic group in specific places might also be beneficial; for example, research performed at Empangeni could provide quite different results than a study conducted at Richards Bay, KwaZulu-Natal. They are only 16.0 kilometres apart, yet they have quite diverse cultures and may view entrepreneurship from various and unique perspectives. Understanding the drivers and constraining variables in these situations would provide useful insights into the development of interventions that would deal with cultural attitudes that are likely to prevent youth from considering entrepreneurship, social entrepreneurship and self-employment as a career option.

Conducting a qualitative, quantitative research project with academic, commercial or government funds

This project would monitor and assess the influence on the entrepreneurial system by social entrepreneurship and start-up enterprises. The research would aim to evaluate whether the small-medium enterprise (SME) sector of the South African economy will expand at an accelerated rate to address the social problems through youth entrepreneurial development. The idea is that tackling some of the challenges that now plague South Africa's youth through social entrepreneurship might have a positive long-term social and economic impact.

Establishment of social entrepreneurship-friendly institutions

The establishment of institutions, for a long time, has been a critical step for public authorities to undertake and develop a particular issue. New institutions would lead to the creation of social entrepreneurship systems. These institutions may also take the shape of semi-public institutions. Social Entrepreneurship's purpose is to help people and organisations, who work across sectors to utilise corporate principles to build, measure and scale up the most creative, effective, and sustainable solutions to common social challenges.

Encourage full flexibility

Providing full independence in social problem-solving projects might promote entrepreneurial behaviour. At the same time, the government can establish standards of performance and publish results. These methods guarantee that the necessary activities are completed and that new means of addressing and even overcoming the problems are generated.

Link the public, private, and non-profit sectors to develop solutions to crucial social problems

The government has the unique power to bring together all of the required stakeholders to address a specific social issue. Public authorities can lead the process of identifying the main causes of the social problem, designing a plan of action to address it, and developing solutions by bringing together key stakeholders from all sectors.

Establish award programs to appreciate creative, effective, and innovative solutions

Creating government award systems to recognise and reward achievement in social entrepreneurship would discover and promote successful initiatives. Such assistance may take the form of exposure, training, networking opportunities, and finance, and it would help to accelerate the growth of exceptional entrepreneurship. Several non-profit, academic, and media organisations, including Ashoka, are already supporting award programs that might serve as examples for the government.

Provide training to all three sectors on the new approach to social problem solving offered by social entrepreneurship

Social entrepreneurship offers not just new means of resolving recurring social problems, but also new ways of thinking about problems. Public officials may play an important role in teaching the public, commercial, and non-profit sectors how to approach social problem solving from a new, business-oriented viewpoint that promotes cost-effective and results-driven solutions.

Establish policy to allow and support social entrepreneurship

The Establishment of policy and elimination of barriers to encourage social entrepreneurship and sustain success. Policymakers and heads of government agencies at all levels may work to create policies to promote social entrepreneurship while also ensuring that current and future policies and processes do not provide unexpected challenges.

Generate and employ economic or non-economic resources for social entrepreneurship

Seek collaborations with foundations and companies to promote social-entrepreneurial efforts. The government can increase the impact of public funds by collaborating with foundations and companies to encourage social entrepreneurship initiatives. Forming partnerships with institutions and companies can allow the government to test new ideas in a knowledge context while offering institutions and businesses access to the whole system, such as education. Such collaborations would also make people aware of a specific social issue while using the knowledge of stakeholders from the non-profit and business sectors. Given the limitations of current government resources, such programs are sometimes the only means to launch new, resource-intensive initiatives.

Creating a public-private social innovation fund

A public-private social innovation fund can effectively utilise taxpayer funds with private capital to provide resources for sponsoring social-entrepreneurial initiatives. Creating a fund particularly dedicated to developing social entrepreneurship would allow the government to use an achievement investment model, similar to venture funding sources, to both start and development ventures.

Create a national social innovation foundation

The establishment of a national social innovation foundation will elevate social entrepreneurship to a national priority. A relatively tiny portion of the government budget could provide a sizable pool of cash for fostering social entrepreneurship, opening the path for South Africa to become a leader in this field in the twenty-first century and beyond. Government agencies might all contribute to the establishment of the National Social Innovation Foundation. Such financing would be a great help in igniting creativity, establishing a research agenda, and implementing solutions.

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The impact of entrepreneurship education on small, medium and micro enterprises' performance in South Africa amid and after COVID-19: A scoping review

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ABSTRACT

Entrepreneurship education has emerged as a potential catalyst for enhancing the performance and resilience of small, medium, and micro enterprises (SMMEs) in South Africa, especially amid and after the COVID-19 pandemic. This scoping review examines the impact of entrepreneurship education on SMME performance in the South African context, with a focus on the COVID-19 pandemic. The study adopts the Resource-Based View (RBV) theory as the conceptual framework to understand the underlying mechanisms. A systematic literature review approach following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines was employed, involving four stages of screening and analysis. The databases Web of Science, Scopus, and Google Scholar were utilised for identifying relevant studies. The review revealed a substantial body of literature investigating the relationship between entrepreneurship education and SMME performance. Findings suggest that entrepreneurship education programs positively influence various aspects of SMME performance, including innovation, adaptability, growth, and market competitiveness. Moreover, the COVID-19 pandemic has accentuated the importance of entrepreneurship education in enabling SMMEs to navigate unprecedented challenges, seize new opportunities, and build resilience. Based on the review findings, several recommendations can be made for practitioners, policymakers, and educational institutions. Firstly, there is a need to enhance the accessibility and quality of entrepreneurship education programs tailored to the unique needs of SMMEs in

South Africa. These programmes should emphasise practical skills, digital literacy, and resilience-building strategies. Additionally, fostering collaboration between educational institutions, government agencies, and industry stakeholders can create a supportive ecosystem for entrepreneurship education. Moreover, policymakers should consider incentivising and supporting SMME participation in entrepreneurship education initiatives through funding and policy interventions. By embracing entrepreneurship education as a strategic tool, South Africa can foster the growth and resilience of its SMME sector, contributing to economic development, job creation, and sustainable entrepreneurship in the face of ongoing challenges.

Keywords: entrepreneurship education, small, medium, and micro enterprises (SMMEs), South Africa, COVID-19, scoping review, Resource-Based View (RBV), performance, resilience.

INTRODUCTION

Entrepreneurship education has gained increasing recognition as a significant driver for the performance and resilience of small, medium, and micro enterprises (SMMEs). Entrepreneurship education has emerged as a promising solution to address these challenges by equipping SMME owners and entrepreneurs with the necessary knowledge, skills, and competencies (Urbano *et al.*, 2021). It encompasses a wide range of educational interventions aimed at fostering an entrepreneurial mindset, enhancing business management skills, promoting innovation, and encouraging the adoption of sustainable business practices (Kuratko, 2020). By providing SMMEs with the tools and support they need to navigate the complexities of the business landscape, entrepreneurship education has the potential to enhance their performance and resilience.

Entrepreneurship education has been recognised as a potential tool to enhance the capabilities and resilience of SMMEs (Hairudinor, Daradjat and Asman 2020). Therefore, higher education Institutions (HEI) have to implement entrepreneurship education to encourage students to venture into entrepreneurship (Mkhonza and Sifolo 2021). The higher education institution entrepreneurship development policy has also put in a lot of effort and encouragement in entrepreneurship development at the local HEIs to produce quality entrepreneurial graduates who will act as catalysts for the transformation of the national economy (Chudziński *et al.* 2023). By providing

aspiring and existing entrepreneurs with the necessary skills, knowledge, and resources, entrepreneurship education can equip them to navigate the uncertainties brought about by the COVID-19 pandemic and adapt to the changing business landscape (Chudziński *et al.* 2023)

Notably, SMMEs play a vital role in the South African economy, contributing to employment generation, innovation, and economic growth (Fatoki, 2014). However, they often face numerous obstacles such as limited resources, a dynamic business environment, and a lack of access to formal business training (Urban, 2015). The following studies have highlighted the positive impact of entrepreneurship education on SMME performance. For example, Kiggundu (2002) found that entrepreneurs who had received entrepreneurship education were more likely to start businesses, have higher survival rates, and achieve higher sales and profitability. Similarly, Bosma *et al.* (2012) demonstrated that entrepreneurship education positively influenced entrepreneurial intentions and subsequent business creation.

However, it is not without hindrances, the COVID-19 pandemic has posed significant challenges to SMMEs in South Africa, affecting their survival, growth, and sustainability (Mkhonza and Sifolo 2021). The COVID-19 pandemic has further underscored the importance of entrepreneurship education in supporting SMMEs through the crisis. The pandemic has brought unprecedented disruptions to businesses, with widespread economic downturn, supply chain disruptions, and shifts in consumer behaviour (Acs *et al.*, 2020). In such challenging circumstances, entrepreneurship education equips SMMEs with the necessary skills to adapt their business models, innovate, and seize emerging opportunities (Meek *et al.*, 2020). By fostering resilience and enhancing the ability to navigate crises, entrepreneurship education can contribute to the survival and recovery of SMMEs amid and after the pandemic.

PROBLEM STATEMENT

Entrepreneurship plays a vital role in driving economic growth and fostering resilience within small, medium, and micro enterprises (SMMEs) (Fatoki 2021). The capacity and capability of SMMEs to create employment and contribute positively to economic growth has created a permanent position for them in the economic development agenda at national, regional and global levels. SMMEs contribute towards income

generation, curbing unemployment and reducing levels of inequality (Ladzani, 2010; Kumah and Babatunde, 2014). It is important to note that, the survival entities which make up the majority of South African-based SMMEs have very little growth potential and they are highly vulnerable to economic shocks. In 2020 the global political economy was shocked by the effects of the corona virus, hereafter COVID-19 (World Health Organisation [WHO], 2020). Since then the virus has spread across the world, leading to it being declared as a pandemic that required economies to be shutdown to varying degrees, in order to curb infection rates.

The COVID-19 pandemic has brought unprecedented challenges to the business landscape, necessitating the exploration of strategies that can enhance the performance and sustainability of SMMEs in South Africa. In this context, entrepreneurship education emerges as a potential solution to equip SMME owners and entrepreneurs with the necessary knowledge, skills, and capabilities to navigate the adverse effects of the pandemic and thrive in the aftermath (World Bank, 2020). However, despite the growing recognition of entrepreneurship education's potential benefits, there is a lack of comprehensive empirical research examining its specific impact on the performance of SMMEs in South Africa amid and after the COVID-19 pandemic. While some studies have explored the broader association between entrepreneurship education and business outcomes, there is a need for context-specific investigations that consider the unique challenges faced by SMMEs in South Africa and the unprecedented disruptions caused by the pandemic. Moreover, previous research has primarily focused on developed countries, neglecting the specific nuances of the South African context. It is essential to consider the socio-economic disparities, institutional challenges, and resource constraints that characterise the South African business environment when examining the effectiveness of entrepreneurship education for SMMEs. To address this research gap, this study aims to investigate the impact of entrepreneurship education on the performance of SMMEs in South Africa amid and after the COVID-19 pandemic.

RESEARCH AIMS AND OBJECTIVE

1. To examine the impact of entrepreneurship education on the performance of small, medium, and micro enterprises (SMMEs) in South Africa, particularly in the context of the COVID-19 pandemic.

2. To suggest possible strategies for enhancing entrepreneurship education on the performance of small, medium, and micro enterprises (SMMEs) in South Africa, during the COVID-19 pandemic era.
3. To make recommendations for enhancing entrepreneurship education on the performance of small, medium, and micro enterprises (SMMEs) in South Africa

LITERATURE REVIEW

Entrepreneurship education has emerged as a promising approach to equipping SMME owners and entrepreneurs with the necessary knowledge, skills, and competencies to navigate the challenges and capitalise on opportunities in the business landscape (Kuratko, 2020). Bosma *et al.*, (2012) noted that there is a positive influence of entrepreneurship education on SMME performance. According to Mkhonza and Sifolo (2021), Small medium and micro enterprise owners (SMMEs) have long been recognised as the apex of the hierarchy that determines the behaviour of the business and thereby bears a heavy responsibility for the vitality of the free enterprise society. SMMEs are credited with providing specialised goods and services that are ignored by the largest businesses. SMMEs intensify competition, thereby increasing economic efficiency (Chimucheka 2013).

SMMEs across South Africa represent more than 98 percent of businesses, employ between 50 and 60 percent of the country's workforce across all sectors, and are responsible for a quarter of job growth in the private sector (Mkhonza and Sifolo 2022). Owner-managers of SMMEs run majority of businesses in the country, whilst entrepreneurs pioneer new markets for innovative products, creating new jobs and enhancing economic growth (Rankhumise and Letsoalo 2019). Okuwhere and Tafamel (2022) state that in applied work, labour economists often equate entrepreneurs with the self-employed, on the grounds that the self-employed fulfil the entrepreneurial function of being risk-taker residual claimants. However, Rankhumise and Letsoalo (2019) argue that this definition is too broad, claiming that only business owners who coordinate factors of production (in particular those who create job opportunities for other people) are really entrepreneurs. Entrepreneurship has only recently come to be regarded as a subject (Ncube 2022). The small and medium business owners are at the most intriguing and one of the most elusive characters in economic analysis (Ibidunni, Ogundana and Okonkwo 2021).

Governments all over the world extol its benefits and implement policies designed to promote entrepreneurship. A complete view of entrepreneurship recognises its multidisciplinary academic underpinnings, drawing from Commerce, Humanities, Science and Technology (Ibidunni, Ogundana and Okonkwo 2021). This heterogeneous provenance reflects the multidimensional nature of entrepreneurship, which is partly self-employment. According to Ncube (2022) entrepreneurship education provides student entrepreneurs with the information, knowledge, and other resources they need, thereby forming a strong atmosphere of innovation and entrepreneurship, reducing environmental uncertainty, and creating a good environment for innovation and development.

Entrepreneurship education and SMME Performance

The objective of entrepreneurship education according to Hairudinor, Daradjat and Asman (2020), includes raising peoples' awareness of self-employment as a career opportunity, promoting the development of personal qualities that are relevant to entrepreneurship such as creativity, risk-taking, and responsibility, and providing the technical and business skills that are needed in order to start a venture. Lambert and Rennie (2021) state that entrepreneurship education is the structured and formal transmission of entrepreneurial competencies, which in other words, refers to the skills, concepts and mental awareness used by individuals during the process of starting and developing their growth-oriented businesses. According to Secundo *et al.* (2021), entrepreneurship education is concerned with fostering creative skills that can be applied in practices, education, and environments supporting innovation. This definition of entrepreneurial education leans on the following underlying definition of entrepreneurship: "Entrepreneurship is when you act upon opportunities and ideas and transform them into value for others. The value that is created can be financial, cultural, or social. Student entrepreneurs use multi-party interaction to achieve knowledge iteration in the learning network; the innovation process is the result of interactions among the environment, organization, and entrepreneurs (Ibidunni, Ogundana and Okonkwo 2021; Secundo *et al.* 2021). Entrepreneurs are made, not born, by imparting the knowledge and skills needed for a new business venture. The process of shaping the ability of student entrepreneurs is a social interaction process in which information resources are acquired and transformed in the form of

observation or direct participation in entrepreneurship education (Secundo *et al.* 2021).

Entrepreneurship education provides student entrepreneurs with the information, knowledge, and other resources they need, thereby forming a strong atmosphere of innovation and entrepreneurship, reducing environmental uncertainty, and creating a good environment for innovation and business performance (Ncube and Lekhanya 2021). Hairudinor, Daradjat and Asman (2020) define business performance as the company's ability to profit from resources and achieve its objectives. It is well established in the literature that the entrepreneur/founder is one of a number of key factors that determine the performance of new ventures. An emphasis on competencies as a means of capturing key aspects of the entrepreneur that impact venture performance is a relatively new development, rooted in early work on managerial competencies that impact performance of larger firms. Ibidunni, Ogundana and Okonkwo (2021) postulate that competencies may be influenced by both traits and cognition but transcend each in that they represent observable and measurable knowledge, behaviours, attitudes, and skills that are instrumental in task performance and that can be developed. Meanwhile, business performance becomes an important aspect for an organisation to manage well, for that reason constitutes an integral part of all activities and operations performed by entrepreneurs to strengthen their business (Chudziński *et al.* 2023). Hairudinor, Daradjat and Asman (2020) state that the role of performance business as a result of organisational goals achieved through various strategies. Entrepreneurship education is significantly related with the SMME's performance and also helpful for gaining the sustainable competitive advantage (Chimucheka 2013).

In the specific context of South Africa, several studies have explored the relationship between entrepreneurship education and SMME performance. Fatoki and Chindoga (2011) found a positive association between entrepreneurship education and the performance of SMMEs in South Africa, particularly in terms of growth and employment creation. Another study by Urban (2015) revealed that entrepreneurship education positively influenced the entrepreneurial intentions and actions of SMME owners in South Africa, leading to improved business performance.

THEORETICAL FRAMEWORK

The Resource-Based View theory

The Resource-Based View (RBV) theory holds a prominent position in the field of management theory, recognised as one of the most influential and widely cited theories (Ljungquist, 2007). Von Krogh and Roos (1995) and Petts (1997) emphasise that RBV provides an inside-out approach to comprehending competitive advantage, explaining why certain companies consistently outperform competitors in the same industry, despite possessing similar resources. This approach begins with evaluating an organisation's resources, capabilities, and core competencies (Black and Boal, 1994).

Grant (2008) posits that idiosyncratic resources and capabilities are inherently diverse across firms within an industry, forming the foundation for long-term corporate strategy and profitability. Carmeli and Tishler (2004) highlight the resource-based view theorists' argument that the performance of organizations can be attributed to disparities in their resources and capabilities. Furthermore, Ireland *et al.* (2003) observe that small, medium, and micro enterprises (SMMEs) that outperform their competitors in the market exhibit greater efficiency in nurturing and leveraging resources. Barney *et al.* (2001) emphasise that the central focus of RBV lies in the ability of SMMEs to effectively accumulate and deploy resources.

Building upon Barney's early contributions, the RBV theory suggests that SMMEs gain a competitive advantage when they develop resources that are valuable, rare, inimitable, and non-substitutable (Barney, 1991). Moreover, Stacey (2001) suggests that socially complex resources generated through collaborative team efforts are difficult to replicate. Thus, the utilisation of resources to cultivate distinctive competencies is considered more crucial than the mere possession of resources and capabilities (Mahoney and Pandian, 1992). Recent scholarship by Rantanen (2021) and Furr *et al.* (2021) emphasises that the sustainability of competitive advantage according to the RBV theory relies on highly valuable, scarce, inimitable, and non-substitutable organisational resources. These resources are effectively leveraged through the implementation of policies and procedures aimed at exploiting them.

According to the RBV theory, organisations, including SMMEs, can achieve a competitive advantage and improved performance by effectively leveraging their

unique resources and capabilities. In the context of entrepreneurship education, the theory suggests that such educational programs can contribute to the accumulation of valuable resources and the development of capabilities that enhance SMME performance. Entrepreneurship education equips individuals with knowledge, skills, and competencies necessary for entrepreneurial success, including adaptability, innovation, and resilience. By participating in entrepreneurship education, SMME owners and entrepreneurs have the opportunity to acquire and develop idiosyncratic resources and capabilities that set them apart from their competitors.

Scholars such as Sharma (2021), Safari *et al.* (2020), Camilleri (2021), and Manzanares (2019) contend that the RBV theory encompasses core competencies, dynamic capabilities, resource availability, and service quality perspectives as vital factors influencing the performance and competitive capacity of SMEs. Therefore, the Resource-Based View theory offers valuable insights into the competitive advantage and sustainable performance of SMMEs. By considering the unique characteristics of resources and capabilities, as well as the development of distinctive competencies, this theory contributes to our understanding of how SMMEs can effectively leverage their resources to gain a competitive edge and enhance performance in the business landscape.

Amid and after the COVID-19 pandemic, SMMEs have faced unprecedented challenges, including disruptions in supply chains, changing consumer behaviour, and economic uncertainties. The RBV theory suggests that entrepreneurship education can play a pivotal role in helping SMMEs navigate these challenges by providing them with the necessary resources and capabilities to adapt, innovate, and seize new opportunities. Through entrepreneurship education, SMMEs can gain insights into effective crisis management strategies, learn how to leverage digital technologies, and develop new business models suited to the changing landscape. By applying the principles of the RBV theory, entrepreneurship education can contribute to enhancing SMME performance during and post-pandemic by building their resource-based capabilities, fostering strategic thinking, and enabling them to effectively allocate and deploy their resources in response to dynamic market conditions. Furthermore, the RBV theory highlights the significance of cultivating core competencies and dynamic capabilities, which are key components of entrepreneurship education. By nurturing

these competencies and capabilities, SMMEs can improve their ability to identify and exploit opportunities, adapt to market changes, and sustain a competitive advantage.

METHODOLOGY

This study employed a systematic literature review approach to critically evaluate the existing body of literature pertaining to entrepreneurship education and its impact on the performance of small, medium, and micro enterprises (SMMEs) in South Africa amid and following the COVID-19 pandemic. The review adhered to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines, which encompass a four-stage flowchart for comprehensive analysis (Moher *et al.*, 2009). Figure 1 (see below) presents the PRISMA tool, which employs various techniques to systematically search and review relevant literature. The utilisation of the PRISMA guidelines enables researchers to report evidence-based findings and facilitates the systematic and critical appraisal of published literature (Moher *et al.*, 2009). The PRISMA framework encompasses four key elements: identification, screening, eligibility, and inclusion of studies. While initially developed for the healthcare field, the PRISMA protocol is equally applicable in diverse disciplinary domains.

The adoption of the PRISMA protocol in this study offers several advantages. Maurya, Mohta, and Shunmugasundaram (2023) highlight that one of the primary benefits of using the PRISMA protocol is the time-saving aspect of conducting targeted searches for articles within the subject area. Given the dearth of a comprehensive list for conducting a systematic literature review specifically focused on SMMEs amid the COVID-19 context, researchers often rely on existing descriptive protocols and meticulously execute and report each stage of the review process (Pahlevan-Sharif *et al.*, 2019). The utilisation of the PRISMA protocol ensures a rigorous and systematic analysis of relevant studies, enabling researchers to provide evidence-based insights into this critical area of inquiry.

Review planning

Upon determining the objective of the study, the initial step involves the identification of search terms or keywords. Moreno-Montes De Oca *et al.* (2015) emphasise the importance of this decision-making process, which entails specifying the search criteria, including the desired time interval and the selected sources. In this study, the

identified keywords were "entrepreneurship education," "performance of SMMEs," "South Africa," and "amid COVID-19 pandemic era." To ensure a comprehensive search, multiple database search engines were utilised to retrieve a wide range of relevant articles and studies examining the impact of SMMEs on performance in South Africa. The selected databases for this study included Web of Science, Scopus, and Google Scholar, as they are prominent sources of peer-reviewed literature covering diverse disciplines. Briner and Denyer (2012) suggest using multiple databases to mitigate bias and enhance transparency in the study protocol. The systematic literature review process encompassed the inclusion of papers published in English-language journals only. The inclusion and exclusion criteria for selecting papers has been illustrated in Figure 1 below.

A comprehensive search on the selected databases (Web of Science, Scopus, and Google Scholar) yielded a total of 662 papers, with 6 duplicates identified (see Figure 1). The subsequent screening process involved the analysis of titles, abstracts, and/or keywords, resulting in the exclusion of 201 articles that did not meet the inclusion criteria. Among the excluded articles, 20 were qualitative in nature, 17 were related to entrepreneurship but did not align with the objective of the study, and 23 were deemed ineligible. Consequently, a total of 19 articles remained and underwent a thorough review.

Review conducting

According to the proponents of the Systematic Literature Review (Tranfield *et al.*, n.d.), the research paper should encompass two distinct phases: descriptive analysis and main analysis. The descriptive analysis entails collecting information such as publication dates, journal sources, and author affiliations to identify trends within the research field. This information aids in providing a comprehensive overview of the literature landscape. On the other hand, the main analysis involves a systematic and meticulous examination of the collected papers to align with the study's objectives. This process commenced with a thorough reading of the full-text articles to gain a comprehensive understanding of their contents. Subsequently, the authors categorised the studies based on the study's objectives and research questions. The information was then recorded, consolidated, and systematised to facilitate a coherent analysis.

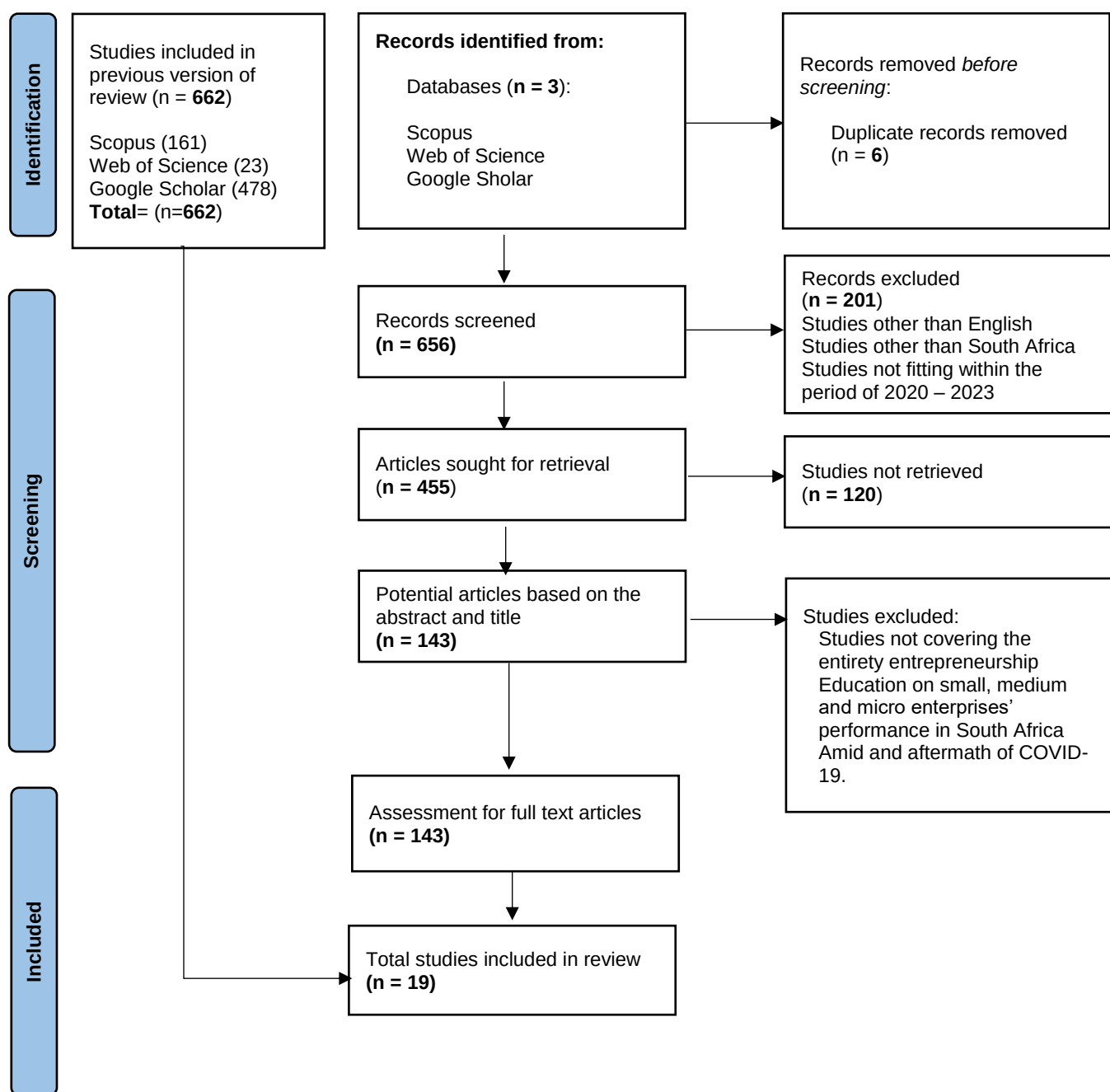


Figure 1. PRISMA flowchart of the Systematic Literature Review. Source: Moher *et al.* (2009)

Result reporting

Following the completion of the analysis process, Tranfield *et al.* (n.d.) emphasise the significance of providing a comprehensive report that validates the rigour of the Systematic Literature Review and elucidates the overall outcomes. In line with this, the researchers embarked on an extensive analysis, considering the research objective and delving into the main findings and trends identified within the selected studies. The aim was to synthesise and present a coherent narrative that captures the

essence of the research, sheds light on key insights, and highlights any significant patterns or themes that emerged from the analysis. By thoroughly documenting and reporting the results, the research team aims to contribute to the existing body of knowledge on the impact of entrepreneurship education on the performance of small, medium, and micro enterprises in South Africa amid and after the COVID-19 pandemic.

DISCUSSION

The impact of entrepreneurship education on the performance of SMMEs in South Africa, during the COVID-19 pandemic era

The impact of entrepreneurship education on the performance of SMMEs in South Africa during the COVID-19 pandemic era has been a subject of growing interest among researchers. Several recent studies have examined the effects of entrepreneurship education on SMMEs in South Africa, particularly during the challenging period of the COVID-19 pandemic. These studies have focused on various dimensions of SMME performance, including growth, innovation, resilience, and adaptability. For example, one noteworthy study conducted in 2020 by van der Merwe and Urban explored the impact of entrepreneurship education on SMME growth during the COVID-19 pandemic. The results revealed a positive relationship between entrepreneurship education and SMME growth, indicating that entrepreneurs who had received formal education and training were more likely to experience business growth even amidst the challenging circumstances imposed by the pandemic.

In support, Bell and Bell (2020) posit that effective entrepreneurship education provides student entrepreneurs with the theoretical grounding and knowledge about entrepreneurship and should enable students to engage with practical experiences where this knowledge can be critically applied to develop practical entrepreneurial skills, thus contribute to SMME performance. Engaging with practical projects can lead students to develop their self-efficacy in accordance with the tangible achievements from this type of practical activity (Nowinsky *et al.*, 2019). Practical entrepreneurship education activities focusing on creating value, can support students in identifying entrepreneurial opportunities (Lackéus, 2020). For instance, in a study by Urban (2020), the influence of entrepreneurship education on entrepreneurial intentions and actions among SMME owners in South Africa was examined. The results showed that

entrepreneurship education positively influenced entrepreneurial intentions, leading to increased business creation and improved SMME performance. This study underscores the importance of entrepreneurship education in fostering an entrepreneurial mindset and empowering SMME owners to take proactive steps towards business success.

Entrepreneurship education has a positive effect on the development of students' creativity in solving problems, communication skills, and opportunity identification (Karlsson and Moberg, 2013; Muñoz *et al.*, 2020). It is clear that there is much evidence that entrepreneurship education has a positive impact on students, and the capacity of students to recognise opportunities. The literature reveals that entrepreneurship education variables have a significant impact on SMME performance. When entrepreneurship education is high, entrepreneurship performance is high. Moreover, a study by Nkosi and Fatoki (2020) investigated the role of entrepreneurship education in promoting innovation among SMMEs in South Africa during the pandemic. The findings suggested that entrepreneurship education programs positively influenced the innovation capabilities of SMMEs, enabling them to adapt their products, services, and business models to meet the changing market demands and overcome the challenges imposed by the pandemic.

In terms of resilience and adaptability, a study by Mogoba and Letseka (2021) explored the impact of entrepreneurship education on the resilience of SMMEs in South Africa during the pandemic. The results demonstrated that entrepreneurs who had received entrepreneurship education were better equipped to navigate the uncertainties and disruptions caused by the pandemic, demonstrating higher levels of resilience and adaptability in their business operations. Additionally, a recent study by Mafini and Chikandiwa (2021) investigated the influence of entrepreneurship education on the financial performance of SMMEs during the pandemic. The findings indicated that entrepreneurship education positively correlated with improved financial performance, suggesting that the acquisition of entrepreneurial knowledge and skills played a crucial role in enhancing the financial outcomes of SMMEs during these challenging times. Entrepreneurship education has been found to contribute to SMME growth, innovation, resilience, adaptability, and financial performance. These findings highlight the importance of equipping SMME owners and entrepreneurs with the

necessary knowledge, skills, and competencies to navigate the uncertainties and capitalise on opportunities even in times of crisis

Challenges faced by SMMES because of COVID-19

The emergence of the global pandemic, COVID-19, which manifested in South Africa in March 2020, has had profound repercussions on businesses of all sizes. The SMME sector, in particular, has been significantly impacted and experienced considerable losses due to the effects of COVID-19. This situation has raised concerns and has brought about uncertainties, necessitating adaptations in the demand and supply of skills. The COVID-19 pandemic has had a comprehensive influence on all sectors of the economy, fundamentally altering the manner in which businesses operate. The implications of COVID-19 on SMMEs encompass a reduction in business activities, a decline in revenue, an increased reliance on e-commerce, as well as heightened health and safety risks for customers, employers, employees, and partners. Consequently, it is imperative to prioritise reskilling and retraining initiatives to mitigate job losses (W&R SETA Strategic Plan, 2020/25).

The pandemic has intensified the adverse impact that was previously manifested within the SMME landscape, exacerbating the challenges that these enterprises were already confronting even before the advent of the COVID-19 pandemic. These effects are manifesting in various forms, including a significant reduction in the revenues and profitability of many SMEs, along with the unfortunate occurrence of job losses. This downturn can be attributed to the unprecedented drop in demand for the products and services offered by these enterprises, driven by the various restrictions and uncertainties brought about by the COVID-19 pandemic (Kalogiannidis, 2020). Moreover, the pandemic's adverse economic downturn and the ensuing additional shocks have significantly strained the operational frameworks of SMMEs (Rajagopaul, Magwentshu and Kalidas, 2020). Moreover, the response measures undertaken by South Africa, including stringent lockdowns, have inflicted substantial revenue declines upon numerous SMEs (Kalidas *et al.*, 2020). These financial contractions have necessitated SMEs to adopt austerity measures in their business expenditures as a survival strategy (Kalidas *et al.*, 2020). Consequently, the COVID-19 pandemic has rendered SMEs particularly vulnerable within the current economic crisis milieu (Effendi, Sugandini, and Istanto, 2020).

An in-depth exploration by Andersen, Sassoon, Pillay, Govender, and Lane (2020) further illustrates that the impact of the COVID-19 pandemic on SMMEs is grave, with more than 60% of these enterprises facing the looming possibility of closure. This alarming statistic underlines the extent to which the pandemic has amplified the vulnerabilities within the SMME sector, necessitating a comprehensive evaluation of strategies that can potentially mitigate these challenges and facilitate their sustained operations. It is crucial to delve into the multifaceted dimensions of the pandemic's influence on SMMEs, encompassing economic, operational, and financial facets, to formulate informed strategies that can bolster the resilience and recovery of this vital sector within the South African economy. This predicament was compounded by the pre-existing economic recession in the country, coupled with a host of both micro- and macro-level challenges that the SMMEs encountered (Akinyemi and Adejumo, 2017). The introduction of the COVID-19 pandemic brought with it economic shocks of substantial magnitude, further amplifying the adverse repercussions that were already affecting the SMME sector (Kalidas *et al.*, 2020).

In the investigation conducted by Frederick, Hattingh, and Ramlakan (2020), an intriguing revelation emerged, indicating a significant inclination among retail-based SMMEs to curtail their expenditures. Impressively, the study found that a substantial 80% of such enterprises were actively seeking to reduce their spending, with over 70% already executing cost-cutting measures related to transport and travel during the initial phase of the national lockdown. This economic shift was a direct consequence of the sweeping effects of the COVID-19 pandemic and the ensuing lockdown measures, both of which cast a shadow of adverse repercussions on various sectors of SMMEs, including but not limited to mining, manufacturing, construction, agriculture, transport, and real estate (Ede, Masuku, and Jili, 2021).

The overarching impact of the pandemic and lockdown measures has been particularly poignant for SMMEs operating within these sectors. A salient reason for this is that a substantial portion of enterprises in these domains experienced a cessation of operations during the stringent Level 5 lockdown, with their activities continuing to be constrained even as the restrictions eased to Levels 4 and 3 (Kalidas *et al.*, 2020). This consequential curtailment of operations has inevitably translated into a negative trajectory for these sectors, leading to adverse financial implications and stymied growth potential.

However, it is noteworthy that despite these formidable challenges, these sectors house a subset of rapidly burgeoning SMMEs within South Africa. These entities are poised to play a pivotal role in driving economic growth and facilitating the generation of employment opportunities (Rajagopaul, Magwentshu, and Kalidas, 2020). By delving into the nuances of these sectors, their dynamics, and the strategies that various SMMEs within them are implementing to navigate the complexities induced by the pandemic, a more comprehensive understanding can be gleaned. This understanding can pave the way for targeted interventions that aim to enhance resilience, support recovery, and foster the pivotal role of these sectors in propelling South Africa's economic resurgence.

The empirical findings put forth by Cunha, Entwisle, Jeenah, and William (2020) underscore a concerning reality within the landscape of Small and Medium Enterprises (SMEs) in South Africa. A palpable sense of pessimism has permeated a substantial portion of these enterprises, with approximately one third expressing a somber outlook on the nation's economic trajectory and future prospects. Adding to this unsettling sentiment, over 30% of SMEs have experienced a tangible decline in their revenue streams, while an alarming 50% anticipate negative profit margins exceeding -5% over the forthcoming 12 months. This disconcerting scenario warrants comprehensive analysis and attention, as it mirrors a significant downturn within a crucial segment of South Africa's economic ecosystem.

Central to this discourse is the profound impact of the COVID-19 pandemic on SMEs, which bears ramifications not just for the enterprises themselves, but for the broader socio-economic fabric. It is paramount to comprehend that SMEs occupy a pivotal role in fostering economic growth, job generation, and fostering inclusive economic development (Glocker and Haxton, 2020). This narrative resonates particularly within the South African context, where SMEs collectively represent a staggering 98% of all businesses. Strikingly, they account for a quarter of the private sector workforce, contribute a noteworthy 39% to the national Gross Domestic Product (GDP), and showcase a substantial 38% ownership by women entrepreneurs (Rajagopaul *et al.*, 2020).

The prevailing turbulence within the South African economy, exacerbated by the onset of the COVID-19 pandemic and the ensuing lockdown measures, has cast a shadow

over the SME sector. Indeed, the very foundational elements that enable these enterprises to thrive have been profoundly impacted. Many have grappled to sustain their operations, a challenge that has cascaded into efforts to protect the livelihoods of their employees, thereby safeguarding vital income streams (Kalidas *et al.*, 2020). The multifaceted implications of this phenomenon ripple beyond the immediate financial realm, encompassing socio-economic stability, employment security, and the holistic well-being of the society at large.

Furthermore, the findings of a study conducted by the National Youth Development Agency (2021) shed light on the significant impact of the COVID-19 pandemic on SMMEs. The study revealed that within the surveyed sample of SMMEs, a staggering 43% had temporarily closed or ceased operations as a direct consequence of the pandemic. This can be primarily attributed to both a decline in demand for products and services and concerns regarding the health and safety of employees. Additionally, the study indicated that approximately 38% of the SMMEs surveyed had resorted to retrenching employees as a means of coping with the adverse effects of COVID-19. For the remaining SMMEs that managed to retain their workforce, salary reductions were implemented as a measure to sustain operations. Notably, over 80% of the respondents reported having implemented salary cuts within their respective organisations.

In addition to the aforementioned workforce-related challenges, the COVID-19 pandemic has brought about a substantial reduction in sales and revenue for SMMEs, exacerbating cash flow problems. This, in turn, has led to heightened financial constraints and difficulties in meeting operational expenses. Furthermore, transportation issues have emerged as a notable obstacle for SMMEs, as disruptions in logistics and supply chains have hindered the timely delivery of goods and services (Ncube, 2020).

According to Fatoki (2021:17), small, medium, and micro enterprises (SMMEs) face a range of challenges brought about by the COVID-19 pandemic. These challenges include limited operational cash flow, a reduction in demand for their products or services, restricted opportunities to acquire new customers, difficulties in resuming normal work activities, logistical and shipping obstacles, and struggles in procuring essential raw materials for production. In comparison to larger firms, SMMEs have

been particularly affected by the negative consequences of the pandemic due to their reliance on labour-intensive operations and their limited reserves of liquidity. Despite the enforced lockdowns caused by COVID-19, SMMEs are still obligated to meet fixed costs such as rent, salaries, and taxes (Fatoki, 2021:17).

SMMEs face significant financial fragility and liquidity challenges, particularly when market demand declines. The implementation of lockdown measures resulted in many SMMEs depleting their cash reserves, leaving them unable to sustain their businesses and support their employees and families (Kunene, 2020:5). This is further supported by the findings of the CDE (2020:3), who reported that 95% of SMMEs in Gauteng province were unable to meet their employee payment obligations due to a lack of revenue. Moreover, Gen 22 on Sloane (2020) highlighted that 93% of SMMEs do not have alternative income sources, and their projections indicate that approximately 71% of small businesses will exhaust their cash reserves due to a decline in income. This dire situation has severely impacted the ability of SMMEs to continue their operations and sustain their livelihoods.

In addition to financial challenges, the shift to remote work has posed significant hurdles for SMMEs. The CDE (2020:3) revealed that 87% of small businesses were not equipped to conduct their operations remotely. As a result, their product and service delivery, customer queries, and customer loyalty have been negatively affected. This inability to adapt quickly to remote work arrangements has further exacerbated the challenges faced by SMMEs during the pandemic. Recognising the plight of SMMEs, the government has made efforts to support them through various relief schemes, including the Debt Relief Finance Scheme, Resilience Facility, and SEDA Funding. These initiatives aim to provide financial assistance and resources to help SMMEs weather the economic downturn caused by the pandemic.

The advent of the COVID-19 pandemic has introduced unparalleled obstacles for small, medium, and micro enterprises (SMMEs) globally, including those situated in South Africa. Acknowledging this predicament, Meek *et al.* (2020) posit that entrepreneurship education emerges as a critical factor in fortifying the resilience and adaptive capabilities of SMMEs. Through equipping entrepreneurs with essential skills in innovation, agile business model adaptation, and leveraging digital technologies,

entrepreneurship education becomes instrumental in aiding SMMEs to navigate the detrimental impacts of the pandemic and capitalise on emerging opportunities.

Possible strategies on enhancing entrepreneurship education on the performance of small, medium, and micro enterprises (SMMEs) in South Africa

In the realm of SMMEs in South Africa, the potential strategies for enhancing entrepreneurship education have emerged as a critical avenue for bolstering their performance and fostering sustainable growth. This discourse aligns with the insightful perspectives of esteemed authors such as Cunha, Entwisle, Jeenah, and William (2020), whose research sheds light on the current challenges faced by SMMEs in the country. By drawing from their findings and synthesising them with scholarly insights from other sources, a comprehensive framework of strategies can be constructed to enhance entrepreneurship education and subsequently uplift the performance of SMMEs.

The study by Cunha *et al.* (2020) that highlights the pessimism prevailing among a significant proportion of SMMEs emphasises the urgency of imparting entrepreneurship education. These educational interventions can be designed to provide SMMEs with the knowledge and skills required to navigate complex economic landscapes, such as the challenges presented by the COVID-19 pandemic. Incorporating this study's insights, a strategy can be devised to develop tailored entrepreneurship education programs that equip SMME owners and operators with adaptive strategies to manage crises effectively and maintain their operations even during challenging times.

Furthermore, considering the findings of Akinyemi and Adejumo (2017), who accentuate the pre-existing headwinds faced by South African SMMEs due to economic recession and micro- and macro-challenges, a multi-dimensional strategy can be crafted. This strategy should focus on integrating entrepreneurship education into the foundational fabric of SMME development initiatives. By fostering collaborations between educational institutions, industry experts, and government bodies, comprehensive and impactful entrepreneurship curricula can be designed. These curricula should encompass topics such as financial management, marketing strategies, legal compliance, and technological integration, addressing the diverse challenges identified by Akinyemi and Adejumo (2017).

The seminal research by Glocker and Haxton (2020), which emphasises the pivotal role of SMMEs in driving economic growth and job creation, provides the impetus to further amplify entrepreneurship education. To align with their insights, a strategy can be formulated to establish dedicated entrepreneurship incubators or accelerators. These centres could provide not only education but also mentorship, networking opportunities, and access to funding sources. This holistic approach, rooted in the research of Glocker and Haxton (2020), would not only equip SMMEs with relevant knowledge but also foster an ecosystem conducive to innovation, collaboration, and sustainable growth.

As highlighted by Rajagopaul, Magwentshu, and Kalidas (2020), the critical role of SMMEs in contributing to South Africa's economic landscape cannot be overstated. In this context, a strategy that leverages the insights from their research could involve the establishment of industry-specific training and development hubs. These hubs would cater to the unique needs of SMMEs operating within different sectors. By tailoring entrepreneurship education to the specific industry challenges and opportunities identified by Rajagopaul *et al.* (2020), such an approach would maximise the relevance and impact of these educational initiatives.

Enhancing entrepreneurship education to improve the performance of SMMEs in South Africa requires the implementation of effective strategies to address the aftermath of COVID-19 pandemic lockdown and the on-going impact. This discussion explores some possible strategies identified in the literature to enhance entrepreneurship education and its impact on SMME performance. For instance, one strategy involves developing and integrating entrepreneurship education into the formal education curriculum at different educational levels thereby including the primary, secondary, and tertiary education institutions (Urban, 2015). Furthermore, Urban (2015) affirms that the inclusion of entrepreneurship courses or modules equips aspiring entrepreneurs with the necessary knowledge, skills, and mindset to start and manage their own businesses. Additionally, Kuratko (2020) notes that integrating practical experiences, such as internships or entrepreneurship experiential learning programs, can provide students with hands-on exposure to real-world entrepreneurial challenges.

Moreover, the shifting landscape caused by the COVID-19 pandemic has compelled many SMMEs to adopt flexible working arrangements, such as remote work and the utilisation of digital technologies. Concurrently, a recalibration of business strategies has become imperative, with a particular focus on cost reduction and the introduction of novel processes, products, and services (Enterprise Research Centre, 2021). These adaptations have spurred the emergence of new business models aimed at meeting evolving customer expectations and operational demands, with an emphasis on leveraging digital technologies. Additionally, SMMEs, particularly those in the tourism sector, have redirected their attention towards the local market as a means of compensating for the loss of international customers due to lockdown measures. Government assistance, facilitated through agencies that support SMMEs, plays a critical role in ensuring the survival and resilience of this sector. Furthermore, temporary tax relief measures offered by the government serve to provide a financial buffer for SMMEs (Common Market for Eastern and Southern Africa, 2020).

Commercial banks, shopping malls, and suppliers can also extend support to SMMEs by offering temporary payment holidays for loans, rent, and trade credit. In the post-pandemic context, SMMEs have a vital role to play in fortifying their resilience through various means, including enhancing technical capacity and skills, investing in e-commerce, diversifying their offerings, and leveraging technology to bolster their competitive edge (Ncube, 2020; Common Market for Eastern and Southern Africa, 2020; Enterprise Research Centre, 2021). Establishing collaboration between academia and industry can greatly enhance entrepreneurship education. This collaboration can involve inviting entrepreneurs and industry experts as guest lecturers, mentors, or advisors to share their experiences and provide practical insights (Hills *et al.*, 2018). Engaging with successful entrepreneurs and industry professionals fosters a better understanding of real-world challenges and opportunities, helping to bridge the gap between academic theory and practical application (Mwasalwiba, 2010).

Moreover, there is a need for longitudinal studies that capture the long-term effects of entrepreneurship education on SMME performance. This would enable a comprehensive assessment of the sustainability and enduring benefits of entrepreneurship education initiatives in South Africa. Structural support, such as targeted training programs and access to markets, is vital to foster the resilience and

growth of SMMEs in the long run. A comprehensive and multifaceted approach is required to address the complex needs of SMMEs and ensure their survival and sustainable development in the current economic climate. Therefore, enhancing entrepreneurship education to improve the performance of SMMEs in South Africa requires a multi-faceted approach. Strategies such as curriculum development and integration, industry-academia collaboration, incubation and support programs, access to funding, and continuous learning can collectively contribute to equipping entrepreneurs with the necessary knowledge, skills, and resources to thrive in the competitive business environment. By implementing these strategies, entrepreneurship education can play a pivotal role in fostering entrepreneurial success and driving the growth and sustainability of SMMEs in South Africa.

Therefore, integrating the insights of prominent authors like Cunha, Entwisle, Jeenah, William, Akinyemi, Adejumo, Glocker, Haxton, and Rajagopaul, an enriched strategy for enhancing entrepreneurship education within the context of South African SMMEs can be formulated. By addressing the challenges, fostering an environment of innovation, and aligning with the critical role of SMMEs in the economy, these strategies can potentially lead to substantial improvements in the performance, resilience, and growth trajectory of these enterprises.

CONCLUSION AND RECOMMENDATIONS

This study has shed light on the significant role that entrepreneurship education plays in enhancing the performance and resilience of small, medium, and micro enterprises (SMMEs) in South Africa, particularly in the context of the challenges posed by the COVID-19 pandemic. Through a comprehensive scoping review, the study has synthesised a wide range of literature to underscore the positive impact of entrepreneurship education on various facets of SMME performance. The findings of this review resonate strongly with the notion that entrepreneurship education serves as a powerful catalyst for fostering innovation, adaptability, growth, and market competitiveness within SMMEs. Moreover, the study emphasises that the COVID-19 pandemic has magnified the significance of entrepreneurship education in equipping SMMEs to effectively navigate unprecedented challenges and capitalise on emerging opportunities.

In light of the review's outcomes, several practical recommendations can be put forth. Firstly, there is an urgent need to augment the accessibility and quality of entrepreneurship education programs tailored specifically to the unique requirements of SMMEs in South Africa. These programs should focus on imparting practical skills, digital literacy, and strategies for building resilience. Additionally, nurturing collaboration among educational institutions, government bodies, and industry stakeholders is pivotal in creating a supportive ecosystem that nurtures entrepreneurship education. Policymakers are encouraged to explore measures that incentivise and support SMME participation in entrepreneurship education initiatives, including funding and policy interventions.

By adopting entrepreneurship education as a strategic imperative, South Africa stands to bolster the growth and resilience of its SMME sector, thereby contributing to overall economic development, job creation, and the cultivation of sustainable entrepreneurship. In an era marked by ongoing challenges, entrepreneurship education emerges as a potent tool to fortify SMMEs and fortify the nation's economic fabric.

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Unemployment Duration, Quality of Employment, and Life Satisfaction among Prime-age Africans in South Africa

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ABSTRACT

The scarring effects of adverse labour market outcomes on an individual's satisfaction with life have not been widely investigated in South Africa. Findings by Moller (2007) and Ebrahim (2013) show that labour market outcomes are the most significant determinants of life satisfaction for the African racial group in South Africa. This study aims to further this analysis by examining the impact of unemployment duration, occupational level, and occupational mobility on the life satisfaction levels of prime working-age (25–54) Africans in South Africa. Utilising all 5 waves of the National Income Dynamics Study (NIDS), the study examines these relationships of interest by estimating both Random Effects and Fixed Effects ordered logit models. Findings highlight that Africans who have been unemployed for long periods are less satisfied with life than those who are employed. At the same time, individuals at higher levels on the occupational skill level ladder have better life satisfaction than those at the lowest skill level. Individuals who move up the occupational ladder enjoy greater life satisfaction than those who move down it. The study concludes that unemployment duration and poor-quality employment result in negative effects on individuals' overall life satisfaction. Policymakers should take into consideration the quality of jobs and upward occupational mobility when developing policies to mitigate unemployment and inequality in the country.

Keywords: life satisfaction, unemployment duration, occupational level, occupational mobility

INTRODUCTION

How satisfied are the previously disadvantaged with life? After 29 years of democracy, this is a relevant question. South Africa is one of the most unequal countries in the world. Even in the post-apartheid era, substantial racial inequality exists in labour market outcomes, well-being outcomes, and other socioeconomic outcomes (Das-Munshi *et al.*, 2016; Leibbrandt *et al.*, 2012; Leibbrandt *et al.*, 2010). In comparison to their non-black counterparts, black South Africans remain the most likely to have adverse labour market, health, and well-being outcomes.

Thus, the findings by Moller (2007) and Ebrahim (2013) stated that even post-apartheid black South Africans are still the least satisfied with their overall lives among the four racial groups in the country. Both authors also establish that in determinants of life satisfaction among racial groups in the country, health status is the most crucial determinant of life satisfaction among the white racial group, while employment status and income are the most significant determinants of life satisfaction among the African and Coloured racial groups. The primary importance of employment in these racial groups is because employment does not only bring much-needed financial security but also social status (Posel *et al.*, 2011).

SA currently has one of the highest unemployment rates in the world, which is heavily concentrated among females, youth, and Africans (Francis *et al.*, 2019). With Ebrahim (2013) already establishing that unemployment leads to low life satisfaction among Africans, this study further broadens this analysis of the impact of the duration of unemployment in determining life satisfaction.

Transitioning to employment is generally regarded as a solution for improving the life satisfaction of individuals. However, Grün *et al.* (2010) state that the quality of employment also matters in analysing individuals' life satisfaction, with the quality of the jobs differing in terms of stability, working conditions, income, and social status. Using occupation level as a measure of the quality of employment, the study will also examine the impact of occupational skill level on life satisfaction and whether those who move up the occupational ladder end up with better life satisfaction than those who move downward.

This study adds to the limited literature on well-being economics in the developing world by answering three questions about among the most disadvantaged racial

groups in South Africa: (1) What is the impact of unemployment duration on life satisfaction? (2) What is the impact of occupational level on life satisfaction? (3) What is the impact of occupational mobility on life satisfaction?` The goal is to highlight how labour outcomes influence the dissatisfaction and satisfaction with life among Africans.

LITERATURE REVIEW

Relationship between labour market outcomes and life satisfaction

The relationship between labour market status and life satisfaction can be defined using three theories, namely the spillover model, the compensation model, and the segmentation model (Bialowolski *et al.*, 2021; Lambert *et al.*, 2018). The first model, the spillover model, states that an individual's satisfaction in one area of their life influences other areas. In other words, the poor satisfaction of individuals with their family condition can result in them also having poor satisfaction with their job (Lambert *et al.*, 2019; Iverson *et al.*, 2000). The model implies that a positive causal relationship exists between job satisfaction and overall life satisfaction.

According to Esche (2020), labour outcomes, such as unemployment and quality of employment, have a negative impact on an individual's financial well-being, social well-being, and family well-being (Esche, 2020). Thus, the negative effects in these life domains can have a negative spillover on individuals' overall life satisfaction. The significance of the positive relationship between these labour market outcomes and life satisfaction has been found in studies by Florean *et al.* (2020), Fors Connolly *et al.* (2022), Sulemana *et al.* (2020), and Shen *et al.* (2020). These results contrast with the compensation theory which states that the relationship between labour market status and life satisfaction is insignificant.

The compensation theory states that a negative causal relationship between labour market outcomes and life satisfaction exists. In other terms if an individual has negative labour market outcomes (poor quality jobs and unemployment), they will seek satisfaction or happiness in other domains of their lives, thus poor labour market outcomes does not decrease their overall life satisfaction (Iverson *et al.*, 2000). This theory is based on two theories, namely the principle of substitution and the catharsis theory. The principle of substitution suggests that individuals replace a lack of satisfaction in one domain of their lives with gratification in another domain of their lives, and the catharsis theory suggests emotions obtained in one domain of one's life

do not spill over to another domain instead these emotions are released as individuals move across domains (Bialowolski *et al.*, 2021).

In contrast to both the spillover and compensation theories, the third theory states that no causal relationship exists between labour market outcomes and life satisfaction (Edwards *et al.*, 2000). The segmentation theory is based on the theory of partial inclusion, which states that only a percentage of an individual's emotions and personality is expressed in specific domains of their lives (Rain *et al.*, 1991). In other terms, individuals segregate their emotions or satisfaction from their labour market condition from those in other spheres of their lives, thus there is no association between labour market status and life satisfaction.

This study examines this relationship based on the spillover theory. It seeks to examine whether unemployment duration and quality of employment (occupational level and occupational mobility) have an impact on individuals' overall life satisfaction. The spillover theory highlights two types of needs that can be used to define the significance of these labour market outcomes in influencing Individuals' overall life satisfaction. These are, namely, financial needs and social status needs.

Financial Needs

The ability of individuals to meet their basic needs (physiological and safety needs) financially is essential to their well-being and satisfaction with life (Oleson, 2004). Paid employment provides individuals with the financial stability to meet these basic needs, thus enhancing individuals' life satisfaction. The unemployed face a limited budget to meet their needs, which decreases their gratification with life (Hall, 2012; Klasen *et al.*, 2009). Furthermore, according to Feriyanto *et al.* (2020) the longer an individual spends in unemployment, the greater the risk of poverty. This is because individuals in long-term unemployment do not obtain unemployment benefits, which is a significant determinant of poverty reduction among the unemployed (Vroman, 2010). Thus, transitioning into paid employment has been found to increase individuals' overall life satisfaction, as the transition results in a gain in income (Grün *et al.*, 2010; Maennig *et al.*, 2012). Whilst transitioning out of employment has been found to decrease individuals' overall life satisfaction as the transition results in a loss of income (Wetzel *et al.*, 2016; Maennig *et al.*, 2012). However, Grün *et al.* (2010) highlight that even though individuals who are in employment have higher life satisfaction than their

unemployed counterparts, we must also consider the quality of employment when examining life satisfaction. Individuals in low-wage employment and lower-class occupation-level jobs are more likely to have lower life satisfaction, as these jobs offer less income and job security, thus resulting in financial distress that negatively affects an individual's life satisfaction (De Coning *et al.*, 2016; Lebihan., 2023). The ability to transition into a high-level occupation category has been deemed to be a possible solution for the inequality in life satisfaction among the employed. As upward occupational mobility can result in an increase in wage and job security, reducing individuals' financial stress and leading to an improvement in their overall satisfaction with life.

Social status needs

Labour market status is directly linked to how society and the individual rank themselves in the social pyramid. Becoming unemployed results in a reduction in social status and an increase in the risk of social exclusion. According to Pohlan (2019), becoming unemployed and being unemployed for an extended period results in an individual being socially isolated from society. This is because of the negative stigma associated with unemployment, with the unemployed being seen by society and perceiving themselves as failures and useless. This negative personal perception of their importance in society and abilities leads the unemployed to have low overall life satisfaction (Blau *et al.*, 2013).

Transitioning from unemployment to employment can significantly assist in helping a person integrate into society and gain confidence, which improves their overall satisfaction with life (Pohlan, 2019). Furthermore, the prestige of the occupation an individual occupies is also a significant determinant of their overall satisfaction with life. Occupational status is directly associated with social class status, as higher occupational levels are perceived as more meaningful and a symbol of career success. Thus, the findings by Apergis *et al.* (2017) and Boehm *et al.* (2015) state that those in higher occupation levels have greater life satisfaction than their counterparts in lower occupation levels.

Moving up the occupational ladder results in individuals gaining more social prestige and power, which is positively correlated with an increase in life satisfaction (Erdogan *et al.*, 2012).

Empirical review

Table 1: Shows a summary of studies that have examined the relationship between unemployment duration, quality of employment, and life satisfaction.

Author & Country	Objective	Age Group & Data	Method	Outcome Variable	Independent variable	Findings
Aliyev (2021) Azerbaijan	Examination of the impact of unemployment on happiness	17-65 years Unemployed; pooled cross-sectional using 3 large social surveys (SS) datasets	Ordinal Least Square (OLS) model Robust Least Squares model Ordered Logit model	Life Satisfaction (a categorical variable: Extremely dissatisfied, Dissatisfied, slightly dissatisfied, Neutral, slightly satisfied, Satisfied, extremely satisfied)	Unemployment duration (continuous variable)	-The findings state that a negative relationship exists between unemployment duration and life satisfaction. - Unemployment decreases individuals' life satisfaction.
Lu (2010) (China)	Examination of economic determinants of happiness and life satisfaction	15 years and above; European Social Survey (ESS)	Ordinal Least Square (OLS) model	Life Satisfaction (a continuous variable, a scale 0-10) Happiness (a continuous variable, a scale 0-10)	Active Unemployed (a dummy variable, equals 1 if active unemployed and 0 if inactive unemployed)	-the actively unemployed people tend to report significantly low life satisfaction compared to the inactive unemployed people
Kassenboehmer <i>et al.</i> (2009) (Germany)	Examination of the impact of unemployment for men and women on their life satisfaction	21 to 64 years. German Socio-Economic Panel (1991–2006)	Pooled & Fixed effects Ordinal Least Square Pooled and fixed-effect logit model	Life Satisfaction (a binary variable, equals 1 if satisfaction level is 7 & above, and 0 if below 7)	Change labour force states (a categorical variable, employed, unemployed and out of the labour force)	-The found that entry into unemployment produce strongly negative effects on life satisfaction over. -The extent of this negative differs based on reasons an individual has become unemployed.
Clark <i>et al.</i> (2008) Germany	Examined changes in wellbeing after life and labour market events	German Socio-Economic Panel (GSOEP) (1984–2003)	fixed-effects regression.	Life Satisfaction (a continuous variable)	Unemployment duration (categorical variable, 0–1 year, 1–2 years, 2–3 years, 5 years or more unemployed)	The study found that unemployment reduces life satisfaction. However, the extent on which life satisfaction decreases was not found to significantly change for those unemployed for less than 5 years
Georgellis <i>et al.</i> (2022) (Britain)	Examined the impact of occupational status on life satisfaction	Age 15 – 55 years; British Household Panel Survey (BHPS).	Ordered Probit Model Fixed Effect Model	Life Satisfaction (a continuous variable, scale of 1-7)	Occupational Status (a categorical variable: top 20%, Middle 40% and bottom 40%)	- The study found that individual in medium-status occupations report lower life satisfaction scores than those of employees in either low- or high-status occupations.

			BUC estimator			
Choi <i>et al.</i> (2020) South Korea	Examine the influence of occupational status	Korea Labor and Income Panel Study (KLIPS)	fixed effects ordered logit analysis.	Life Satisfaction (a continuous variable, scale of 1-5)	Occupational prestige (a categorical variable: 1. managers, 2. professionals, 3. semi-professionals, 4. clerks, 5. service and sales workers, and 6. manual workers) Wages (a continuous variable of individuals monthly wage)	-The study found that wages have a positive impact on life satisfaction for both male and female workers, but this relationship is more significant for females than males

METHODOLOGY

Dataset

The study utilises panel data from the National Income Dynamic Study (NIDS) to answer the research questions. NIDS is the only panel in the country conducted among individuals of all ages. It is carried out by the Southern Africa Labour and Development Research Unit (SALDRU), which is based at the School of Economics at the University of Cape Towns (UCT). The NIDS panel currently has five waves conducted for over nine years. The survey of Wave 1 was conducted in 2008, the second wave in the years 2010-2011, the third and fourth waves, respectively, in the years 2012 and 2014-15, and the last wave in the year 2017. In these waves, the panel utilises three separate questionnaires, namely the adult (15+), child (0-14), and household questionnaires. These questionnaires provide information on critical factors such as health, education, poverty and well-being, migration, household structure, and composition, labour market participation, and economic activity that determine an individual's life (Chinhema *et al.*, 2016). This study will utilise information from the household and adult questionnaires from 5 waves of the NIDS panel to examine the research objectives.

Sample

The study restricted the samples to only individuals between the ages of 25 and 55. The age restriction of 25-55 years in the samples is because individuals in this age group are regarded as being in their prime working age (Dvorkin *et al.*, 2022).

Individuals' prime-age years are deemed to be the most productive working years (Tüzeman *et al.*, 2020), and the decline in their participation in the labour market and

well-being among individuals in this age group has significant implications for the economic growth of a country (Valletta *et al.*, 2018).

In addition to restricting the sample to only prime working-age individuals, the study will also restrict its samples by labour market status. Table 2 summarises the racial, age, and labour market status restrictions for the two samples utilised in the study and what question the samples will be utilised to answer.

Table 2: Summary of the samples, their restrictions, and the questions they will be used to answer in the study.

Samples	Restrictions			Questions
	Race	Age	Labour market status	
Subsample 1 (Used in the models 5.1 and 5.2 presented in Table 5 below)	African	25-55 years	Unemployed or employed	How does the unemployment duration of the unemployed (t) influence their likelihood of having higher overall life satisfaction than their employed counterpart (t)?
Subsample 2 (Used in models 6.1 and 6.2 presented in Table 6, and models 7.1 and 7.2 presented in Table 7 below)	African	25-55 Years	Employed	How does an individual's occupational skill level (t) influence their overall life satisfaction?
				How does an individual's occupational mobility influence their overall life satisfaction at t?

MEASURES

Life Satisfaction

The study will measure life satisfaction based on individuals' responses to self-reported life satisfaction on the NIDS survey. Participants were asked, "Using a scale of 1 to 10 where 1 means 'very dissatisfied' and 10 means 'very satisfied', how do you feel about your life as a whole right now?" This question has been utilised to measure life satisfaction in numerous studies in South Africa examining life satisfaction, such as Ajaero *et al.* (2023), Booysen *et al.* (2022), Botha *et al.* (2013), Botha (2014), Ebrahim *et al.* (2013).

The responses will then be utilised to create an ordinal categorical variable consisting of 10 groups constructed on individuals' self-reported life satisfaction levels. The

categorical life satisfaction variable will be the dependent variable in the study's analysis.

Unemployment Duration Measure

The study will measure unemployment duration using self-reported unemployment spells from the NIDS survey. This self-reported variable will be derived from individuals' responses to question E67 in wave 1, E75 in wave 2 & wave 3, and Eg7 in waves 4 & 5 of the NIDS adult questionnaires, where participants were asked, "How long have you been wanting work and been without any paid employment?" This question was asked to participants who had reported to be unemployed during the interview and the participants were required to respond to their length of unemployment in both years and months.

Using the individuals' responses to their unemployment duration in years, the study uses the responses to create a labour market status categorical variable utilising HW employment as a base category. These categories of this variable are summarised in Table 4 below.

Job Quality

Occupational Class

This study's occupational scale was constructed from the South African Occupational Classifications (SASCO) occupation categories, a Statistic South Africa (Stats SA) publication (Grapsa, 2017, Stats SA. 2008). The SASCO publication provides the national framework for identifying occupations and the basis for international occupational comparability (Stats, S.A., 2005). SASCO ranks occupational categories in the country into four ordinal skill levels based on the nature of work done in the occupation, the amount of formal education required to carry out the tasks of the occupations efficiently, and the amount of job experience or informal on-the-job these occupations require (StatSA, 2012).

In the NIDS survey, participants were asked about the type of occupation they do. Their responses were grouped into ten categories, namely: (1) Legislators, senior officials, and managers, (2) Professionals, (3) Technicians and associate professionals, (4) Clerks, (5) Service workers and shop and market sales workers, (6) Skilled agricultural and fishery workers, (7) Plant and machinery operators and assemblers, (8) Plant and machinery operators and assemblers (9) Elementary

occupations, (10) Armed forces, occupations unspecified and not elsewhere classified and not economically active persons.

Using SASCO classifications of occupations, each occupation category is grouped in one of four skill level categories, with lower skill level occupations being grouped as skill level 1 and higher skills occupations being grouped as skill level 4, as shown in Table 3.

Tables 3 (Panel A) Ten categories of occupations, their subgroups, and skill levels

NIDS occupation categories	Subgroups of the occupation categories	SASCO Skill levels
1. Legislators, senior officials, and managers	*Legislators and senior officers * Corporate Managers *General Managers	4
2. Professionals	* Physical, mathematical, and engineering science professionals * Life science and health professionals * Teaching professionals * Other professionals (business professional, legal professional among others)	3
3. Technicians and associate professionals	* Natural and engineering science associate professionals *Life science and health science and health associate professionals * Teaching associate professionals * Other associate professionals	3
4. Clerks	*Office clerks * Customer services clerks	2
5. Service workers and shop and market sales workers	* Personal and protective services workers * Models, salespersons, and demonstrators	2

Tables 3 (Panel B) Ten categories of occupations, their subgroups and skills level

Categories	Subgroups	Skills Level
6. Skilled agricultural and fishery workers	* Market-orientated skilled agricultural and fishery workers * Subsistence agricultural and fishery workers	2
7. Craft and related trades workers	* Extraction and building trades workers * Metal, machinery, and related trades workers * Precision, handicraft, printing, and related trades workers * Other craft and related trades workers	2
8. Plant and machinery operators and assemblers	* Stationary-plant and related operators * Machine operators and assemblers * Drivers and mobile plant operators	2
9. Elementary occupations	* Elementary sales and services occupations * Agricultural, fishery, and related labourers * Labourers in mining, construction, manufacturing, and transport	1
10. Armed forces, occupations unspecified and not elsewhere classified and not economically active persons	* Armed forces * Occupations unspecified and not elsewhere classified * Not economically active persons	This category was not indexed

Occupational Mobility

To observe the distance that an individual has moved on the scale of occupation skills levels during the observed periods, the following equation was used:

$$\text{Change in Skill Level} = \text{Occupational Skill Level at } t - \text{Occupational Skill Level at } t-1 \quad (1)$$

The study utilised the skill levels (SL) of a person occupied in **t-1** as the base category to monitor individuals' mobility occupationally at **t**. The “Change in SL” in the equation showed how much and in what direction the individual moved in the scale of the skill levels of occupations. In other terms, its value is determined if an individual has been mobile (Change in SL ≠ 0) or immobile (Change in SL = 0). The direction of the individual's mobility was determined by whether the value of the change in SL is

positive (meaning the occupational mobility is upward) or negative (meaning the occupational mobility is downwards).

The value of “Change in SL”, as calculated using equation 1, will be used to code the categorical variable of occupational mobility. This categorical variable of occupational mobility consists of three categories, namely: downward occupational mobility, immobile occupational mobility, and upward occupational mobility.

Individuals with Change in SL >0 were classed as being in the upward occupational mobility category, while individuals with Change in SL $=0$ and Change in SL < 0 were classed, respectively, as being in the immobile and the downward occupational mobility categories.

Control Variables

In the examination of the relationship between labour market outcomes and life satisfaction, the study will control for certain socio-demographic and –economic factors that have been previously to have an influence on the significance of these relationships of interest. How these variables were coded is summarised in Table 4 below.

Table 4: Summary of how the dependent, independent, and control variables in the study were coded.

Variables	Coded
Dependent Variable	
Life Satisfaction	Life satisfaction is defined by 10 levels of satisfaction at t : 1. Satisfaction level One (lowest) 2. Satisfaction level Two 3. Satisfaction level Three 4. Satisfaction level Four 5. Satisfaction level Five 6. Satisfaction level Six 7. Satisfaction level Seven 8. Satisfaction level Eight 9. Satisfaction level Nine 10. Satisfaction level Ten (highest)
Independent Variable of Interest	
Unemployment Duration	A categorical variable that has 4 categories based on individuals' self-reported Unemployment duration at t : 0. Employed 1. Less than 1 year 2. 1 – 2 years 3. 3- 4 years 4. 5 years & above
Occupational Class	Occupational Class is defined into four categories: 5. Skill level 1 occupation (Low-Class Occupation Level) 6. Skill level 2 occupation (Middle-Class Occupation level) 7. Skill level 3 occupation (Upper-Class Occupational Level) 8. Skill level 4 occupation (Upper-Class Level)
Occupational Mobility	Occupational mobility is defined by three categories: 1. Downward Occupational Mobility 2. Immobile Occupational Mobility 3. Upward Occupational Mobility
Control Variables	
Good Self-Reported Health (SRH)	A dummy variable that equals 1 if the individual reported either good SRH, very good SRH or excellent SRH at t , and 0 otherwise
Poor Mental Health (PMH)	A dummy variable that equals 1 if the individual obtained a CES_D score of 12 & above, and equals 0 if CES_D is below 12
Age	Continuous variable
Age squared	
Gender (male)	Dummy variable that equals 1 if individual is male and 0 if female
Marital Status	A Dummy variable that equals 1 if individual is married and 0 if otherwise
Education	A categorical variable that consists of 6 education categories belongs in at t , namely: No schooling, Incomplete Primary, complete primary, Incomplete secondary, Matric and tertiary education
Geographic Area	A Dummy variable that equals 1 if the individual lives in an Urban and 0 Rural
Economic Sector	A categorical variable of the economic sector an individual is employed in at t
Household Size	A continuous variable of the number of individuals that dwell within their household
Time (wave dummy)	A categorical variable of the four waves utilised in the country

MODEL

Ordered Logit Model

The relationships of interest in this study will be examined using an ordered logit (ologit) model. An ologit model is a regression utilised when the dependent variable of the model has an ordinal outcome. This type of model is based on the cumulative probabilities of the dependent variable's outcomes (Grilli *et al.*, 2014).

The study utilises the ologit in its analysis because the dependent variable of the study is an ordinal categorical variable. The ordered logit approach has been utilised in numerous studies examining determinants or impacts on life satisfaction, such as Amati *et al.* (2018), Baetschmann *et al.* (2015), Berger (2013), Frijters *et al.* (2004), Rudolf *et al.* (2015), Suppa (2021), Susanlı (2018), and Zhou *et al.* (2017).

The study estimates the ologit models examining the relationship of interest utilising a random effect (RE) approach and a fixed effect (FE) approach. The RE approach is a panel model that enables the examination of factors that vary over time and those that do not vary over time (Dieleman *et al.*, 2014). The main assumption of the RE model is that unobserved variables are not correlated with observed variables in the model (Gardiner *et al.*, 2009). However, if this assumption is not met, it results in omitted variable bias due to unobserved heterogeneity. Thus, the study also employs a FE approach.

An FE approach is a panel model that can control for time-invariant unobserved individual factors that might be correlated with the observed independent variables. This model does not include variables that do not vary with time. The FE approach is generally favoured because of its ability to control omitted variable bias. However, the RE approach is equally as efficient and can provide more details if it is well specified.

DESCRIPTIVE ANALYSIS

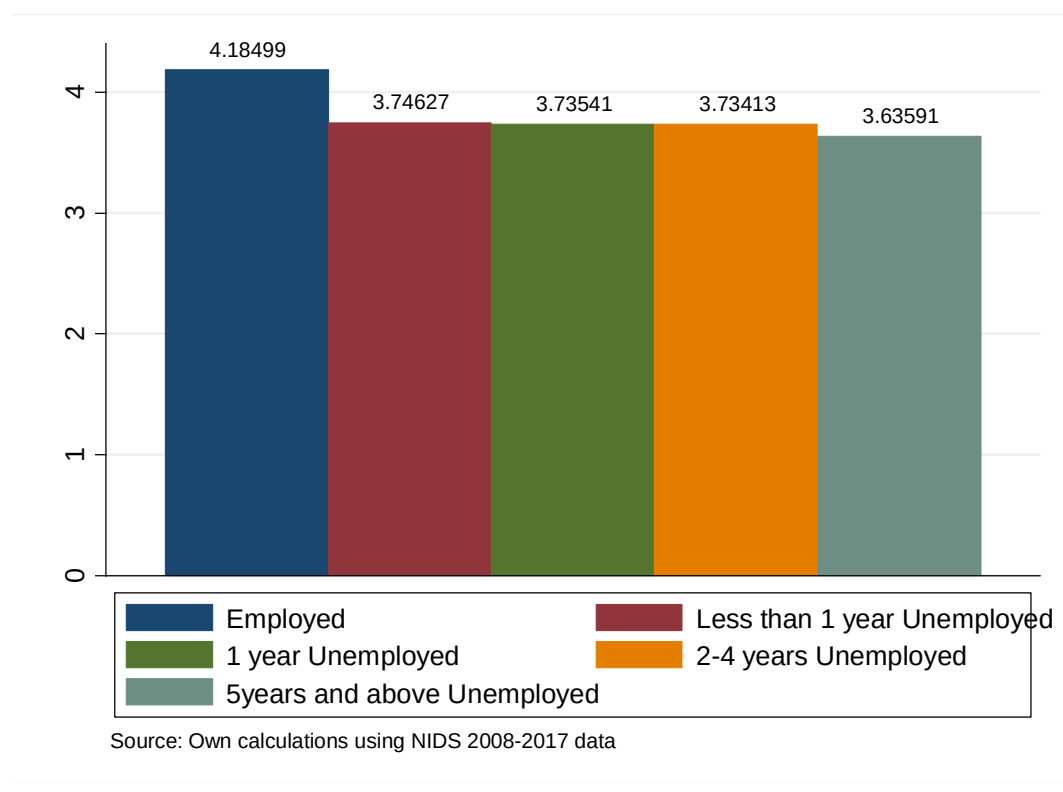
Mean life satisfaction of unemployment duration categories and employment

Diagram 1 shows the mean of life satisfaction among those employed, less than 1 year unemployed, 1 year unemployed, 2-4 years unemployed, and 5 years & above unemployed. The results show that the employed have an average life satisfaction level of 4.18, which is respectively 11.47, 11.76, 12.06, and 14.83 percent higher than

the life satisfaction average of those unemployed for less than a year, 1 year, 2-4 years, and 5 years and above. These results align with literature that states the employed have higher life satisfaction than the unemployed.

The trend of average life satisfaction across the unemployment duration categories observed in the graph is in line with findings that state that life satisfaction becomes lower the longer the duration spent unemployed. In the results in Diagram 1, the average life satisfaction level is 3.75, 3.74, 3.73, and 3.64, respectively, among those unemployed for less than 1 year, 1 year, 2-4 years, and 5 years & above. The different means of life satisfaction across the categories are significant ($F = 20.04$, $P < 0.01$) according to the analysis of variance (ANOVA).

Diagram 1: Showing the mean life satisfaction among unemployment duration and employed categories.



Mean life satisfaction of occupational level and mobility

Diagram 2 shows the mean life satisfaction of individuals at each occupational level. The results show that the average life satisfaction of those in Skill-Level 1 occupations

is 4.05, Skill-Level 2 occupations is 4.34, Skill-Level 3 occupations is 4.67, and Skill-Level 4 occupations are 5.02. The results shown on the diagram are in line with the literature that states that the higher the occupational level, the higher the overall life satisfaction (Safi, 2010). The results show an upward linear relationship between the occupational level category and average life satisfaction.

Diagram 3 shows the mean life satisfaction of individuals based on their occupational mobility status. The results state that those who engaged in upward occupational mobility have an average life satisfaction level of 4.52, and those who engaged in downward occupational mobility have an average of 4. Whilst those who were occupationally immobile have an average life satisfaction of 4.39, which is 9.75 percent above and 2.96 percent below that of those who engaged in downward and upward occupational mobility, respectively. These results are aligned with those of Zhou *et al.* (2021), stating that those who move down the occupational ladder end up with lower life satisfaction than their counterparts.

Using ANOVA to test the significance of the difference in the mean life satisfaction across the groups examined in Diagrams 2 and 3. The results of the ANOVA found that the differences in mean life satisfaction are significant across all occupational skill levels ($F = 18.81$, $P < 0.01$) and occupational mobility categories ($F = 27.99$, $P < 0.01$)

Diagram 2: Showing the mean life satisfaction among occupational level status categories.

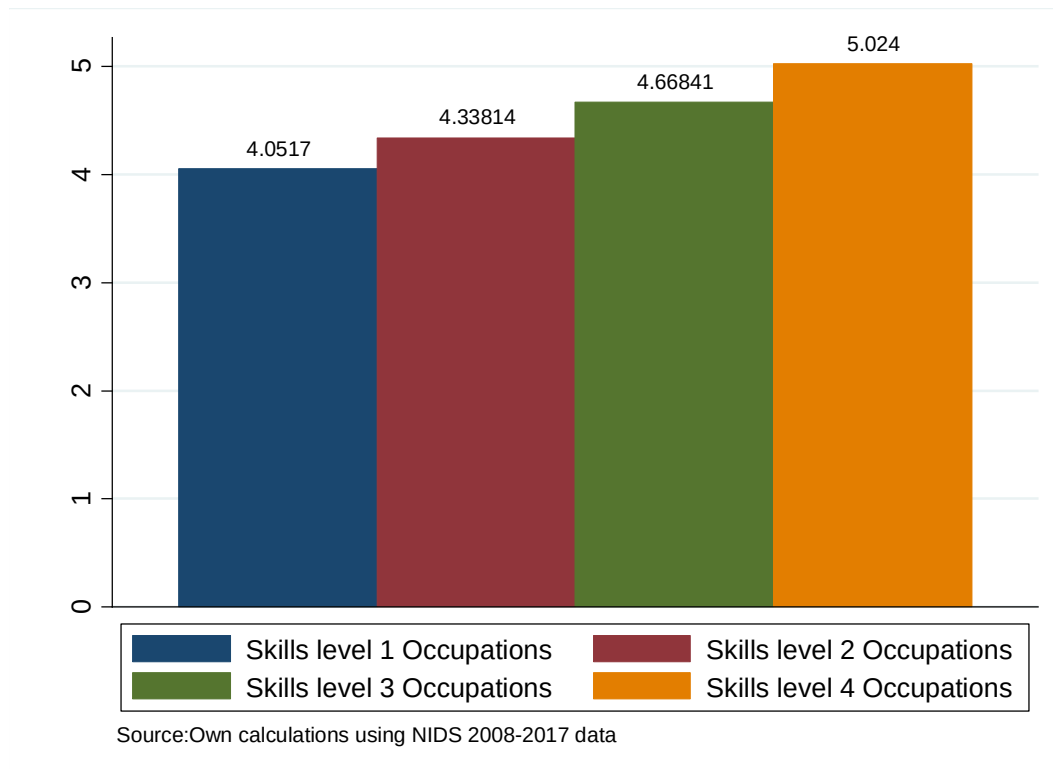
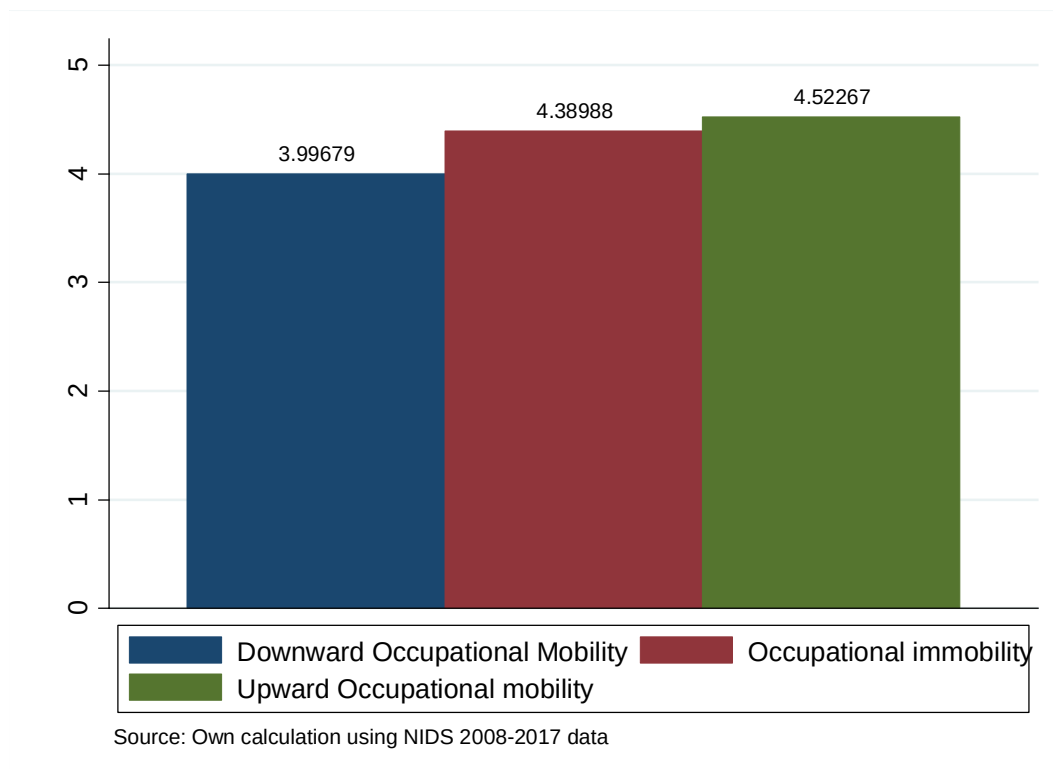


Diagram 3: Showing the mean life satisfaction among occupational level status categories.



REGRESSION RESULTS

Examining the impact of unemployment duration on life satisfaction

Table 5 shows a RE and FE-ordered logit model examining the relationship between unemployment duration and life satisfaction among prime-working-age Africans in the labour force. Models 5.1 and 5.2, respectively, represent RE and FE models, examining the relationship of interest using employment as the base category.

Table 5: Shows an ordered logit model examining the relationship between unemployment duration and life satisfaction among prime-working-age Africans.

VARIABLES	(5.1) Panel ordered logit. RE	(5.2) Panel ordered logit. FE
Unemployment Duration categories:		
(Base category: Employed at t)		
Less than 1 year unemployed	0.034 (0.225)	0.402 (0.280)
1-year unemployed	-0.301*** (0.088)	-0.311*** (0.114)
2-4 years unemployed	-0.263*** (0.087)	-0.130 (0.121)
5 years and above unemployed	-0.277*** (0.059)	-0.272*** (0.088)
Good SRH status	0.179*** (0.068)	0.022 (0.091)
PMH status	-0.308*** (0.049)	-0.293*** (0.063)
Male	0.036 (0.045)	0.000 (0.000)
Age	0.000 (0.023)	0.110 (0.072)
Age-squared	0.000 (0.000)	0.000 (0.001)
Married/ living with a partner	0.293*** (0.045)	0.141 (0.087)
Household Size	0.011 (0.007)	-0.007 (0.014)
Educational level category:		
Incomplete Primary	0.070 (0.101)	-0.241 (0.312)
Complete Primary	0.347*** (0.119)	0.029 (0.385)
Incomplete Secondary	0.433*** (0.095)	-0.206 (0.398)
Matric	0.627*** (0.104)	0.064 (0.469)
Tertiary	0.961*** (0.104)	0.254 (0.481)

Urban	0.011 (0.045)	-0.113 (0.079)
Waves	0.096*** (0.015)	-0.226* (0.133)
Constant		
Observations	8,391	7,315
Number of pid	3,130	

Notes:

- Model 5.1 controls for factors such as SRH status, mental health, gender, age, marital status, household size, education level, geographic area, and waves.
- Model 5.2 controls for factors such as SRH status, mental health, gender, age, marital status, household size, education level, geographic area, and waves.
- Subsample 1 was utilised in both models.
- Own calculations wave 1-5 of NIDS
- Standard errors in parentheses *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

In the RE model, model 5.1, those who are unemployed for 1 year, 2-4 years, and 5 years and above, respectively, are less likely to have a higher life satisfaction level than their counterparts who are employed. These results support findings by Hahn *et al.* (2015) and Pohlan (2019) that state that those who are in long-term unemployment have lower life satisfaction than those in employment. However, the unemployment duration categories of “1 year”, “2-4 years”, and “5 years and above” were found to be statistically significant at all levels of significance ($P < 0.01$), whilst the duration category of “less than 1 year” was found to be not significant at any level.

In the FE model, model 5.2, the unemployment duration category of “less than 1 year” remained insignificant, and the category of “2-4 years” unemployed became statistically insignificant, whilst the being unemployed for “1 year” and “5 years & above” remained significant at all levels of significance. Though statistically insignificant in both models, the results for less than 1-year unemployed contrast with the literature, as the results state that those who are unemployed for less than 1 are more likely to have higher life satisfaction levels than their employed counterparts.

Examining the impact of occupational skill levels on life satisfaction

Table 6 shows ordered logit models that examine the impact of occupational skill level and life satisfaction among employed prime-working-age Africans. Model 6.1 and Model 6.2 are RE models examining this relationship of interest but differ in terms of the controlling of the economic sector of employment. Model 6.1 only controls for SRH

status, PMH status, gender, age, marital status, household size, education level, province, geographic area, and waves. Model 6.2 controls for all the variables controlled for in Model 6.1 and adds the economic sector of employment.

The FE model, model 6.3, will examine the impact of occupational level on life satisfaction level while controlling for SRH status, PMH status, gender, age, marital status, household income, education level, geographic area, economic sector of employment, and waves.

Table 6: Shows an ordered logit models examining occupational skill level and life satisfaction among prime-working-age Africans.

VARIABLES	(6.1) Panel ordered logit. RE	(6.2) Panel ordered logit. RE	(6.3) Panel ordered logit. FE
Occupational level categories			
Skills level 2 occupations	0.107* (0.065)	0.043 (0.071)	0.044 (0.107)
Skills level 3 occupations	0.163* (0.095)	0.073 (0.105)	-0.203 (0.171)
Skills level 4 occupations	0.571*** (0.181)	0.532*** (0.187)	0.309 (0.288)
Good SRH status	0.041 (0.099)	-0.030 (0.104)	-0.053 (0.132)
PMH status	-0.400*** (0.067)	-0.357*** (0.071)	-0.346*** (0.092)
Male	0.018 (0.061)	0.057 (0.066)	0.000 (0.000)
Age	-0.027 (0.031)	-0.022 (0.033)	0.104 (0.111)
Age-squared	0.000 (0.000)	0.000 (0.000)	0.001 (0.001)
Married/ living with a partner	0.279*** (0.060)	0.231*** (0.064)	0.085 (0.120)
Household Size	0.002 (0.009)	-0.001 (0.010)	-0.029 (0.023)
Educational level category:			
Incomplete Primary	-0.256* (0.148)	-0.233 (0.156)	-0.698 (0.544)
Complete Primary	0.037 (0.169)	0.013 (0.180)	-0.353 (0.629)
Incomplete Secondary	0.146 (0.136)	0.150 (0.145)	-0.426 (0.649)
Matric	0.397*** (0.148)	0.367** (0.158)	-0.227 (0.730)
Tertiary	0.618*** (0.150)	0.551*** (0.163)	-0.135 (0.745)
Urban	0.013 (0.062)	0.010 (0.064)	-0.018 (0.106)
Economic Sector		0.031***	

		(0.010)	
Waves	0.098*** (0.021)	0.097*** (0.022)	-0.263 (0.211)
Observations	4,787	4,359	3,757
Number of pid	2,146	1,922	

Note

- Model 6.1 only controls for SRH status, PMH status, gender, age, marital status, household income, education level, geographic area, and waves
- Model 6.2 controls for SRH status, PMH status, gender, age, marital status, household income, education level, geographic area, sector of employment, and waves.
- Model 6.3 controls for SRH status, PMH status, age, marital status, household income, education level, geographic area, economic sector of employment, and waves.
- All three models utilise subsample 2.
- Own calculations wave 1-5 of NIDS
- Standard errors in parentheses *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Model 6.1 results show a positive relationship between occupational skill level and life satisfaction level, as they show that those in higher occupation levels have greater life satisfaction. Those in skill level 2, skill level 3, and skill level 4 occupations were less likely to have a higher life satisfaction level than those in skill level 1 occupations. In terms of statistical significance, the results of those in skill level 2 and skill level 3 occupations were slightly significant ($P < 0.10$), and the results of those in skill level 4 occupations were significant at all levels ($P < 0.01$). Controlling for individual economic sectors of employment, in model 6.2, skill level 2 and level 3 occupations become statistically insignificant in influencing life satisfaction. Whilst being in skill level 4 occupations remained statistically significant at all significance levels ($P < 0.01$).

In the FE model, model 6.3, the results of all occupational skill level categories are statistically insignificant. Despite the differing statistical significance in the three models, the results consistently state that those higher-skill level occupations are more likely to have better life satisfaction levels than their counterparts in low-skill level occupations.

The decrease in significance after the addition of the economic sector as a control variable highlights that the significance of the relationship between occupational skills level and life satisfaction differs with the economic sector individuals are employed in.

Examining the impact of occupational mobility on life satisfaction

Table 7 shows ordered logit models examining the relationship between occupational mobility and life satisfaction among prime-working-age employed Africans (Sub-

sample 2). Model 7.1 represents the RE model, and model 7.2 represents the FE model.

Table 7: Shows an ordered logit model examination of the relationship between occupational mobility and life satisfaction among prime-working-age Africans.

VARIABLES	(7.1) Panel ordered logit. RE	(7.2) Panel ordered logit. FE
Occupational mobility category:		
(Base category: Downward occupational mobility)		
Immobile	0.226*** (0.062)	0.081 (0.084)
Upward mobility	0.439*** (0.087)	0.391*** (0.109)
Good SRH status	0.013 (0.104)	-0.075 (0.137)
PMH status	-0.369*** (0.070)	-0.336*** (0.095)
Male	0.046 (0.063)	0.000 (0.000)
Age	-0.034 (0.033)	0.104 (0.123)
Age-squared	0.000 (0.000)	0.002* (0.001)
Married/ living with a partner	0.224*** (0.063)	-0.029 (0.126)
Household Size	0.001 (0.010)	-0.0345 (0.024)
Educational level category:		
Incomplete Primary	-0.238 (0.155)	-1.014* (0.608)
Complete Primary	-0.012 (0.178)	-0.535 (0.688)
Incomplete Secondary	0.143 (0.143)	-0.608 (0.690)
Matric	0.354** (0.155)	-0.574 (0.799)
Tertiary	0.547*** (0.155)	-0.460 (0.820)
Urban	0.016 (0.063)	0.023 (0.114)
Economic Sector	0.032*** (0.010)	0.025 (0.021)
Waves	0.118*** (0.023)	-0.369 (0.239)
Constant		
Observations	4,395	3509
Number of pid	1,927	

Notes:

- *Models 7.1 and 7.2 control for SRH status, PMH status, gender, age, marital status, education level, geographic area, province, economic sector of employment, and waves.*
- *Both models utilise subsample 2*
- *Own calculations wave 1-5 of NIDS*
- *Standard errors in parentheses *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$*

The results in model 7.1, RE model, show that individuals who engage in upward occupational mobility and those who remain at the same occupation skill level are significantly more likely to have better life satisfaction levels than their counterparts who engage in downward occupational mobility. For both occupational mobility categories, the results are statistically significant at all levels of significance ($P < 0.01$).

However, in the FE model (7.2), being occupationally immobile becomes insignificant, and being upwardly mobile occupationally remained significant at all levels ($P < 0.01$). The results in both models do display a positive relationship between occupational mobility and life satisfaction, indicating that individuals who move up or are immobile occupationally have greater life satisfaction than their counterparts who move downwards the occupational ladder. Furthermore, the size of the coefficient in both models is larger for upward occupational mobility than that for occupational immobility, highlighting that the strength of the advantage in life satisfaction in comparison to downward mobility might be stronger for the upward mobile than the immobile occupationally.

Moving up to a higher occupational skill level is deemed an achievement, increases one's social status, and might lead to greater financial stability. Thus, individuals who engage in this type of mobility enjoy greater life satisfaction. While remaining at the same occupational level leads to greater life satisfaction than downward occupational mobility, moving down the occupational ladder leads to a decrease in social status and financial stability, leading to low life satisfaction.

CONCLUSION

The study sought to examine the impact of unemployment duration and occupational level on life satisfaction. Whilst also observing whether the suggested solutions for adverse life satisfaction caused by these labour outcomes assist in improving life satisfaction. This was done by examining the impact of occupational mobility on life satisfaction. The study examined this using both the RE and FE-ordered logit models.

The study found that in comparison to the employed, those who have been unemployed for 1 year, 2-4 years, and 5 years & above were found to have significantly lower life satisfaction levels. And the quality of employment does matter when considering the life satisfaction of the employed. However, its significance is dependent on the economic sector in which individuals are employed.

As the result indicated, as opposed to those in skill level 1 occupations, individuals in skill level 2, skill level 3, and skill level 4 occupations were found to have significantly higher levels of life satisfaction whilst controlling certain socio-economic and demographic factors but not the economic sector of employment. The addition of the economic sector of individual employment decreased the significance of the occupational-level categories, leaving only the skills level 4 occupations as the only significant category. Thus, in future studies, this relationship of interest can be examined in each sector.

Occupational mobility was found to be a significant determinant of life satisfaction. Those who moved upward the occupational ladder were found to have better levels of life satisfaction than those who moved downward the occupational ladder. Whilst those who remain at the same occupational level have better levels of life satisfaction than those who move down. As had been determined in previous studies, social status is an important determinant of life satisfaction among Africans. The findings of this study support these findings as moving up occupationally can be regarded as an increase in social status thus, those engaging in it have higher life satisfaction.

The policy implication of the study is that the government, in its pursuit to uplift the previously disadvantaged from unemployment and improve their lives, must create quality employment, and ensure that policies promote upward mobility in the occupational ladder of the previously disadvantaged. Currently, Africans in South Africa are heavily concentrated in low-class occupations, and those who migrate into employment from long-term unemployment generally migrate into poor-quality employment, which only partially improves their satisfaction with life.

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Is South African economic growth sufficient for achieving the NDP unemployment target by 2030?

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ABSTRACT

This study investigated the relationship between unemployment rates and economic growth, known as Okun's law. The non-linear autoregressive distributed lags (NARDL) model was employed using quarterly time series data sampled from 2000Q1 to 2021Q4. In this model, unemployment was used as the dependent variable, whereas output, exchange rate, and consumer price index (CPI), were used as explanatory variables, and were decomposed into positive and negative partial sums to capture asymmetry in their effects on unemployment. The findings of this study provided evidence of asymmetry in the effect of all the explanatory variables in the long run, and a negative relationship is found between output and unemployment. However, unemployment was found to be more elastic to negative shocks in output than positive shocks. This implies that in the South African labour market, employers are quicker to retrench when the economy is in recession and slower to absorb when the economy is in expansion. Therefore the 6% unemployment target by 2030 appears hypothetical for South Africa, considering its current position. In this regard, this study recommends South African policymakers adjust their labour laws to be more flexible so that employers do not substitute more labour with capital in the production process.

Keywords: unemployment, GDP growth, Okun's Law, NDP 2030 and NARDL

INTRODUCTION

The beginning of the year 2020 implied that only one decade is left for the objectives of the National Development Plan (NDP) to be achieved in 2030. Achieving low unemployment is one of the NDP goals, and is at the heart of society. The

unemployment rate has been a problem in South Africa (SA) since the advent of democratic unity. Unemployment has been stubbornly high and has caused a chaotic society characterised by poverty, crime, and corruption. According to Mosikari (2013), unemployment produces an unwanted situation to becoming like permanent citizens of the country. The aforementioned conditions include a low level of living standard, psychological stress, loss of dignity, and human freedom. Previously, the South African economic authorities have implemented stimulus policies aimed at achieving high growth and low unemployment. Accelerated and shared growth initiatives for South Africa (ASGISA) and Gear Employment and Redistribution (GEAR) are among those vibrant policies that were once used and they all had a common goal.

Most studies such as those by Madito and Khumalo (2014), Mihajlovic and Fedajev (2021), Stungwa and Tozamile (2021), Pasara and Garidzirai (2020) to count few have validated Okun's law in SA. This notion proposes a negative correlation between output growth and unemployment, which means economic growth should increase to a certain level to reduce unemployment rates. In this regard, most economies of the world strive to stimulate high growth of output and absorb the available labour force in the production process, in order to reduce unemployment. On the other hand, there is undeniable evidence from existing literature that economic growth on other occasions may be positively related to unemployment rates in SA (Abraham and Nosa 2018; Tenzin 2019; and Bakshi and Ebrahimi 2016).

The above disagreement in the literature remains the backbone behind the aim of this study. The main aim of the study is to add value to the current debate and literature by deliberately investigating the nexus between unemployment and economic growth in SA while controlling for inflation rates and exchange rates. Economic growth has remained around 3.48% on average for SA between 2000 and 2010, higher than 1.15% on average between 2011 and 2020. Concurrently, the unemployment rate was 28.20% on average in the years between 2000 and 2010 and decreased in the later decade as it drifted to 26.93% on average. Figure 1.1 below indicates the behaviour of unemployment and economic growth in SA.

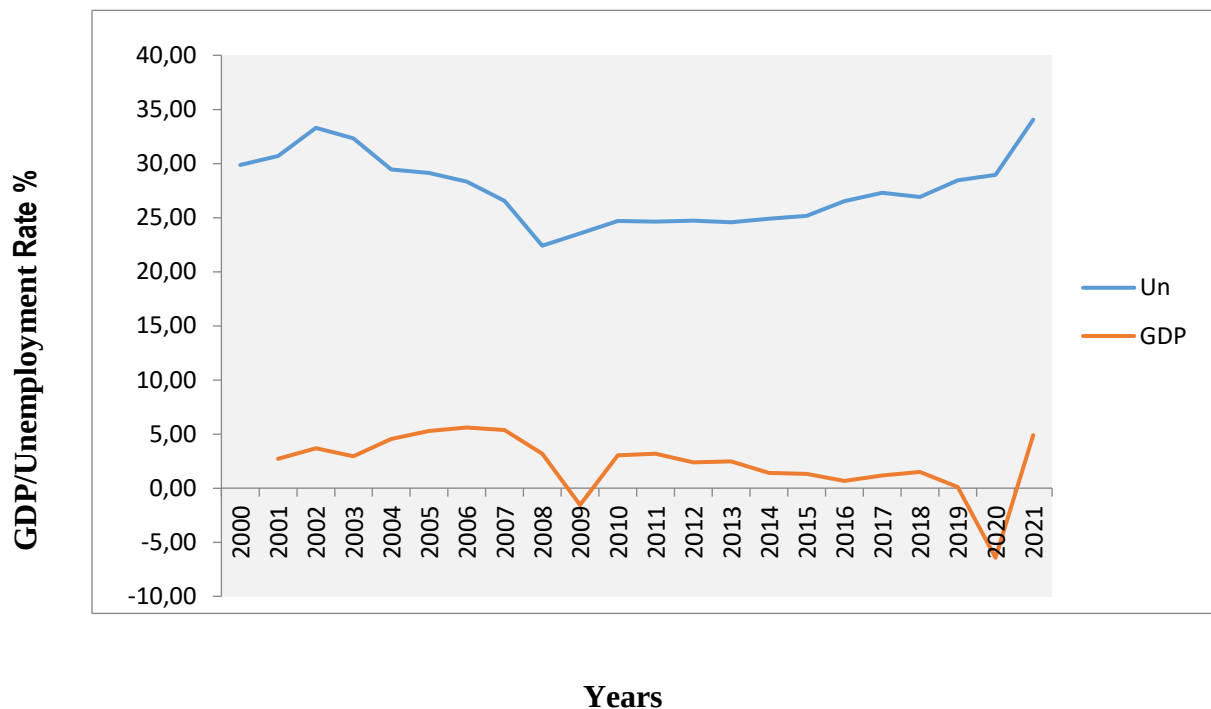


Figure 1.1: Unemployment and economic growth in SA

Source: Compiled by the authors using the data extracted from World Bank

The economic growth was trending upwards from the year 2001 to 2006, at the same time the unemployment rate was diminishing up until the year 2008. This means that unemployment was acting as a lagging indicator and had a negative relationship with economic growth. From that year the negative growth in 2009 and 2020 is explained by the global financial crisis and lockdown respectively. In 2020, the trough is too deep since almost all firms were closed while spending was autonomous and most people were highly dependent on government provisions, such as grant reliefs. However, since the beginning of 2010 to 2019, the South African economy declined and in contrast, unemployment has been trending. This is contrary to the expected relation of unemployment to output growth explained by Okun's theory.

The NDP took effect in 2012 and its projection particularly on unemployment was 6% by 2030. Given the notations of Okun's law theory and considering current experience in growth rates, is this projection of unemployment even possible? This question remains unanswered and forms a fundamental objective of this study. Table 1 has

been extracted directly from the NDP draft which was written by the current government, and it presents unemployment targets from 2010 to 2030. It also shows official unemployment deviation from the target. This means the current government has a full understanding of both targets and measures to fight unemployment. In 2010 the unemployment rate was below the target level, however, in the years 2015 and 2020 the unemployment gap was increasing. Unfortunately, the exogenous shocks dramatically reduced growth in 2020 but the recovery in 2021 was aggressively reaching 4.9%, such growth was last seen before the GFC. The 2021 recovery unfortunately was accompanied by the highest unemployment since 2000; this might be explained by the fact that the South African economy is dominated by capital-intensive production due to strict labour laws.

Table 1: Unemployment rate and target for NDP

Millions and %	2010	2015	2020	2030
Working-age (15-64)	32.4	35.1	36.5	38.8
Working-age participation rates	54%	57%	60%	65%
Age dependency ratio	1.6	1.5	1.5	1.5
Unemployment rate target	25%	20%	14%	6%
Actual unemployment rates	24.68%	25.15%	28.97%	---

Source: Table extracted from NDP 2012

With the above background, this study attempts to investigate if there is any possibility to realise the unemployment target by 2030 as long as economic growth is concerned. The study also takes into account the effect of exchange rate fluctuation, since currency arrangement forms a huge part of monetary policy conduct. Inflation has a negative effect on unemployment and it creates an unstable environment for growth. The exchange rates remain a shock absorber and it reflects that SA has an open economy and is affected by decisions taken by other countries. These variables have been included in several studies when investigating the relationship between unemployment and economic growth, including Bakshi and Ebrahimi (2016) Kocaarslan *et al.* (2020), and Nyakokwe (2013). However, the highlighted studies above do not provide the same emphasis with regards to NDP and targeted level of unemployment rather they are interested in the nexus between the two main variables under investigation. The rest of this paper proceeds as follows: Section 2 is the review

of previous studies, Section 3 provides the econometric techniques applied for estimation, and Section 4 offers a discussion of the results. Ultimately, the conclusion and policy recommendation of the study is highlighted in section 5.

LITERATURE REVIEW

The literature of the study relies on a few economic theories one of them has been indicated earlier, Okun's law. The economic growth should grow above its potential level by 3% to be able to reduce 1% of the unemployment rate, according to Bankole and Fatai (2013) and Elshamy (2013). There are plenty of studies that have investigated Okun's theory for different economies including SA. For example, Mazorodze and Siddiq (2018) investigated the nexus between the two aforementioned variables where they used the nonlinear Autoregressive distributed lags (NARDL) model. The study found a negative relationship between unemployment and output, furthermore during the recession, the unemployment rate increased by 10.3% compared with decreasing unemployment during the recovery. The study has considered the data sample that ranged from 1994Q1 to 2017Q4. These results were also validated by a great deal of the studies such as those of Phirir (2018), Mihajlovic and Fedajev (2021), Khalid *et al.*, (2021), Jannika *et al.*, (2022), Yasmin and Yasim (2020) and Sere and Tehereni (2020). The above findings indicate that during the downswing of the business cycle, the economy is at high risk to incur high unemployment rates which may hardly be recovered during the expansion phase, especially if it lasts shorter than the recession.

Tenzin (2019) on the other hand, has found a positive relationship between output and unemployment rates in both the short-run and long-run for SA. The study used the ARDL model with the data observed between 1998 and 2016. For the same economy, similar sentiments were similarly shared by Abraham and Nosa (2018). The same findings were verified by Bakshi and Ebrahimi (2016), in Iran. Kutumo (2019) derived similar findings in Kenya where economic growth was linked to youth unemployment. The study relied on simple Ordinary least square (OLS) and Granger causality tests to validate the positive relationship between the variables.

Other studies such as Hlongwane (2021) have differed in terms of the results of the current debates. The study used the ARDL model and Granger causality test with data

observed between 1980 and 2020 and found no relationship that exists between the variables in SA. Similar sentiments were kindly shared by Kanteh (2021) in Liberia.

At the beginning of the study, it was highlighted that the SARB pursued targeting inflation. This variable should have a negative relationship with unemployment based on economic theory alluded to by the Philips curve. Vermeulen (2017) has validated the negative relationship between unemployment rates and inflation rates in SA. From the aforementioned results, the recommendations have argued that the South African economy adopts dual targeting for both inflation and unemployment rates. Similar sentiments were also raised by Madhuku and Kaseeram (2018); this implies the validity of low unemployment, especially in SA. Similarly important, the interest rates channel influences growth by influencing high investment by firms if it is at a low average level. Nyahokwe and Ncwadi (2013) indicated that interest rates have a positive effect on unemployment in the short run. These findings were derived from vector autoregressive VAR and general autoregressive conditional heteroscedasticity (GARCH) models that were used in the study. Therefore inflation and interest rates indicate the functioning of the monetary policy as it has an important influence on the South African economy.

Similarly important the exchange rates system may be fixed or flexible and it also signifies that the economy is open to interacting with other economies. At the same time, economic activities such as growth and unemployment may be affected by exogenous factors transmitted by the exchange rates channel. For example, Nyahokwe (2013), has indicated that high exchange rates volatility leads to an increase in unemployment rates by 8%, while depreciation of the currency did not induce high unemployment rates between 2000 and 2010. The study relied on results interpreted from VAR and GARCH models. Usmas and Elsalih (2018) have come to a similar aforementioned conclusion but the study used the NARDL model. Similarly important Bakhshi and Ebrahimi (2016) indicated that there is a negative relationship between the appreciation of the currency and unemployment rates in Iran. Similar findings were also corroborated by Kocaarslan *et al.* (2020) and Nyahokwe and Ncwadi (2013).

METHODOLOGY

To analyse the impact of economic growth on unemployment in South Africa, this study adopts a quantitative research approach based on quarterly time series data sampled from the year 2000Q1 to 2021Q4. This sampling period was carefully selected in the bid to reflect the success of the contemporary monetary policy (inflation targeting) since it was adopted, at realising the goal of the NDP of reducing unemployment to 6% by 2030.

Data

Table 2 depicts the variables included in the model. The selection of these variables, particularly the control variables, is underpinned by the theory between them and the dependent variable (unemployment rate). The GDP represents the output gap and was collected as GDE from Federal Reserve (FRED). The data was collected from various sources that appear in the table, and the expected signs are negative for all the variables as proposed by the theory.

Table 2: Description of Variables

Variables and presentation	Unit of measure	Source	Expected sign
Dependent variables			
Unemployment Rate (<i>Un</i>)	%	FRED	
Independent variables			
Output (<i>GDP</i>)	GDE	Easy Data	Negative (Okun's Law)
Exchange rate (<i>Ex</i>)	Rand vs. USD	Easy Data	Negative
Consumer price index (<i>CPI</i>)	Rands	IMF	Negative (Philips curve)

Source: Authors Compilation

Theoretical Model

Okun (1962) proposed two specifications of the Okun's law, which are: differenced approach and the gap approach. In this study the gap approach is specified as it relates unemployment to the cyclical component of output (output gap), as shown in equation 1 below:

$$U_t = \gamma_0 + \gamma_1(Y_t^A - Y_t^*) + \varepsilon_t \quad (1)$$

$t = 2000Q1.....2021Q4$

In the above equation, t denotes time in quarters, γ_0 is the intercept and is the coefficient of the output gap or slope. The output gap ($Y_t^A - Y_t^*$) is made from actual output Y_t^A and expected output Y_t^* , since the cyclical component of output is not directly observable, therefore the filter proposed by Hodrick, and Prescott (1997) will be applied to generate the output gap component. Consider the equation 1a below that depict the ingenious model:

$$U_t = \sum_j^p \delta_j U_t + \sum_i^q \theta_i Y_t + \varepsilon_t \quad (1a)$$

Where δ_j denotes the coefficient for dependent variable. The first step Silvapulle *et al*, (2004), was to form a distributed lags model out of the first equation, so that unemployment is explained by it lags and output. The second step was to decompose the output into positive and negative shock as indicated in equation 1b below.

$$U_t = \sum_j^p \delta_j U_t + \sum_i^q (\alpha_i Y_t^+ + \beta_i Y_t^-) + \varepsilon_t \quad (1b)$$

The equation 1b above is the reason why this study undertook the NARDL model in this study because it is underpinned by the theoretical background. Therefore, the study adopts Silvapulle *et al.*, (2004) work concerning the assumption of non-linearity of the variables. Other reasons for assuming non-linearity could be traced in figure 1 above where the data of the output and unemployment does not follow linear segment. Moreover, in the results section the descriptive stat table indicates the skewness of the variables that shows asymmetry that is further found in the results for long run asymmetry in table 6.

Empirical Model

Various studies have used the NARDL to analyse Okun's law such as Mazorodze and Siddiq (2018), Mikajlovic and Fedajev (2021), and Phiri (2018). Okun's Law is specified in the Non-linear ADRL framework following the specification by the study by Shin *et al.* (2014) in Equation 2. The rationale behind the application of the NARDL is that the response of a dependent variable is distinguished into two parts, firstly the response to the direction of a shock (positive or negative) and lastly on the magnitude of a shock (big or small). Therefore such a model is more applicable in this study, as

it examines the response of unemployment on the contractionary and expansionary episodes in output. This study adds two explanatory variables exchange rate and CPI to incorporate other variables influencing unemployment in South Africa. CPI is backed by the Philips curve theory which proposes an indirect propositional correlation between inflation and unemployment, while exchange rate volatility may have a great influence on unemployment in the case of South Africa being an emerging economy that is subjected to external vulnerabilities. Equation 2 below presents the long-run equation of the conventional ARDL which assumes linearity among parameters:

$$Un_t = \alpha_0 + Y_t + EX_t + CPI_t + \varepsilon_t \quad (2)$$

Equation two represents the long-run equation of the conventional ARDL and it was further developed to the NARDL of Shin *et al.* (2014) to consider nonlinearity in parameters as shown by equation 3

$$Un_t = \alpha_0 + \alpha_1 Y_t^+ + \alpha_2 Y_t^- + \alpha_3 EX_t^+ + \alpha_4 EX_t^- + \alpha_5 CPI_t^+ + \alpha_6 CPI_t^- + \varepsilon_t \quad (3)$$

Where (Un_t) is the unemployment rate as a dependent variable, Y_t , EX_t , CPI_t are output gap generated by the Hodric Prescott Filter, exchange rate and CPI respectively, as repressors. Unlike the conventional ARDL in equation 1, where linearity is assumed in the parameters, in this model the variable of interest (Output) and other repressors are decomposed into their positive and negative partial sums, as shown by equations 4 and 5 below. For the purpose of this study, Okun's law model will be estimated under the auspices of the NARDL. However, the conventional ARDL will be applied for robustness check, particularly in the long run findings.

$$X_t^+ = \sum_{i=1}^t \Delta X_t^+ = \sum_{i=1}^t MAX(\Delta Y_t, \Delta EX_t, CPI_t) \quad (4)$$

$$X_t^- = \sum_{i=1}^t \Delta X_t^- = \sum_{i=1}^t MIN(\Delta Y_t, \Delta EX_t, CPI_t) \quad (5)$$

Negative variations for each regressor are represented by (X_t^-) whereas the positive deviations for each respective regressor are captured by (X_t^+) . The cointegrating vector for the long-run parameters to be estimated is represented by $(\alpha = \alpha_0, \alpha_1, \alpha_2, \alpha_3, \alpha_4, \alpha_5, \alpha_6)$ in Equation 3, and (ε_t) is the white noise error term. Equation 4 below represents the short-run error correction model (ECM).

$$\begin{aligned}\Delta Un_t = & \alpha + \beta_0 Un_{t-1} + \beta_1 Y_{t-1}^+ + \beta_2 Y_{t-1}^- + \beta_3 EX_{t-1}^+ + \beta_4 EX_{t-1}^- + \beta_5 CPI_{t-1}^+ + \beta_6 CPI_{t-1}^- \\ & + \sum_{i=1}^p \gamma_i \Delta Un_{t-1} + \sum_{i=1}^q (\theta_i^+ \Delta Y_{t-1}^+ + \theta_i^- \Delta Y_{t-1}^- + \theta_i^+ \Delta EX_{t-1}^+ + \theta_i^- \Delta EX_{t-1}^- \\ & + \theta_i^+ \Delta CPI_{t-1}^+ + \theta_i^- \Delta CPI_{t-1}^-) + \varphi ECT_{t-1} + \mu_t\end{aligned}\quad (6)$$

The short-run lag orders are symbolised by p, q . The long run coefficients ($\alpha_1 = -\beta_1 \div \beta_0, \alpha_2 = -\beta_2 \div \beta_0, \alpha_3 = -\beta_3 \div \beta_0, \alpha_4 = -\beta_4 \div \beta_0, \alpha_5 = -\beta_5 \div \beta_0, \alpha_6 = -\beta_6 \div \beta_0$) will represent the long-run influences of both negative and positive shocks in the independent variables. On the other hand, the effect of both negative and positive shocks in the independent variables on unemployment in the short run will be captured by $\sum_{i=1}^a \theta_i^+$ (increase) and $\sum_{i=1}^a \theta_i^-$ (Decrease). Equation 6 is specified in such a way that it shows the asymmetric effect of independent variables shocks on unemployment for both short-run as well as the long run. The coefficient of the error correction is denoted by φ , it is expected to be negative and statistically significant. The null hypothesis for the long-run asymmetry using a Wald test is $\beta^+ = \beta^-$ to assess long-run asymmetry, the null hypothesis must be rejected in favour of the alternative stating $\beta^+ \neq \beta^-$. Likewise for the short-run asymmetry the alternative hypothesis of $\sum_{i=1}^a \theta_i^+ \neq \sum_{i=1}^a \theta_i^-$ must be accepted. Intuitively, the presence of asymmetry both in the long run and the short run implies that the effects of the negative and positive shocks are not identical on unemployment.

One of the benefits of applying the NARDL is that, alongside the above tests we can also model the dynamic multipliers, to assess how the dependent variable (unemployment) adjusts to its long-run equilibrium given the negative and positive deviations on each independent variable as shown by Equation 5.

$$\begin{aligned}X_k^+ &= \sum_{j=0}^k \frac{\partial Un_{t+j}}{X_{t-1}^+}, & X_k^- &= \sum_{j=0}^k \frac{\partial Un_{t+j}}{X_{t-1}^-}, & k \\ &= 0, 1, 2, 3 \dots \dots \infty\end{aligned}\quad (7)$$

Note, as $k \rightarrow \infty, M_k^+ \rightarrow \alpha_1$ and $M_k^- \rightarrow \alpha_2$.

The procedure for the application of the NARDL requires that all the series are either integrated of order I (0) or I (1). There should be no order I (2). Therefore the unit root test will be the first step in determining the order through which the underlying series are integrated. If stationarity is established among the series, then the Augmented

Dickey-Fuller cointegration test will be applied to establish if there is long-run cointegration. Basically, cointegration will mean that there is a causal effect among the variables in the long run. The long-run cointegration is tested using the Pesaran, Shin, and Smith (2001) bound test that may use F-stat to test for a joint hypothesis or a t-stat that is used to test a sing hypothesis. The F-stat hypothesis is as follows:

$$H_0^F: (\alpha = 0) \cap \left(\sum_{j=0}^q \beta_j = 0 \right)$$

$$H_a^F: (\alpha \neq 0) \cup \left(\sum_{j=0}^q \beta_j \neq 0 \right)$$

For t-stat, the null hypothesis and alternative hypothesis are denoted by $\alpha = 0$ and $\alpha \neq 0$ respectively. The critical values depend on the number of factors such as the number of independent variables, their integration order, the number of short-run coefficients and the inclusion of the intercept and trend. Reject the null hypothesis (H_0^F or H_0^t) if F-stat or t-stat is more extreme than the upper bound of critical values at 1%, 5%, and 10%.

RESULTS AND DISCUSSION

Table 3 indicates the results of the descriptive statistics. The table particularly contains the mean, standard deviation, kurtosis, and skewness. Skewness as a measure of asymmetry provides important information that will give clues about the results of the Wald test of asymmetry.

Table 3: Descriptive Statistics

	UN	GDP	EX	CPI
Mean	25.71338	750581.2	9.998402	108.0481
Std. Dev.	2.861302	358485.6	3.274841	35.06366
Skewness	1.319765	0.138095	0.582362	0.336010
Kurtosis	5.065655	1.653686	1.948039	1.789746
Jarque-Bera	41.19151	6.925760	9.031746	7.026528
Probability	0.000000	0.031339	0.010934	0.029799
Observations	88	88	88	88

Source: Estimation

The average value is 25% which is very high it indicates that South African policies aimed at amplifying growth have never reduced the unemployment rather it has been more capital intensive. Furthermore, the kurtosis of unemployment is above 3 which indicates that it has the highest peak among the variables and hence shows the overall picture of high unemployment rates in SA. All selected variables show 88 observations which are enough for the time series model.

Having explored the nature of the data, the study applied the unit root test to test for stationarity among the series and the results are presented in Table 4.

Table 4: Unit Root

Series	Augmented Dickey-Fuller (ADF)			Philips Perron (PP)		
	I (0)	I (1)	Order	I(0)	I(1)	order
<i>Un</i>	0.567	-9.865***	I(1)	-2.097	13.015***	I(1)
<i>GDP</i>	13.33***	-----	I(0)	-14.459***	-----	I(0)
<i>Ex</i>	-0.855	-7.074***	I(1)	-1.977	-6.992***	I(1)
<i>CPI</i>	2.458	-5.852***	I(1)	-1.129	-6.632***	I(1)

*Note: *** imply 1%, ** 5%, and * 10% significant levels. The figures in brackets are standard errors.*
Source: Estimation

All variables were found to be non-stationary at levels except GDP growth, but they were rendered stationary after taking their first differences. This is indicative of the range of the variables from 2000 to 2021 given the quarterly data used in the study. There is no variable which was stationary after the second difference I (2), in this regard; the long-run cointegration test can be performed followed by the appropriate model. This study relies on the bound test for cointegration which accommodates the cases where variables have a mixed order of integration or if they are integrated of order one. In this regard, the study will use the non-linear autoregressive distributed lags (NARDL) model. This model is flexible and has the advantage compared to the traditional ARDL model since it allows the researcher to analyse the effect of both negative and positive shocks of the explanatory variables on the dependent variables.

Since stationarity has been established, the order through which the series are integrated meets the procedures of the cointegration test. The study carries on with the cointegration test, and the results are contained in Table 5. The NARDL model allows for the variables to be a combination of I (1) and I (0). In the literature, many integration tests can be used to test long-run relationships, and these include the fully modified OLS procedure of Hansen and Phillips (1990), Engle and Granger (1987) test, and maximum likelihood Johansen (1988, 1991) and Johansen-Juselius (1990) tests. These methods however assume that all-time series variables are integrated of order one i.e., I (1) and are also not reliable in cases of small sample sizes. The bounds testing procedure proposed by Pesaran and Shin (2001) is relevant because it accommodates the situation where variables are integrated into different orders. The results in Table 5 reveal a long-run relationship among the variables when asymmetry is taken into consideration.

Table 5: Cointegration-Bound Test

Function: ($Un =$ $f(GDP^+, GDP^-, EX^+, EX^-, CPI^+, CPI^-)$	F Stat	Lower Bound	Upper Bound
	6.06	2.12*	3.23*
		2.45**	3.61**
		3.15***	4.43***

*Note: *** imply 1%, ** 5%, and * 10% significant levels. The figures in brackets are standard errors.*

Source: Estimation

The F statistics (6.06) exceed all the critical values of the lower and upper bounds (See Table 5). Therefore the null hypothesis of no long-run cointegration is rejected. Now that the variables move in the same direction in the long run, therefore both long-run and short-run error correction models can be estimated. Table 6 presents the results of the long run together with asymmetry by the Wald test.

Table 6: Long run relations

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GDP_POS	-1.541965	0.740517	-2.082282	0.0417
GDP_NEG	-1.829093	0.756940	-2.416430	0.0188
CPI_POS	-0.214835	0.098042	-2.191263	0.0324
CPI_NEG	5.052215	0.930601	5.428979	0.0000
EX_POS	0.989952	0.370604	2.671184	0.0098
EX_NEG	-0.400621	0.359100	-1.115626	0.2691
C	27.62614	1.019172	27.106467	0.0000

Long run**Asymmetry**

$\beta^+ = \beta^-$	F. Stat	Prob	Conclusion
			Long run
GDP	5.624987	0.0202	asymmetry
			Long run
EX	53.25471	0.0000	asymmetry
			Long run
CPI	39.67162	0.0000	asymmetry

Source: Estimation

The constant term is +27.63 and it is statistically significant, which means if all other variables are held constant then the unemployment rates remain at 27%. This is close to the mean of 25 indicated in the descriptive statistic table (See Table 3). The variable of interest (GDP) takes the expected negative sign, which validates Okun's law notation of an association between these variables. The results further indicate that more people lose their jobs in South Africa when an economy is in contraction, and fewer people are being hired when an economy is in expansion in the long run. Intuitively, unemployment is more elastic to negative shocks in GDP than positive shocks as 1.54 is greater than 1.82. The results of the Wald test provide genuine insights into the presence of asymmetry in the effect of output on unemployment, as the F stat is significant at 10%. The aforementioned results are consistent with that of Madito and Khumalo (2014), Pasara and Gandziras (2018) and Stungwa and Tozamile (2021) in the same region. Previous studies like Mazorodze and Siddiq (2018) have argued that in the South African labour market, employers are faster to

retrench when an economy is in recession and slower to absorb when an economy expands. The recent example that supports the notations made by Mazorodze and Siddiq is that after the covid-19 pandemic outbreak in 2020 output decreased dismally and more people lost their jobs, as a result, unemployment increased. However, at the beginning of the year 2022, when more covid-19 restrictions were done away with, economic activities were boosted, therefore GDP increased by 4.9%, but then unemployment continued to rise to 34% in the second quarter of the year 2022. Employers are reluctant to hire even when economic activities are conducive. On the other hand, Black *et al.* (2017) argue that in the production process, capital is preferred labour, because of strict labour laws, and this is the case in the South African mining industry.

Moving along to the negative and positive shocks in CPI, the results suggest that in the long run positive shocks in CPI reduced unemployment by 0.214 for the period under investigation and is significant at 5%. These results accord with the notations of the Philips curve theory. Likewise, the Negative shocks also reduce unemployment drastically by 5.052 in the long run, and the effect of CPI on unemployment is also found to be asymmetric. This implies that it does not matter whether the consumer prices increase or decrease, unemployment will continue to decrease. However, it decreases at a faster rate when there is deflation than inflation. The aforementioned results were supported by most studies including Bakshi and Ebrahimi (2016) and Vermeulen (2017) in SA. These results imply that the inflation targeting adopted by SA in 2000, is a mastering remedy to create an environment conducive for growth to reduce unemployment rates. This means that the monetary authorities are doing their best to reduce unemployment rates through monetary policy transmission mechanisms toward the NDP target. Table 7 below presents the results of the robustness check. The conventional version of an ARDL was employed to test the reliability of the long-run results.

Table 7: Robustness check results

Variable	Coefficient	Standard error	t-stat	P-values
GDP-GAP	-1.105614	0.155023	-7.131923	0.0000
CPI	-0.178801	0.062865	-2.844229	0.0061
EX	1.507344	0.538087	2.801302	0.0068
C	11.779891	1.254511	9.390026	0.0000
@TREND	0.009665	0.004675	2.067134	0.0430
R-squared	0.9217			
Adjusted R-squared	0.8961			
F-stat	35.9333			
P-value	0.0000			
Durbin-Watson stat	2.14			

Source: Estimation Results.

The robustness check results are conformable of the long run findings, which validated the existence of the Okun's law and Philips in the sampled period. The long run bound test and diagnostic test of the robustness check model is provided in Appendix C.

Now turning to the negative and positive shocks in the exchange rate, the results show that the depreciation of the Rand increases unemployment by 0.98 and is significant at 1%; such findings are in line with Nyahokwe (2013). This means in SA, the depreciation of the currency in the long-run is accompanied by high unemployment rates. On the other hand, the appreciation of the Rand reduces unemployment by 0.40, however, the effect of the rand appreciation is insignificant. These results are directly in accord with that of Ismas and Elsalih (2018) who in their findings indicated that the unemployment rate reacts to depreciation rather than appreciation of the currency. This means that in SA as an open economy the exchange rates play a significant role in accelerating unemployment away from the target of 6% by 2030. The effect of the exchange rate is also found to be asymmetric.

Table 8: Short-run Error Correction Model

Variable	Coefficients
D(GDP_POS)	1.1460
D(GDP_NEG)	1.0920
D(CPI_POS)	-0.0949 [0.1260]**
D(CPI_NEG)	2.2308 [0.4372]***
D(EX_POS)	0.4903 [0.2695]*
CointEq(-1)*	-0.44 [0.0823]***

Note: *** imply 1%, ** 5%, and * 10% significant levels. The figures in brackets are standard errors.

Source: Estimation

The results in Table 8 particularly for GDP were written in such a way that lags coefficients were summed for positive and negative shocks respectively. In line with Tenzin (2019), the results suggest that in the short-run unemployment moves together with GDP, unemployment increases when GDP increases and decreases when it decreases. This disregards Okun's law in the short run. On the other hand, positive shocks in CPI result in a reduction in unemployment by 0.094 and is significant at 5% this proves the evidence of the Philips curve in the short run. The negative shocks in CPI reduce unemployment by 2.28 in the short run and the effect is statistically significant at 1%. This implies that in the short run, it does not matter whether price increases or decreases, unemployment will still decrease. However, it decreases at a faster rate in response to negative shocks than positive shocks. Exchange rate depreciation in the short run also increases unemployment by 0.49 and is significant at 10%. In the short run, no evidence of asymmetry was detected. Ultimately, the ECM takes a negative sign as expected and is significant at 1%; this implies that there exists a long-run relationship among the variables. The adjustment process is too slow as it takes more than two quarters for the disequilibrium of the previous quarter to be corrected ($\frac{1}{0.44} = 2.27$).

The results of the dynamic multiplier graphs presented in Appendix A are the same as the results of the long run and short run. The graphs show that the response of a dependent variable (unemployment) in both negative and positive shocks in the dependent variables is smaller in the short run. However, as time goes by the dependent variable becomes more elastic to both negative and positive shock, and becomes more asymmetrical. Table 8 presents results from the post-estimation

diagnostic checks which are necessary to ensure the reliability of the estimated results. The evidence indicates that the residuals from the estimated models are free from autocorrelation, heteroscedasticity, model misspecification, and residual non-normality since the p-values are above the 5% significant level. Equally important is the CUSUM test for stability which is presented graphically in Appendix B. The CUSUM test is used to test the systematic movement of the model's parameters within a 5% significance level. Both the CUSUM and CUSUM square line fluctuates within the 5% significance band (See appendix B.). This means that the estimated models do not suffer from instability in parameters.

Table 9: Diagnostic tests

Diagnostic Tests	F-statistic	P-value
Heteroskedasticity Test	2.479966	0.0511
Breusch-Godfrey Serial Correlation LM Test:	1.461127	0.2266
Ramsey RESET Test	1.645520	0.1760
Jarque-Bera	3.4998	0.1738

Source: Estimation

CONCLUSION

Achieving low rates of unemployment has been a matter of concern in emerging economies like South Africa. High rates of unemployment are both socially and economically detrimental. Therefore South Africa embarked on a plan to reduce unemployment to 6% by 2030. From a theoretical standpoint, it is noted that sustained economic growth will play a role in reducing unemployment. However, the result show that the conditions of the South African labour market are not appealing for the reduction of unemployment. The results in the long run postulate that employers are quicker to retrench when the economy is in recession and they are slower to hire when the economy is in expansion. According to Black and Hasson (2016), this can be attributed to the fact that in the production process capital is preferred to labour, because of the strict labour laws which make employers reluctant to hire. The policy implication of this is that in developing countries like South Africa, where there are great uncertainties in the labour market. Artificial intelligence coming with the Fourth Industrial Revolution (FIR) will have a perfect destination in South Africa to replace more labour. Furthermore, the depreciation of the rand plays a vital role in accelerating

the high rate of unemployment in South Africa. This implies that creating conditions that will ensure the competitiveness of the Rand in the foreign exchange market is highly recommendable at this point. Ultimately inflation targeting as a monetary policy plays a vital role in achieving unemployment targets, as the results show that unemployment is reduced at a faster rate when prices are stable. In light of the above-mentioned results, economic growth is not sufficient at achieving the unemployment target of 6% by 2030. Therefore, creating a flexible labour market may go a long way towards achieving the NDP by 2030. The South African policymakers are recommended to revise and reduce strict labour laws that make firms look at the labourers as the highest expense among factors of production and thereby replacing them with capital in the long-run. Future research studies may investigate the effect of corruption on unemployment rates in South Africa.

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The authors declare no conflict of interest associated with this research project, and also that the disclosed information is accurate.

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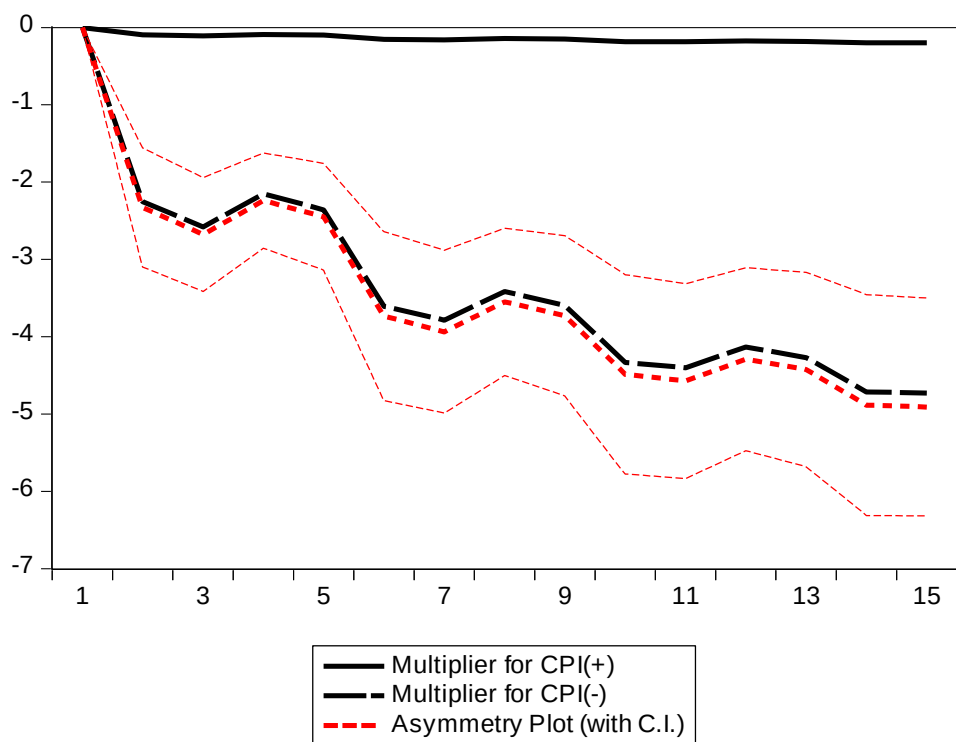
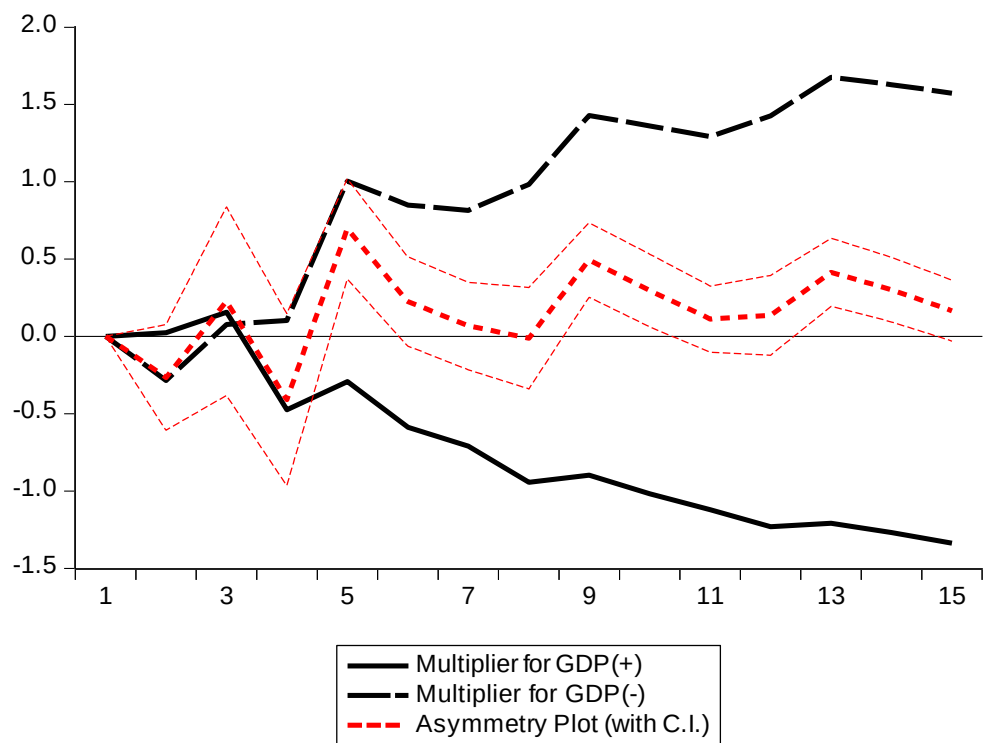
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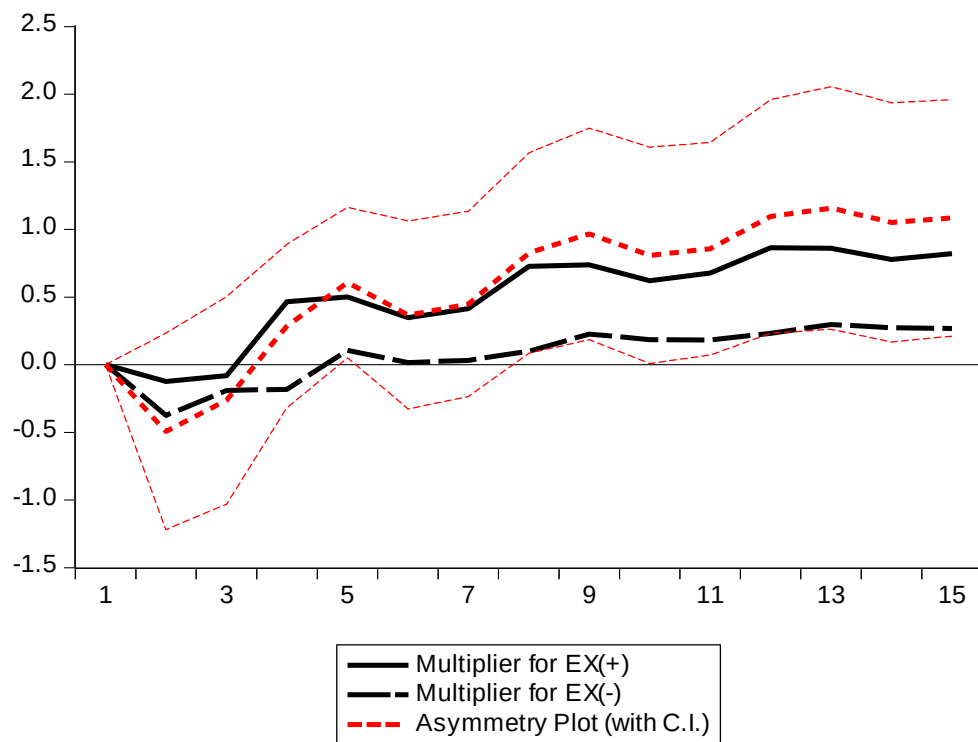
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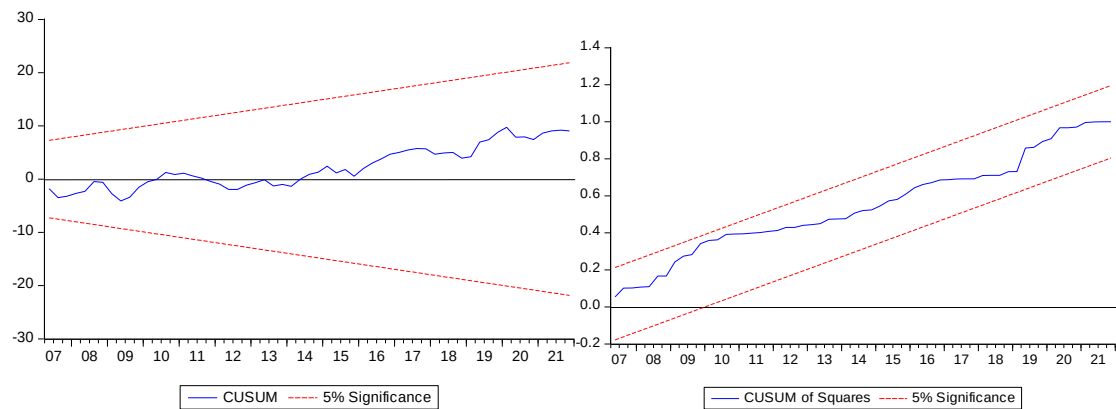
Appendices

Appendix A





Appendix B



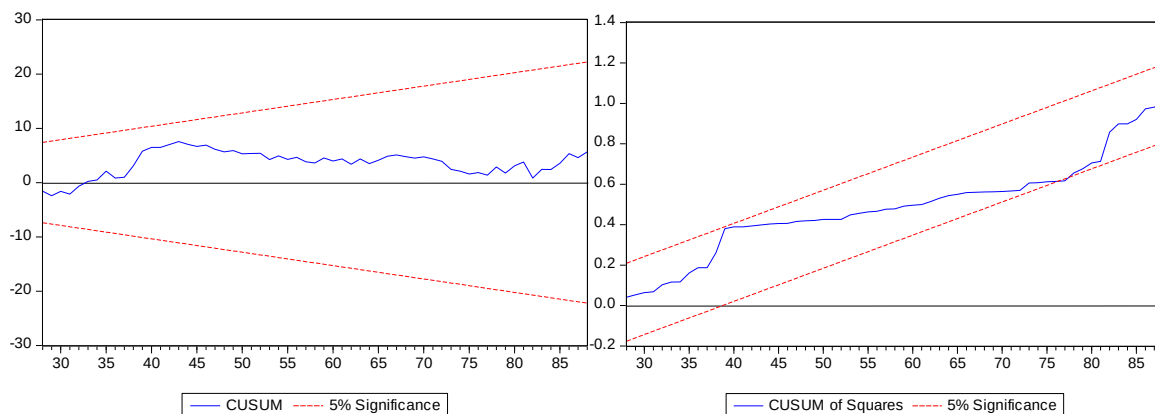
Appendix C

Function:

$$(Un = f(Un, CPI, EX, GDP\_GAP))$$

	F Stat	Lower Bound	Upper Bound
	4.5488	3.47*	4.45*
		4.01**	5.07**
		5.17***	6.36***

Diagnostic Tests	F-statistic	P-value
Heteroskedasticity Test	1.5638	0.0928
Breusch-Godfrey Serial Correlation LM Test:	0.9016	0.4114
Ramsey RESET Test	2.3441	0.1310
Jarque-Bera	0.012261	0.9938



$$Un_t = 0.30^{***} Un_{t-4} - 0.87^{***} GDP_{GAP_t} + 0.56^{***} GDP_{GAP_{t-3}} - 0.11^{***} CPI_t + 2.25^{**} EX \\ - 3.05^{***} EX_{t-2} - 0.0062^* EX_t + 0.0059^{***} TREND - 0.615^{***} ECT_{t-1}$$

The impact of power outages on the survival of informal enterprises in the uMhlathuze Local Municipality, South Africa

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ABSTRACT

Informal enterprises are acknowledged as significant economic drivers that provide livelihoods and generate employment and income for millions of individuals. The purpose of this paper was to investigate the challenges of power outages on the survival of informal enterprises in UMhlathuze local municipality. The study followed a qualitative research approach, where semi-structured interviews were conducted. The study population comprised of fifteen (15) enterprise owners whose businesses include salons, car washes and the sale of fast-food. A convenience sampling method was adopted to select the participants of the study. The study discovered that power outages, especially high levels of rolling blackouts such as stage 4, 5 and 6 has a huge impact on the survival of informal enterprises at UMhlathuze local municipality. The findings further revealed that informal businesses in townships suffer greatly compared to those situated in towns. The study recommends alternative methods such as affordable power inverters to lessen the effect of rolling blackouts. The study concluded that power outages influence the effectiveness of informal enterprises, which leads to the threat of their survival.

Keywords: power outage, Electricity, informal enterprises, business survival.

INTRODUCTION

In developing countries, especially in South Africa, informal enterprises have been acknowledged as a backbone of township economy, generating employment opportunities and alleviating poverty (Gumede, 2019). Informal enterprises are regarded as a source of income for disadvantaged individuals who are unemployed and those who are making means to break the chain of poverty in their families (Ringson & Raniga, 2022). Despite their significant contribution, informal enterprises encounter challenges that hinder their survival. These challenges comprise of power outages amongst others which has exposed the survival of many businesses to variability in South Africa (Lubinda, 2018; Sassen, 2018; Lenoke, 2017).

Growitsch, Malischek, Nick & Wetzel (2013) define a power outage as a deliberate shutdown of electricity in parts or all of a power distribution system, usually to prevent system breakdown when demand exceeds system capacity. Power outages have become a frequent occurrence in South Africa, resulting in significant disruptions to small businesses across the country (Goldburg, 2015). Informal enterprises, often operate with limited resources and infrastructure and are particularly vulnerable to the adverse effects of power outages. The purpose of this paper was to investigate the challenges of power outages on the survival of informal enterprises in UMhlathuze local municipality. Specifically, the study aim was to determine loss of productivity and income challenge experienced by informal enterprises during the high-level rolling blackouts. Opperman (2023) reported that small businesses generate less output as a result of lower productivity costs, which has an impact on their potential to create employment opportunities as well as productivity.

PROBLEM STATEMENT

Eskom's power supply serves as an essential input for many businesses in South Africa. The majority of activities rendered by informal enterprises such as salons, car washing machines and fast-food restaurants rely on the continuous and efficient flow of electricity (Botha, 2019). Mhlanga (2018) reported that 65% of small businesses in townships cease operation during hours of power outage and this has a negative impact on enterprises' productivity, and subsequently lead to shut-down. Electricity is a significant input for productivity; thus power outages contribute to the vulnerability of informal enterprises in South Africa and subsequently have a negative effect on the

economic growth of the country. This paper posits that there is no clear academic literature on the impact of power outages on the survival of informal enterprises.

LITERATURE REVIEW

Informal entrepreneurship

Informal entrepreneurship has received a greater recognition due to its significant contribution to the betterment of individuals living in townships (Salvi, Belz & Bacq, 2023). This acknowledgement is evident by the substantial role of informal entrepreneurship on employment creation, poverty eradication and the reduction of income variation in many nations throughout the globe (Mhlongo & Daya, 2023). Ault & Spicer (2022) support the recognition that 2 billion individuals who are struggling to secure formal employment globally opt for entrepreneurial entry into the informal sector. These individuals operate elementary enterprises that pursue survival-oriented goals, and work with immediate family members. Webb, Khoury & Hitt (2020) defined informal entrepreneurship as commercial endeavours that are undertaken by individuals who identify and exploit opportunities in the market. Informal entrepreneurship, often known as the shadow economy or the grey economy, represents economic activities by individuals and economic units without official contractual agreements (Etim & Daramola, 2020). According to Teyi, Larsen & Namatovu (2023), informal entrepreneurs are individuals who engage in legitimate business activities that are unregistered and fail to have necessary regulatory approval to operate and in most cases they operate with limited resources.

Power outage

A power outage is described as a situation where the supply of electricity stops and leads to power not being provided to the end user (Schoeman & Saunders, 2018). Rankumise (2017) further suggests that a power outage is an electrical deficiency due to increased power demand that exceeds the supply. The term 'load shedding' is defined as a measure which is executed to diminish the "strain placed on an electricity grid", by means of provisionally cutting the supply of electricity (deliberately) to limit the utilisation of energy supply, as caused by an over-demand thereof (Goldberg, 2015; Steenkamp *et al.*, 2016). Prof Assan & Masibi (2015) further support that a power outage is the action from Eskom that roll power cuts with the intention of diminishing the load on the power supply system when the demand is higher than the

supply. There are two types of power outages: planned and unplanned outages. A planned outage is a power outage that occurs when the supply of electricity is switched off at a substation or other local grid location so that maintenance or emergency repairs can be made (Schoeman & Saunders, 2018). Unplanned outages are periods of time when the electricity supply to a particular building or area is interrupted and is not scheduled. Unplanned outages can occur due to cable theft, weather conditions, illegal electricity connections, old infrastructure, and even excavation or building developments (Nateghi, Guikema & Quiring, 2011). Umar & Kunda-Wamuwi (2019) explain that load shedding is the system of deliberately reducing demand on the energy generation system by provisionally switching off distribution of energy to different geographical areas. Eskom, the primary electricity provider in South Africa, has implemented load shedding since 2008 as a result of a number of issues, one of which is the neglect of its infrastructure for supplying energy (Carlsson *et al.*, 2020).

Impact of power outages on informal enterprises

Electricity plays a significant role in the economic growth and most business sectors rely on electrical energy for their operations (Essay, 2017). Power outages have a significant influence on businesses' total expenditure, the effectiveness of operations, non-functional equipment, and deterioration of goods (Raza *et al.*, 2020). Micro-enterprises are struggling to maintain their viability due to power outages. Power outages implemented by Eskom; the state-owned electricity provider present a significant challenge for small businesses in South Africa (Times, 2023).

Table 3.1. Impact of power outages on informal enterprises

Direct impacts	Indirect impacts	Social impacts
Loss of production Equipment damage Raw material spoilage Increased expenses	The cost of income being postponed The financial cost of losing the market	Uncomfortable temperature Loss of leisure time

Sources (Linares & Rey, 2013)

The inconsistent power supply disrupts operations, hampers productivity and subsequently causes financial loss to small businesses as they often need more

resources to invest in alternative power solutions (Winter, 2011). According to Cissokho (2015) and Nyanzu & Adarkwah (2016), power outages negatively influence the productivity of micro enterprises through various ways, such as loss of revenue, increased expenses, decreased employee productivity and equipment damage.

Loss of revenue

Power outages have forced most local businesses operating in townships to cease operations during hours of blackout. A Nedbank report (2023) suggests that 65% of small businesses have been forced to cut jobs due to significant revenue losses. Mbedzi & Kapingura (2023) posit that the most significant impact of power-cuts on small businesses is the loss of productivity. They further advance that when power goes off, business operations come to a halt and this leads to missed deadlines, delayed projects, decreased outputs and subsequently leads to lost revenue and decreased customer satisfaction.

Increased expenses

Charity & Simon (2023) believe that power interruptions as a result of blackouts forces small businesses to use alternative sources of power to continue with operations. The authors indicate that this requires additional expenses to maintain equipment, buy fuel and pay for maintenance. Power-outages lead to increased operation costs, lost revenue, decline in margins and affect profitability (Times, 2023). Generators are the most prevalent alternative energy source. However, they are very expensive to operate and maintain depending on the stages of blackouts.

A decrease in employee productivity

Tembe & Hlengwa (2022) explain that power outages cause a decline in the level of productivity and cause a fundamental disturbance in the normal process of production in business. Power outages can affect businesses activities through a variety of channels, which eventually lead to negative effects on productivity (Cissokho & Seck, 2013). The authors advance that there is an efficiency channel through which discontinuous power provision is identical with disturbance in the production process, causing productive resources to lie sluggish, causing lower output.

Equipment damage

Power outages have caused severe setbacks to many informal businesses operating in the township economy. Umar & Kunda-Wamuwi (2019) testified in a study conducted by Tembe & Hlengwa (2022) that power outages have initiated a massive interruption to the operation of small businesses, damaged equipment such as electrical appliances and caused food spoilage to businesses that could not afford alternative sources of power, forcing them to cease operations due to enormous disparities in service demand and supply.

THEORETICAL FRAMEWORK

Imenda (2014) defines a theoretical framework as a foundational review of existing theories that serves as a roadmap for developing the arguments of the researcher in the study. Voss, Tsikriktsis & Frohlich (2002) postulate that theories are developed by researchers to explain phenomena, draw connections, and make predictions. This paper followed the economics of power system reliability and planning theory.

The economics of power system reliability and planning theory

The economics of power system reliability and planning theory, developed in 1979 by Mohan Munasinghe suggests that electricity is necessary for achieving productive goals (Munasinghe, 1979). Commercial, industrial, and agricultural producers depend on the availability of a stable electricity supply to provide adequate goods and services to retailers (Munasinghe, 1979; Kufeoglu & Lehtonen, 2016).

The theory recommends generation, transmission, and distribution as three core elements through which an electric power system must provide reliable electricity for consumers at the required time and location (Anwar *et al*, 2022; Yohanandhan *et al*, 2022). Consequently, electricity becomes unreliable where there are power surges, brownouts or voltage level, power outages, load-shedding, and blackouts. The effects of unreliable electricity, such as load shedding, can be calculated by estimating the industrial outage cost based on a comprehensive study of spoilage, the production made idle, and the recovery of lost production during both normal working hours and overtime which leads to poor business performance (Munasinghe, 1979; Choudhary, 2017). Therefore, the disruption of electricity's generation, transmission and distribution components will affect the supply of electricity to customers. Exogenous events, such as bad weather and staff strikes in the utility or related energy sector,

can also be the cause of interruptions which subsequently lead to power outages (Ibiene, Clinton & Chinago, 2018; Onaolapo *et al*, 2022).

The theory also postulates that the effects of power outages vary depending on the industrial consumers or type of industry involved, the duration of the interruption, and the time of occurrence (Munasinghe, 1979). Micro-enterprises depend on a stable and reliable supply of electricity to produce goods and render services of high quality. The interruption of power supply compromises the productivity of small businesses as it damages their equipment and decreases their revenue (Akuru & Okoro, 2014; Obokoh & Goldman, 2016). Alby, Dethier & Straub (2012) submit that a reliable power supply increases the productivity of small businesses. Therefore, the economics of power system reliability and planning theory argues that a reliable electricity supply is an indispensable input to the survival of micro-enterprises (Oseni & Pollitt, 2015).

METHODOLOGY

Research design

Research design refers to a framework for collecting data and analysis of results that enables researchers to answer the study's research questions (Flick, 2018). The study employed a qualitative design approach to investigate how power-cutting affects the survival of informal enterprises operating in the salon, car washing and fast-food sector in uMhlathuze local municipality. Qualitative research is viewed as an exciting and highly rewarding activity as it engages the interaction between the researcher and the participant to acquire reliable information from individuals or groups on their feelings (Mason, 2006). A convenience sampling method was used to prudently select fifteen (15) participants from three sectors namely, salon, car washing and cooked fast-food. This sampling was chosen to allow participants to give their opinions on the impact of load-shedding in their businesses. Semi-structured interviews were conducted with the informal entrepreneurs situated in Esikhaleni, Mzingazi and KwaDlangezwa. Content analysis method was used to analyse the primary data collected. This study adhered to strict ethical considerations anonymity of all participants and voluntary participation was encouraged from participants. The study was conducted using the ethical clearance (UZREC 171110-030 PGD 2020/14) from the Faculty of Commerce, Admin, and Law at University of Zululand.

FINDINGS AND DISCUSSION

The purpose of this paper was to investigate the challenges of power outages on the survival of informal enterprises in UMhlathuze local municipality. Participants submitted that the implementation of power outages affects the productivity of micro enterprises, lowers their revenue, and negatively influences the quality of the services they render to their customers/clients. These submissions are supported by a study conducted by Olajuyin & Mago (2022) highlighting that load-shedding has a negative impact on the performance of small businesses.

Themes developed for the study.

- Loss of clientele
- Decline of effectiveness and profitability
- Increased expenditure
- Surviving mechanism

Participants of the study

Participants (n =15)	Location	Business type
P1	Esikhaleni	Cooked fast-food
P2	Esikhaleni	Salon
P3	Esikhaleni	Salon
P4	Esikhaleni	Cooked fast-food
P5	Esikhaleni	Car wash
P6	Esikhaleni	Salon
P7	KwaDlangezwa	Cooked fast-food
P8	KwaDlangezwa	Cooked fast-food
P9	KwaDlangezwa	Cooked fast-food
P10	Mzingazi	Car wash
P11	Mzingazi	Cooked fast-food
P12	Mzingazi	Cooked fast-food
P13	KwaDlangezwa	Car wash
P14	Esikhaleni	Car wash
P15	Esikhaleni	Salon

Source: Researcher's construct (2023)

Theme 1: Loss of clientele

Power outages have a substantial impact on the operations of micro enterprises, leading to decreased sales, increased costs and damage to businesses' reputations and subsequently leads to loss of customers. The following quotes paint the experiences of participants:

“Customers are impatient, they come to our stalls because of the need, if we are failing to satisfy the need, they leave to look for an alternative way of satisfying their need. Most of my customers are school kids who in most cases afford fries and igwinya, it is difficult to meet my targets during power outages especially when Eskom implements stage 6” (Participant 1).

“Eish, I had lot of customers complaining about their cars not properly cleaned inside. This is caused by the fact that we use the traditional way where we use the brush instead of a vacuum that uses electricity. Load-shedding is killing our businesses, we are losing customers.” (Participant 15).

“It’s difficult to ask clients to come back after 2 hours, they come to us and when we told them we are experiencing load-shedding, they go to other salons that have invested in generators (Participant 2).

“During stage 6 we lose about 6 hours because of load-shedding, just think how many customers we send-off because of loadshedding. We just wake up and come just sit here, looking at people passing, going from the south to the north” (Participant 3).

Seinker (2019) supports the comments from participants 1,2,3, and 15 that small businesses cannot purchase generators that can be used as alternative sources of energy. Implementation of high levels of power outage result in a detrimental situation for micro-enterprises, causing an adverse impact and subsequently lose clientele.

Theme 2: Decline of effectiveness and profitability

There has been a drop in sales and services that are rendered by micro enterprises as a result of load-shedding. This is evident in the low business turnover rate. Participants share their experiences below:

“These power-cuts have severely impacted my business, I had to use my savings to take of some business expenditure considering that I have not been productive[e]

because of power interruptions. It will take some time for me to recover from the expenses caused by the decline in my effectiveness” (Participant 14).

“I close my business during loadshedding because I entirely depend on electricity to cook food and to keep soft drinks cold in the refrigerator” (Participant 12).

(Participant 6) reported that the business becomes dry, and it becomes difficult to even pay rent.

“I sometimes don’t open because of load shedding, what is the point of coming to work for only 4 hours a day? This loadshedding will hit during peak hours where we supposed to be making money, it [is] sad that I am unemployed and this business is the only way I am generating income, but when things are like this, I become hopeless.”

“Clients come to my car wash for services such as vacuum and car wash spray gun. Both this equipment uses electricity and during loadshedding I have few clients coming to the car wash and that is a loss to me because I am making less money” (Participant 13).

A study conducted by Mbomvu et al., (2021) affirms that micro enterprises depend on electricity to conduct their business, it is therefore alarming that the implementation of power outages by Eskom directly causes the commercial operation of micro enterprises to cease. Seinker (2019) further supports the view that micro enterprises operate for survival purposes, and they are not generating enough income to acquire alternative electricity power supplies (e.g., generators and inverters) to remain afloat during load shedding and this results in revenue loss.

Theme 3: Increased expenditure

The implementation of power outages forces informal enterprises to consider alternative sources of energy, which drastically raise operational costs owing to fuel expenditure. Additionally, the damage that frequent power variations do to the equipment also increases costs such as maintenance and repairs. The following quotes paint the experiences of participants.

“One would consider charcoal as [a] cheap item, but its expensive especial[ly] when it’s not budgeted for and it also decrease[s] the revenue, I used 3 bags of charcoal for

the period of 2 hours during loadshedding to cook food, and that's too much for me” (Participant 11).

“Petrol is expensive and to run a car was for 4 hours with a generator is a nightmare, I need to have 25 litres to 50 litres of petrol to make sure that I don’t los[e] my clients” (Participant 5).

“My intentions were far from spending an amount of R350 on something that I have. I have 4 cutting machines but all of them depend on electricity, so I had to buy the wireless one for business continuity” (Participant 15).

The findings of this study resembles with Charity & Simon (2023) who allude that power interruptions as a result of blackout force small businesses to use alternative sources of power to continue with operations which becomes an additional operating cost.

Theme 4: Surviving mechanism

Micro enterprises rely on the supply of electricity for their day-to-day operations. Small businesses find it difficult to arrange alternative power sources as preventative measures when there are unannounced power outages. Participants indicated that power outages present an unfair competition to small businesses that can afford generators and those that could not. The following quotes shed light on the participants' actual experiences in relation to survival mechanisms during power outages:

“This power outage is a national crisis and it seems like even the people responsible to solve [it] don’t have a solution. I had to think of a cheaper way of doing my business and charcoal came to my mind, I now make fire with charcoal to ensure that I cook for my customers” (Participant 11).

“I am renting a generator and it costs me R400 a week, I also need to buy petrol. For me it’s better because my business is operating even during power cuts, I can’t afford to lose 4 hours of business. I am surviving with a generator during stage 6 of loadshedding”. (Participant 5).

“I have lost so much money because I had to turn back many clients during high stages of loadshedding and this has pushed me to invest in a wireless hair head shaver, so far it has worked for me, I charge it and it last[s] for 3 hours” (Participant 6).

A study conducted by Lubasi (2020) supports the findings of this study, the author details that alternative sources of energy like a generator that uses petrol or diesel prevails to be the solution for many businesses in South Africa. Tembe & Hlengwa (2022) also support the findings of this study by indicating that back-up systems such as generators and solar power are considered as a momentary remedy for power outages and to keep businesses running.

RECOMMENDATIONS AND CONCLUSION

The purpose of this paper was to investigate the challenges of power outages on the survival of informal enterprises in UMhlathuze local municipality. Participants were selected through convenience sampling to share their experiences of power outages and how it has impacted their businesses. Data collected through this study was analysed using themes. The findings of this study align with the economics of power system reliability and planning theory, developed in 1979 by Mohan Munasinghe which suggests that electricity is necessary for achieving productive goals of businesses. The theory further points out that unreliable power supply affects the processes of small businesses considering that their operations depend on the availability of stable electricity. Given the socioeconomic conditions they face, South Africa's unreliable energy supply has prevented informal enterprises from creating a means of survival. The findings of this study evidence that the implementation of power outages negatively affects the operations of informal enterprises operating at uMhlathuze local municipality. Therefore, the study recommends that informal entrepreneurs at uMhlathuze local municipality should consider alternative sources of energy such as generators and share the costs of running the generators to keep their business running during power outages. The study further forwards that, salons operating in the informal sector should invest in wireless equipment such as professional hair clippers which will allow them to cut their clients' hair during power outages. It is also recommended that policymakers should persuade the electricity provider to reduce electricity tariff rates for informal small businesses to make it affordable given that they are not compensated for their losses and that it is difficult to manage the increased

operating costs of a business due to costs associated with replacing damaged products and equipment, loss of profit due to loadshedding, and expensive electricity at the same time. Lastly, uMhlathuze Local Municipality should assist informal entrepreneurs with a mobile generator which can move from one ward to the next based on power outage implementation and pursue them to pay for fees to connect to generators. The findings of this study are not generalisable to other local municipalities, which creates a need for future studies.

Conflict of interest

There is no conflict of interest.

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The barriers and challenges faced by black women in management positions: A case study of The National Research Foundation

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ABSTRACT

At the dawn of the new South Africa (SA), the introduction of many policies and strategies that included new employment and labour laws aimed at transforming the country resulted in an increased number of black women employed in all sectors of the economy. Since the new dispensation, supporting policies, and laws, more and more black women have taken up leadership positions in various organisations. However, there are not sufficient women in leadership. Those who aspire to leadership positions or are already in leadership continue to face several challenges. If SA is to fast-track its transformation agenda with even more women taking up leadership positions and rising through the ranks, it is important to understand and address the challenges and or barriers that they face as leaders, and of course to propose solutions to these challenges. The main objectives of this study were to investigate the barriers that prevent black women from entering leadership and to investigate the challenges they encounter once they are in these positions. To address this problem, an exploratory and case study approach was used. An interview-based survey was conducted with eleven out of fifteen black women leaders at the National Research Foundation (NRF), the remaining four were not available for the interviews. Before the interviews, the researcher first discussed the motivation for the study with the aim of ensuring clarity and understanding. Since the study was exploratory, data was collected using a qualitative method. Thematic analysis was used to analyse data. The findings of this study supported the assumption that there are barriers that prevent black women from occupying leadership positions. These barriers include the perceived unwillingness of the organisation to promote diversity in the workplace, the 'think manager-think male' stereotype, the issue of not having enough qualifications

and skills, conflicting roles, the glass ceiling, and the SA history of apartheid and patriarchy. It was also revealed that once black women finally progress to these positions, they face challenges; they are not as acknowledged or respected as their male counterparts. Black women sometimes find it difficult to maintain a balance between responsibilities at work and at home. The abovementioned findings imply that black women are still underrepresented at the leadership level.

INTRODUCTION

Before the shift from apartheid to a democratic government, South African black people were not afforded equal opportunities. Moumakoe (2013) argues that before 1994, the South African Public Service systematically marginalised women across the colour spectrum, this means that race and gender were the primary determinants of the opportunities that one had. After 1994, the democratic government took over and required all South African citizens to be afforded equal rights and equal opportunities. Mello and Phago (2007) note that SA is still a young democracy grappling to redress the imbalances of the past, which were not only about colour but also about gender and many other inequities. Before 1994, women of any colour were also disadvantaged, and thus, black women experienced both racial and gender discrimination (Mello and Phago, 2007). According to Hendrickse (2004), patriarchy played a big role in influencing informal and formal human relationships and the opportunities available for women in the workplace. Mathur-Helm (2005) argues that the focus has been on correcting racial imbalances and less focus is given to gender imbalances, as a result, black women leaders are still underrepresented and experience many challenges in their leadership positions. The purpose of this study was threefold, the first part of this study investigated the barriers that prevent black women from occupying leadership positions at the NRF, and the second part investigated the challenges faced by black women who are already in leadership positions at the NRF. Lastly, this study analysed whether these challenges and barriers are linked to race and gender.

PROBLEM STATEMENT

Research conducted by Bell and Nkomo (2001) indicates that there are barriers that prevent black women from occupying leadership positions and that when they finally get into leadership positions, they do not get the recognition and acknowledgment they

deserve or as that of their male counterparts. Black women encounter obstacles to upward social mobility, cultural issues, and marginalisation. They encounter paternalism, are undervalued, have their work ethicised, and are typically given fewer opportunities than men and white women.

RESEARCH OBJECTIVES

The rationale of this study was that SA needs to develop better strategies to enhance transformation and in particular the ascendance of women to leadership positions so that they make meaningful contributions to the development of SA. To do this, SA needs to develop a better understanding of and address the challenges faced by black women occupying leadership positions in various organisations like the NRF. To do this, the research study first aimed at identifying the barriers that hinder black women from entering leadership and the challenges they encounter once they occupy these positions. The objectives of this study were as follows.

1. To investigate if there is a lack of dedication and commitment, perceived or real, by the organisation to advance black women at the NRF.
2. To examine the impact of the 'glass ceiling' on black women wanting to occupy leadership positions at the NRF.
3. To explore the degree to which conflicting roles are a hindrance to black women leaders' competence at the NRF.
4. To investigate the impact of not having enough women role models on black women leaders at the NRF.
5. To investigate the extent to which the legacy of apartheid and patriarchy have an impact on the slow increase of black women occupying leadership positions at the NRF.

LITERATURE REVIEW

The South African government has played a big role in trying to address the imbalances of the past (Carli and Eagly, 2001). Farmer (2013) notes that many legislative changes addressing various forms of inequality were brought about by the democratic shift in government. Farmer (2013) acknowledges that South Africa has one of the most complex and diverse populations in the world which consists of Blacks,

Coloureds, Indians, and Whites, hence it is referred to as the “Rainbow Nation”. Carli and Eagly (2001) argued that even though several legislations are put in place with the aim of correcting historical imbalances, discrimination against women and racial discrimination still exists. According to Moumakoe (2013), racial and gender discrimination are manifestations of inequality in development, as a result, there is the slow promotion of black women to leadership. Moumakoe (2013) further argues that gender discrimination in the workplace is caused by women's exclusion in decision-making in the past. Women who are already in leadership positions do not receive equal respect and acceptance as men (Moumakoe, 2013). Catalyst (2004) argues that the number of women entering leadership and in leadership positions slightly increased in 2004 lagging behind countries like the United Kingdom and the United States. Black women would have suffered from the combined detrimental effects of both racial and gender discrimination, but white women would have suffered because gender discrimination against women was filtered through a speedy system of racial discrimination (De La Rey and Duncan, 2003). Historical inequalities created a “think manager-think male” stereotype which basically excluded women from entering leadership positions (Moumakoe, 2013).

RESEARCH METHODOLOGY

This study used an exploratory study research design. An exploratory study is conducted when facts are recognised but more evidence is needed to develop a feasible theoretical framework (Sekaran and Bougie, 2010). The purpose of conducting exploratory research was to get a deeper understanding of the challenges that black women who are in leadership positions at the NRF face. Saunders, Lewis, and Thornhill (2007) argue that an exploratory study may assist the researcher in finding the important variables that flawlessly address the research problem. Because of the nature of this study and the population, a qualitative method of collecting data was used. Qualitative research provides an understanding of the problem and is also used to uncover trends in thoughts and opinions. According to Thomas (2003), qualitative methods include a researcher describing kinds of characteristics of people and events without comparing events in terms of measurements. Because the researcher already knew the structure of the NRF and the employees, this study used a judgment sampling technique to select the population. According to Sekaran and

Bougie (2010), judgment sampling refers to the selection of subjects that are mostly advantageous or in the best position to provide information that is needed.

DATA ANALYSIS

The information from the interviews was captured and processed using the qualitative data software known as thematic analysis. According to Braun and Clarke (2006), thematic analysis gives the necessary time or opportunity for flexibility in the researcher's choice of theoretical framework. Through this flexibility, thematic analysis allows for the rich, detailed, and complex description of your data" (Braun and Clarke, 2006:79). Themes were identified using the interview recordings. What counted as themes were points that captured the key ideas about the data in relation to the research question and represented some level of patterned response or meaning within the data set.

PRESENTATION AND DISCUSSION OF RESULTS

Research objective one

Objective one aimed at finding out if there is a lack of dedication and commitment to advance black women by the organisation.

The main objective was to find out if the NRF is playing its part in ensuring that black women leaders are not discriminated against because of their gender and race. The aim of this objective was to also investigate if the organisation's human resources department is linking diversity to organisational issues whenever possible and to examine and monitor human resource processes to ensure that they produce diverse outcomes. Four participants out of eleven participants agreed that the organisation is committed to ensuring a non-discriminatory working environment for them.

Participant One mentioned that: *"The organisation is trying, we have programmes and workshops that are meant to promote diversity."*

Three participants also agreed that the organisation is committed to ensuring that black women stand an equal chance of progressing to leadership positions as their male counterparts and that when they are finally in these positions they are acknowledged and respected as their male counterparts. They also acknowledged that there are initiatives such as diversity workshops that are put in place to ensure

that they are not unfairly treated. However, most participants disagreed with the four participants and highlighted some of the issues that convinced them that the organisation is not doing enough to ensure that they were treated equally.

Participant Two mentioned that even when they work hard their efforts and dedication go unnoticed. *“Nothing is done to ensure that we are treated fairly, but we are always questioned.”*

Participant Three also argued that: *“Even when we attend those diversity workshops, they don’t come back to us and tell us the way forward.”*

Participant Four *“Sometimes I feel that I was only hired because they had to.”* The other four participants answered ‘No’ to the question of whether the organisation is doing enough to ensure that they are treated fairly. These results agreed with the literature which states that the barriers that prevent women from occupying leadership position are the unwillingness of the organisation to promote diversity in its leadership (Bell and Nkomo, 2001). According to research conducted by Powell (1999) over a decade ago, men continue to be dominant in senior leadership and it is difficult to eliminate prejudice and discrimination in the workplace. “Men are likely to be more comfortable with other men - the old boy network” (Bell and Nkomo, 2001:3). Promoting and hiring decisions are frequently unstructured and open to bias (Bell and Nkomo, 2001).

Challenges encountered by black women leaders climbing the corporate ladder at the NRF

Question five of part one of the interview questions guided the researcher to discover the challenges encountered by the participants in their corporate journey.

Most (4) of the respondents revealed that working hard to prove their potential and competencies was the major challenge that they were facing as they were climbing the corporate ladder. These results agree with a large body of existing literature. According to Spierenburg and Wels (2006), one black woman stated that being a woman in leadership means you must work hard to prove yourself and show people that you deserve to be a manager. Participant one agreed with this view as she mentioned that:

“In order for a black woman to get a promotion to executive positions, she must work four times harder to impress the superiors.”

The other two participants revealed that women are not recognised in decision-making. This concurs with Donaldson (1997) who argued that in the past, powers were not equally distributed to men and women especially in decision-making processes because men were superior to women, as a result, women had to take orders from men. Bradley (1989) further contends that the sexual division of labour in the workplace maintains that the generalisation 'men control, women obey' continues to hold.

Participant Three also added that:

“At some point, I feel like I’m not recognised in the strategic decision but I’m there for tick box compliance.”

Carli and Eagly (2001) argued that even when black women leaders are in leadership positions, their contributions to decision-making are not as respected as that of men because it is believed that they do not possess the leadership skills needed. Furthermore, the other two participants also acknowledged that there are some capacity constraints that hinder them in climbing up the corporate ladder. This includes their educational level, lack of skills, and experience. According to Davis and Maldonado (2015), the factor that promotes barriers for black women to occupy leadership positions is the 'pipeline problem' which implies that women with the appropriate educational background are not available, therefore, they are not hired. Lastly, the other two (2) participants of the sampled population revealed that age is also a challenge for women to acquire leadership positions in the organisation.

Participant Three mentioned that:

“There is a correlation between the level of your experience and your age limit”.

Participant Five added that: *“Age is a sabotage.”*

Research objective two

This objective was to examine the impact, if any, of the 'glass ceiling' on black women wanting to occupy leadership positions at the NRF. The focus of research objective

two was to investigate the extent to which the glass ceiling negatively affects black women wanting to occupy leadership positions at the NRF.

Most (7) of the participants agreed that age and gender is the major bottleneck preventing black women to accelerate and progress in their career. This concurs with Bell and Nkomo (2001) who argue that black women face prejudice barriers, and gender difficulties, and defeat cultural confusions.

Participant One is also in agreement with the findings as she comments:

“In order for a black woman to get a promotion to executive positions, she must work four times harder than a white woman.”

Participant Four also eluded that:

“Gender inequalities are still an issue in this contemporary society.”

Hymowitz and Schellhardt (1986) argued that the glass ceiling is a barrier that is not seen for black (women) climbing the corporate ladder. These findings also concur with the body of literature that women are judged as unsuitable for leadership positions because of their gender and age (Bell and Nkomo, 2001).

Participant Seven is also in agreement with the findings that she comments that:

“The percentage of black women entering leadership positions is still low because of gender prejudice that underestimates women in this country.” Spierenburg and Wels (2006) further argue that tokenism is a great challenge for black women entering leadership. The two participants highlighted that performance evaluation was not a barrier to their career growth at the NRF.

Participant Three mentioned: *“My performance is evaluated based on my job description which I find fair.”*

The other two of the participants revealed that the selection process for executive positions is not easy if you are a Black woman in the organisation. Govender (2005) asserted that there are many barriers that impede black women from moving up the corporate ladder which include lack of training and gender stereotypes. The challenges discussed above are those experienced personally by the sampled black women. It is evident that there is a need for societal transformation to address all the

issues associated with the glass ceiling preventing black women from progressing in their careers.

Research objective three

Objective three of this study explored the degree to which conflicting roles are a hindrance to black women leaders' competence at the NRF. The main aim of research objective three was to determine whether conflicting roles affect the job performance of black women. To address objective three, one question was asked to check if the participants can maintain a balance between responsibilities at work and at home.

The majority (7) of the respondents agreed that conflicting roles are not affecting their job performance. The other four respondents share the perspective that conflicting roles are affecting their job performance. Participant Three shares the same views as those who perceive conflicting roles as having an impact on their job performance.

She comments that: *"I have to balance between work and my family."*

Participant Four also mentioned that:

"I have my personal life outside of the working environment."

This concurs with the body of literature. According to research done by Madsen (2012), women are interested in advancing their careers and they also desire to achieve a work-life balance outside their career in comparison to male counterparts. In addition, women sometimes encounter difficulties in combining family and work responsibilities. These difficulties discourage them from taking on the fast-paced and demanding schedule of a career (Mello and Phago, 2007). Spaight and Whitaker (1995) further argue that black women are forced into the multiple roles of being a provider, homemakers, protectors, disciplinarians, and mothers. Ramazan (2010) also argues that work and family conflict is among the most common negative impacts that prevent women from reaching higher leadership levels. However, there are some participants who revealed that conflicting roles do not affect their job performance.

Participant One mentioned that: *"I don't believe in balance."* Furthermore, Participant Five also mentioned that: *"multi-tasking is a prerequisite for my job."* These findings revealed that most black women do not find it hard to maintain a balance between

their home and work responsibilities. They also revealed that they do not have difficulty managing their time.

Research objective four

Research objective four looked at the impact of not having enough women role models. The main objective was to determine if not having enough women leaders that new women leaders can look up to affects the new women leaders at the NRF.

Ten out of eleven black women leaders at the NRF are not affected by not having enough role models. This opposes the literature that not having enough role models is a challenge to black women wanting to climb the corporate ladder. The inadequate amount of woman role models and mentors and the elimination of women from informal networks serve as obstacles to the advancement of women in reaching leadership positions (Mello and Phago, 2007). Lack of support from both male and female, white and black leaders may result in a drop in the number of women wanting to occupy leadership positions in an organisation (Cain, 2015). “Mentors could be used to encourage ethnic minority and disadvantaged groups as well as support women to break through the glass ceiling” (Garvey et al., 2014) cited in (Cain, 2015:29).

Cain (2015) further argues that mentoring can assist new women leaders with regard to advancing their careers. “*Mentoring is a resource that can be beneficial to the success of someone building his or her career*” (Garvey et al., 2014) cited in (Cain, 2015:29).

Participant One disagreed with the literature by revealing that “*Not having women role models does not affect me, in fact, I prefer males.*”

Three participants also mentioned that they have male role models and that not having female role models does not affect them.

Participant Four argued; “*I don’t see the importance of having role models, I’d rather concentrate on becoming someone’s role model myself.*”

Two participants also revealed that it is hard to make friends with other women leaders and mentioned that it is easier to make male friends instead, as a result, they prefer male mentors or role models.

One participant mentioned that not having women mentors is hard because sometimes male leaders are not willing to associate themselves with women and are not willing to help *“Sometimes you just see and feel that you don’t fit in! Some men still see women as inferior. Not having a woman mentor did affect me.”* This agreed with Linstead et al. (2004) who argued that most female leaders do not have role models, instead they have male mentors and that women leaders receive lower pay as compared to men. Because of the negative stereotypes surrounding women and the impact of racial discrimination, black women have few role models. This is a challenge because they are not encouraged even when they face difficulties in their roles. They are isolated.

Research objective five

Research objective five investigated the extent to which the legacy of apartheid and patriarchy has an impact on the slow increase in several black women occupying leadership positions at the NRF. The main aim of research objective five was to determine the extent to which the legacy of apartheid and patriarchy has an impact on the slow increase in several black women occupying leadership positions at the NRF. To address objective five, the researcher asked research participants whether they agreed to the fact that injustices of the past contributed to the sluggish growth of black women occupying leadership roles in the organisation or not.

The majority (9) of the participants agreed that the legacy of apartheid has an impact on the slow increase in the number of black women occupying leadership positions at the NRF. This concurs with the literature that gender discrimination in the workplace is caused by women's exclusion in decision-making in the past (Moumakoe, 2013). Because black women face combined discrimination, it makes it hard for them to enter leadership positions or to be promoted to leadership positions even if their qualifications allow them (Carli and Eagly, 2001).

Participant One mentioned that:

“As a black woman you are discouraged to apply for leadership positions because of your race and gender. Our society as blacks created a system where women are inferior to men”.

This concurs with the literature. According to Nkomo (2001), black women had to struggle with both racism and sexism. Because black women face combined discrimination, it makes it hard for them to enter leadership positions or to be promoted to leadership positions even if their qualifications allow them (Carli and Eagly, 2001).

Participant Two mentioned that: *"There is still a long way to go! When you finally get a job as a manager some people are convinced that it had to do with your gender or race."*

Participant Three mentioned: *"Sometimes you are made to believe that you only got into leadership because of the policies that were introduced like Affirmative Action as if you don't have enough qualification."*

Participant Four mentioned: *"People always question how you got the position"*.

Participant Five mentioned: *"Being a black woman in a leadership position is hard!"* Literature also alluded that black women are sometimes questioned on how they progressed to their leadership positions *"It is hard work to overcome prejudices that come with Affirmative Action appointments. The notion that your sex and skin colour is the reason for your appointment is experienced as very disempowering."* (Interviews July 2000) cited in (Spierenburg and Wels, 2006:87).

"Once women have attained leadership positions, many discover that the organisation commitment to their success stops there" (Spierenburg and Wels, 2006:93). Spierenburg and Wels (2006) also argue that new women leaders do not have access to company information, they do not own the terrain and they do not have same power and support systems. *"I have the feeling that the organisation wasn't really committed to having black women be successful, it was like running into a brick wall"* (Interview June 2000) done by (Spierenburg and Wels, 2006:94).

Participant Six mentioned that: *"As long as apartheid history is still written and it's still on the internet, racism will never die, yes, apartheid and patriarchy do contribute to slow growth of black women in leadership."*

Participant Seven mentioned that: *"Our experiences with black men are not the same, and our experiences with white woman are not the same, because of South African black history of apartheid and patriarchy."*

According to Holvino and Blake-Beard (2004), black women leaders do not receive the same pay as white women, or male leaders in general. *“Black women receive lower pay than white men and women as well as men of colour, and they must learn to maintain a positive self-image when confronted with microaggressions that could halt promotions, mentoring, and success”* (Holvino and Blake-Beard, 2004:176).

Participant Eight mentioned that: *“We will never be good enough but the only way to survive is to ignore all these challenges we are faced with.”* Participant Nine mentioned that: *“Even when there is no discrimination because you know the South African history you expect to be discriminated.”* Hymowitz and Schellhardt (1986) suggest psychological or internalised discrimination as one of the barriers. This is a result of historical discrimination against women and black people. The idea that women are not meant to occupy leadership jobs and the belief that men prefer the high-stakes environment of top leadership while women prefer positions that have greater job security and fewer challenges. *“The maternal instinct will trump women’s career motivation”* (Hymowitz and Schellhardt, 1986:5).

CONCLUSION AND RECOMMENDATIONS

The findings revealed that black women are still experiencing a number of barriers to entry into leadership. Some barriers include lack of commitment by the organisation to promote black women leaders, glass ceiling, think managers think white make stereotypes, age limits, inadequate skills and education, conflicting roles, lack of support from other women leaders, and unfair selection/promotion. The findings also revealed that when women are finally promoted to leadership positions, they do not get the respect and acknowledgement as that of their male counterparts, and their mistakes are noticed and remembered longer. Women often feel disrespected and isolated. The study also revealed that the majority of women at the NRF do not find it challenging to balance work tasks and family tasks. Women leaders are often penalised for making errors while their male counterparts are praised for taking risks, young women leaders are not fully trusted as a result, their ideas and opinions are seldom recognised. They are also observed as less experienced leaders and their judgment is more frequently questioned. Because young leaders do not possess many years of experience, their lack of experience leads others to question their technical expertise and professionalism.

Although all women experience similar barriers, it could be argued that the degrees to which they experience these barriers are different. The experiences of black women and white women in leadership are not the same because black women struggle with both racism and sexism. Although the findings revealed this, it is important not to undermine the fact that education lays a strong foundation for the establishment of successful leaders. Because of SA's apartheid history, a number of black women did not get a chance to get formal education and training and to accumulate the skills that are needed for one to be a good manager. In addition to this, education increases opportunities for individuals. One can also argue that the burden of some challenges can be reduced with education. For example, the ability to search and access information is improved with education. With regard to whether the current government initiatives are assisting black women to overcome some of the barriers that they encounter when they want to progress to leadership positions, the results reveal that the number of women getting employment increased after these legislations, but there is a very small percentage of black women who were promoted to leadership positions.

The results also revealed that some participants believe that the NRF employs black women as leaders with the aim of improving the company image because women leaders are not involved in the decision-making processes and their views are not taken into consideration. Below the conclusions of the study are discussed according to the research objectives of the study.

The first objective was to investigate if there is a lack of dedication and commitment, perceived or real, by the NRF. The findings showed that some participants believe that the NRF is not doing enough to ensure that black women progress to leadership positions. Most participants believe that when they finally progress into leadership positions, the organisation is not doing enough to ensure that they are not discriminated against and that they receive the same acknowledgement as their male counterparts. Although some participants feel that they are qualified for their positions, they still think that there is a possibility that they were employed because of their race and gender, as a result, their opinions and contributions sometimes go unnoticed.

The second objective was to examine the impact, if any, of the glass ceiling on women wanting to occupy leadership positions at the NRF. The results revealed that there are still barriers that prevent black women from entering leadership at the NRF. One of the

reasons is that the NRF is a male-dominated organisation. Leadership positions are also dominated by men. The study also revealed that male leaders prefer to work with other male leaders because they believe that they are capable of doing the job while women leaders are not trusted, hence they are given easier tasks. Because of these reasons, women end up working harder than their male counterparts with the aim of proving themselves. They are often not included in the decision-making. As leaders, they are expected to support and agree to decisions taken by their male colleagues. The findings also revealed that the history of SA apartheid and patriarchy played a big role in ensuring that black women do not get the same opportunities as men and white women.

The third objective was to explore the degree to which the conflicting roles are a hindrance to black women's competence at the NRF. The findings revealed that most black woman leaders at the NRF do not have difficulty in managing responsibilities at work and home. Seven out of eleven black women leaders mentioned that they are able to balance their work and home responsibilities, while some complained that the NRF needs to introduce new policies that favour women. For example, the NRF does not provide enough support for pregnant women and when they give birth, they are only given four months maternity leave. Some women feel that this is not enough.

The fourth objective was to investigate the impact of not having enough women role models on black women leaders at the NRF. Research findings revealed that not having people who are willing to take these women step by step when they enter into leadership does not have a negative impact on women's competency at the NRF. Ten out of eleven black women managers mentioned that they prefer male role models over women role models, they also revealed that not having women role models does not affect them in any way.

The fifth objective was to investigate the extent to which the legacy of apartheid and patriarchy has an impact on the slow increase in the number of black women occupying leadership positions at the NRF. The findings revealed that the majority of black women leaders at the NRF believe that the history of SA apartheid and a patriarchal society defined black women as a person whose place is in the kitchen and who do not possess the skills that are needed for one to become a manager. Black

women are still discriminated against in the workplace even though there are legislations that were introduced with the aim of promoting diversity in the workplace.

Based on the findings of this study, it can be recommended that the government should do a follow-up on organisations to see if the legislation that was introduced after SA apartheid really worked. The NRF should also try by all means to promote and manage diversity. In addition to this, priority should be given to the evaluation and monitoring of the impact of current government initiatives on promoting the historically disadvantaged. Within the NRF, there should be departments that focus on the different categories of leadership. Understanding the challenges that black women in leadership face would assist in the formulation of policies and programs that would indeed address the real challenges of black women leaders at the NRF and in SA as a whole. In addition to this, it is critical for the NRF to understand the history of SA apartheid and patriarchy. Below, the recommendations of the study are discussed according to the research objectives of the study.

The *first* objective was to investigate if there is a lack of dedication and commitment, perceived or real, by the organisation to advance black women. To ensure that black women leaders receive equal opportunities as that of men, the NRF should:

- Ensure that the human resource department analyses data such as the number of promotions to check if black women are in fact promoted to leadership positions as equally as white women and men. This will assist in determining if they are benefiting from diversity initiatives or not.
- Introduce appropriate systems of measurement and hold leaders responsible for diversity advancement.
- Create a benchmarking team to recognise best practices.
- Contribute to an ongoing formal diversity effort.
- Link diversity to organisational issues on every occasion possible.
- Inspect and monitor human resource processes to guarantee that they produce diverse results.

The *second* objective was to examine the impact, if any, of the glass ceiling on black women wanting to occupy leadership positions at the NRF. In order to break the glass ceiling, the government and private companies should invest in training those who were previously disadvantaged. This can be done by introducing women's leadership programmes and supporting women wanting to enhance their knowledge through funding and human development courses. Women who are already in leadership

positions should be given platforms to share their experiences with government officials employed to ensure that every organisation practice diversity.

The *third* objective was to explore the degree to which conflicting roles are a hindrance to black women's competence at the NRF. The findings revealed that a number of black women at the NRF are able to balance responsibilities at home and work. The NRF should also be supportive. For example, a pregnant woman should be allowed to work from home in the later stages of pregnancy without having to take leave.

The *fourth* objective was to investigate the impact of not having enough women role models on black women at the NRF. A number of black women from the sample indicated that not having enough women role models does not affect them. The organisation should have leaders break away at least three times a year where leaders will get to know each other better and build work relationships.

The *fifth* objective was to investigate whether the legacy of apartheid and patriarchy has an impact on the slow increase of black women occupying leadership positions at the NRF. The NRF should consider the policies that were introduced by the new SA democratic government when hiring, this will ensure that everyone stands an equal chance of being promoted or hired as a manager.

FUTURE RESEARCH

This study focused mainly on black women leaders at the NRF, future research could possibly investigate other organisations (Private and Public organisations). Other suggestions for future research could be to carry out a comparative study of the barriers to entry which includes men, black women, and white women. On the same note, different sectors such as science and engineering may be included to gain more insight into the sectorial uniqueness and diversity that exists within the different business sectors. In addition to this, different locations could be investigated separately, as barriers to entry into leadership differ with location. For example, black women leaders in rural and semi-urban environments experience these challenges differently from those managing in upmarket organisations. Lastly, different countries other than South Africa could probably be an area for future research. This could add a different dimension or angle to the field of study. Eventually, the aim would be to continue to add knowledge to the already existing literature on barriers that prevent

black women from occupying leadership positions, and the challenges they encounter once they are in these positions, especially in the black context.

LIMITATIONS OF THE STUDY

According to Baron (2008), the limitations of the study are the circumstances that a researcher has no control over. The number of black leaders occupying leadership positions at the NRF limited the accessibility to a larger number of women of this calibre. To enlarge generalisation, different areas across SA could contribute to future research on a similar topic. Because of the nature of this study, both primary and secondary data were used. This study used the NRF as the study site, therefore, the results/findings did not apply to the whole of South Africa.

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Accessing social grant services: A case study of Ngcobo Local Municipality, Eastern Cape Province

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ABSTRACT

When poverty rears its ominous head in communities, particularly in rural municipalities, it reveals the ever-increasing dimension of inequality and human imbalances. Despite the government's efforts to alleviate poverty through the implementation of social assistance grants, access to these services continues to be hampered for the poorest of the poor and vulnerable people, particularly those who are disadvantaged and illiterate. This background necessitated the investigation based in Ngcobo Local Municipality in the Eastern Cape, as anecdotal evidence indicates that residents of this municipality face similar challenges, which may be exacerbated by their unique circumstances. The study is a case study with a mixed method approach, with a focus on the qualitative approach. The findings show that while the South African Social Security Agency (SASSA) is doing everything possible to alleviate poverty, there are factors in this municipality that are impeding grant recipients and potential beneficiaries from receiving the expected services. To that end, it is suggested that SASSA decentralise all grant applications in local offices in order to provide an effective and equitable benefit to all its clients.

Keywords: Ngcobo Local Municipality, SASSA, grants, poverty and inequality, COVID-19

INTRODUCTION

When poverty rears its ominous head in communities, particularly in rural municipalities, the ever-increasing dimension of inequality and imbalances between human beings becomes apparent. Poverty and deprivation were among the South African government's top priorities after 1994. The key goals of post-apartheid public policies were to eliminate hunger and provide access to other basic services, as well as to create an equitable society that creates jobs. The government has been steadfast in its efforts to alleviate poverty through the distribution of social grants to fulfill these key objectives. To this end, SASSA was established as an entity of the Department of Social Development in terms of the SASSA Act (Act No. 9 of 2004 as amended) to provide effective and efficient administration, management and payment of Social Assistance (SASSA, n.d. (a)).

The above Act was enacted in response to Section 7 (1)(2) of the Constitution of the Republic of South Africa (Act No. 108 of 1996) (afterwards, the Constitution), which states that everyone has the right to health care services, including reproductive health care; sufficient food and water; and social security, including appropriate social assistance if they are unable to support themselves and their dependents. Despite the government's efforts to alleviate poverty through the implementation of social assistance, access to these services remains hampered for the poorest of the poor and vulnerable people, particularly those who were previously disadvantaged.

COVID-19 has resulted in significant changes in service delivery. This was evident in Ward 19 of Ngcobo Local Municipality in the Eastern Cape Province, South Africa. Ward 19's residents are impoverished and the majority are illiterate. According to Ngcobo Local Municipality Socio Economic Review and Outlook (2017), Ngcobo town has the highest poverty and unemployment rates in the Chris Hani District.

According to Plagerson, Hochfeld, and Stuart (2017), social assistance provision in South Africa is a developing transformative experience, with remarkable improvements in social assistance to vulnerable people in terms of development and as a safety net. However, according to Mundzhedzi (2016), some people who are prospective clients and eligible for social assistance and support are unable to access social grants. According to a study conducted by Gibbs, Washington, Jama, Shai, Sikweyiya, and Willan, (2018:1823) titled "Systematically excluded", young women's

experiences of accessing child support grants in South Africa”, the authors claim that barriers to access grants include the following:

- a lack of essential application documents for both the primary caregiver and the child;
- travel time to and from SASSA offices, where individuals must go to register for the grant, and;
- the complex nature of the application process.

This study was conducted in this context. The study shed light on the challenges faced by SASSA grant recipients and potential beneficiaries in Ngcobo Local Municipality, as well as recommendations for improving grant administration to be more efficient and effective.

In order to begin the discourse of this study, it is first necessary to define the term “social protection” in order to contextualise it.

SOCIAL PROTECTION DEFINED

The Asian Development Bank (2003) defines social protection as the collection of policies and initiatives aimed at lowering poverty and vulnerability through the development of effective labour markets, lowering risk exposure, and strengthening people’s ability to protect themselves against hazards and interruptions or losses in income. Thus, the five main components of social protection are as follows:

- labour markets,
- social insurance,
- social assistance,
- micro and area-based schemes to protect communities, and
- child protection (Asian Development Bank, 2003).

Since the 2008 financial crisis, the coverage of social protection has increased dramatically in lower-and middle-income nations (Drolet, 2016, cited in Drolet, 2020). Initiatives like cash benefits, old-age pensions, in-kind transfers, and disability benefits helped the most vulnerable people weather the effects of the global financial crisis. They also stabilised the microeconomic system and helped people overcome poverty and social exclusion in both developed and developing countries (ILO, 2011).

Social protection programmes in South Africa are providing relief to vulnerable households through grants (Drolet. 2020). Hujo (2021) argues that social protection is a crucial tool in addressing poverty, inequality, and social exclusion. The literature is reviewed in the next section to determine the steps taken by South Africa to guarantee social protection.

LITERATURE REVIEW

To combat poverty in South Africa's post-apartheid era, the democratic government took a multifaceted approach, focusing on the establishment of institutions at macro-regional and local levels to promote development, reconstruction, and social dignity (Xaba, 2006). The establishment of the social security system resulted from the South African government's efforts to alleviate poverty and inequality (Bhorat, 2020). Hence, according to the National Development Plan (NDP) Vision 2030, South Africa needs to ensure that vulnerable groups and citizens are protected from the worst effects of poverty by 2030 (National Planning Commission, 2011).

However, according to Winchester, King, and Richworth (2021), political boundaries regarding registration of social grant programs pose a barrier to accessing these grants. To this end, Delany and Jehoma (2016) point out that when applying for a social grant, most clients, particularly those living in remote rural areas, face numerical direct costs. To this, SASSA, through its Strategic Plan 2020-2025 (SASSA, n.d. (b)), agrees that there are places where it is necessary to open new local offices due to service requirements, and the distances beneficiaries had to travel to receive services.

On the other hand, according to Skuse (2020), the majority of vulnerable prospective applicants are denied access to the Disability Grant because doctors charge a high fee to complete the medical assessment, which results in these individuals being denied access to the Disability Grant. Furthermore, as previously stated in this study, Mundzhedzi (2016) reveals that there are still people who are prospective clients and eligible for social assistance and support, but are unable to obtain social grants.

In South Africa, the provision of social grants is critical because it has turned to be a means of survival for the majority of people due to unemployment and poverty. Dubbeld and de Almeida (2020) attest to this view by indicating that an increasing number of South African households rely on social grants to make ends meet. This is a challenge for the country because unemployment has forced people who are eligible

and active for work to share grants with their parents and grandparents in order to survive.

Grants in South Africa are intended to help people who are unable to work, such as senior citizens, children, and people with physical or mental disabilities. The social security system is not intended to help people who are work-eligible but unable to find work despite being of working age (Sagan, 2017). Based on this explanation, one could argue that the absence of grants for unemployed adults between the ages of 18 and 59 represents a significant gap in social assistance coverage.

The above issue is also brought up by Joseph (2012), who argues that there is a need for a universal type of a social assistance to all unemployed people since if no one in a home receives social grants, the members are left without a means of subsistence. This notion is supported by a study conducted by the Black Sash (2011), which revealed that grant funds are used to help many more people than the actual grant recipient. According to the findings of the aforementioned study, respondents reported using their grants to benefit an average of 5 people per household, with the highest recorded single grant being used for 11 people in a household in one of the districts in Limpopo Province.

Although, as a result of COVID-19, Social Relief of Distress (SRD) was introduced as a six months grant available to unemployed adults. This grant, however, is not intended to be permanent, as it is a temporary measure. According to Patel, Dikoko, and Archer (2023), the COVID-19 SRD reached 10 million additional beneficiaries in 2022, and its quick evaluation discovered that 93% of recipients used the money for food. The grant has been extended till the end of March 2024 (Godongwana, 2023). However, Sehlabane (2014) discovered that, in general, SRD is not a sustainable method for addressing food insecurity.

Be that as it may, grants have also become one of the most important sources of income for the majority of South African low-income families (Gutura & Tanga, 2017). According to Bastagli *et al.* (2019), social grants have clearly reduced the impact of poverty on the poor. Marais (2020) emphasises the importance of a truly universal grant that provides a sufficient basic income, as well as improved labour and industrial policies. According to Castelo-Branco (2020), Walmart founder Sam Walton supports basic income as a way for the government to subsidise low-wage workers. In effect,

this was revealed by the research of Patel *et al.* (2023). Few participants in their study worked full-time or part-time, and the grants supplemented their income. The following section provides an overview of the different types of social grants available in South Africa.

AN OVERVIEW OF SOCIAL GRANT TYPES AND ELIGIBILITY REQUIREMENTS

As previously stated, the South African government has introduced a variety of social grants to combat poverty and assist deserving people to survive. These social grant types are discussed briefly below.

The Old Age Grant

The Old Age Grant (OAG) is a grant for people over the age of 60. It is distributed to those who qualify for the grant. This grant was previously known as the old-age pension. The applicant must be a South African resident at the time of grant application (Ngwenya, 2016). In addition, the applicant must not be receiving any other type of social assistance or receiving care in a state-sponsored facility (You & Your Grant, 2017).

Disability Grant

Individuals between the ages of 18 and 59 who have a physical or mental disability that prevents them from working for more than six months are eligible for the Disability Grant (DG). There are two types of grants: temporary and permanent. Applicants who are unable to work for six to twelve months are eligible for a temporary disability grant, and applicants whose condition does not change over a 12-month period are eligible for a permanent disability grant (Nzabamwita, 2021). However, this does not mean that the applicant will receive the grant in perpetuity; the grant will be reviewed after five years to determine whether the applicant still qualifies medically.

The applicant must be a South African citizen, permanent resident, or refugee living in South Africa at the time of application, be between the ages of 18 and 59, not be receiving care from a state institution, and have a 13-digit, bar-coded identity document (ID) (Beukes, Mariana, Jensen, Moses, & Yu, 2017; You & Your Grants, 2017).

War Veteran Grant

Individuals who served in the Second World War between 1939 and 1945, or the Korean War between 1950 and 1953, and are unable to support themselves, are eligible for the War Veteran Grant. They must show proof of service during the wars mentioned, such as a certificate of service. The primary residence of the applicant must be in South Africa. It is also not possible to receive other forms of social assistance or to be treated in a state-run facility (Zikhali, 2021).

Social Relief of Distress

Social Relief of Distress (SRD) is a temporary social relief grant that an applicant can receive if they are experiencing undue hardship, are waiting for an approved grant, have lost a breadwinner, or are in times of disaster such as fire and other related conditions. SRD is issued monthly for a maximum of three months, with the option to extend the period for an additional three months in exceptional circumstances in the form of a food parcel or cash, depending on the circumstances (SASSA, 2019).

The COVID-19 SRD Grant

In April 2020, SASSA established a special COVID-19 Social Relief of Distress fund to alleviate poverty in the event of a COVID-19 pandemic. The grant was intended to be valid for six months, from May to October 2020. (Bhorat, Oosthuizen, and Stanwix, 2020). According to Bhorat *et al.* (2020), the grant amount would be R350 for people aged 18 to 59 who do not receive any other form of social assistance, such as a social grant, the Unemployment Insurance Fund (UIF), or the National Student Financial Aid Scheme (NSFAS). Applicants who receive other types of government assistance are automatically disqualified from consideration for the COVID-19 grant (Bhorat *et al.*, 2020).

Grant in Aid

Beneficiaries who are already registered in the SASSA system and receive OAG, WV, or DG are eligible for the Grant in Aid (GIA). The grant is intended to help with medical bills, nutritious food purchases, and compensating the caregiver for the elderly or disabled (RSA, 2019). In order to be eligible for the GIA, applicants must demonstrate that they require regular attendance by another person due to physical or mental

disabilities. A doctor contracted by the state or a contracted SASSA doctor completes the medical assessment for the Grant in Aid (Brockhoff, 2013).

Child Support Grant

The Child Support Grant (CSG) is intended to help low-income families and those who do not have other sources of income meet their child's basic needs. The grant is not intended to replace other sources of income, but rather to assist in covering the difference in cost of living (Dastile, Celik, & Potsane, 2020). Applicants must be parents or primary caregivers of a child who are responsible for the child's care, according to the CSG. To be eligible, the applicant must be a South African citizen or have permanent residency in South Africa.

According to Skuse (2020), a child must be between the ages of zero and 18 years old and not be in the care of a state institution to be eligible for the CSG. The child must also live with a parent or primary caregiver who is not paid to care for the child. According to Kelly (2016), the CSG application requires (ID), which is bar-coded, or refugee status for non-South African applicants, as well as a copy of the child's birth certificate, which must include an identification number or evidence of refugee status if the child was not born in South Africa.

Care Dependency Grant

The Care Dependency Grant (CDG) is intended to provide financial assistance to children with severe disabilities who require full-time and specialised care. The CDG provides coverage for disabled children from the time they are born until they reach the age of eighteen. To be eligible, the applicant must be a parent, primary caregiver, or court-appointed foster parent. The applicant must also be a South African citizen or permanent resident (You & Your Grants, 2017).

Foster Care Grant

The Foster Care Grant (FCG) is another type of grant issued by SASSA to meet the basic needs of foster children (You & Your Grants, 2017). A court will order that a child be placed in the custody of a foster parent if the child is orphaned, abandoned, placed at risk, abused, or neglected. Foster kids are those who have been placed in the care of foster parents. Foster parents must be South African citizens, permanent residents, or refugees to be eligible for the FCG. They must also be in South Africa at the same

time as the child. To be eligible for the grant, the foster child must be legally placed in custody and remain in the care of the foster parent. The age criteria for eligibility range from zero to 18 years, with the grant being extended to 21 years if the child is still in school, and proof of attendance is required (You & Your Grants, 2017).

RESEARCH METHODOLOGY

This study used a mixed method, but the qualitative approach was dominant. The qualitative method is discreet and organised, and is employed on real-life matters that require actual solutions (Creswell & Creswell, 2017). According to Creswell (2014), one of the outstanding features of the research is that the data is collected directly from the study area where the participants are encountering the issue of the research problem.

Furthermore, the interpretivism paradigm was used in this study. This paradigm is linked to qualitative approaches. As its central goal and endeavour is concerned with comprehending the experiences of the participants (Gichuru, 2017). Based on the explanation above, it was hoped that this paradigm would allow the study to make sense of the data gathered in Ngcobo Local Municipality about the barriers to accessing social grants.

Sampling

Sampling, as defined by Maree, Creswell, Ebersöhn, Eloff, Ferreira, Ivankova, Jansen, Nieuwenhuis, Pietersen, and Clark (2020), is the process of selecting respondents from a large number of people in a given population and includes decisions about which people, settings, events, behaviours, and/or social processes to investigate. Furthermore, sampling is regarded as a research technique used to determine how people, circumstances, or even things are discovered (Pfeiffer, Harrington, & Lombard, 2019).

Ward 19 of Ngcobo Local Municipality was chosen as the study's sample, and Ward 19 is made up of seven administrative areas: Mnyolo, Mgudu, Zabasa, Sinqumeni, Manzimdaka, Gubenxa, and Ntsinga. The study chose Manzimdaka Administrative area as the sample because it is the closest. This study used a purposive sampling procedure, which is one of the non-probability sampling methods, to select participants. The study's target population was 50 participants, 40 of whom were

drawn from Ward 19. The categories included 34 beneficiaries, 6 were eligible clients who have not yet received grants and 10 were SASSA officials from the Ngcobo Local Office. The recognition that officials at the operational level would have more insight and experience in the administration of social grants was a key consideration in deciding who should be included in the grants value chain.

Data analysis

SPSS Version 28 was used for the analysis of quantitative data. Furthermore, the use of thematic analysis was motivated by its capacity to classify qualitative responses that are comparable in nature (Bryman, Bell, Hirschsohn, dos Santos, du Toit, Masenge, van Aardt, & Wagner, 2011). Thus, the qualitative data was analysed based on the developing patterns found in the gathered data.

RESULTS AND FINDINGS

The gender profile, age, and language of the community participants are shown in Table 1.

TABLE 1: Gender profile, age, and language of community participants

GENDER PROFILE	Female	Male	Other	Total	
	27	13	0	40	
AGE	18-34	35-59	60+	Total	
	25	10	5	40	
LANGUAGE	Xhosa	English	Indian	Afrikaans	Total
	40	0	0	0	40

Source: Authors

According to Table 1, the gender information gathered indicates that there are 25 females and five males among active beneficiaries, and six females and four males among those who are not active in the Socpen system. Six females and three males in the grant value chain were sampled, according to the SASSA officials' age profile.

Section B of the data collection instrument took into account the number of social assistance recipients from SASSA. It was discovered that 34 beneficiaries had already

received grants, and six (6) participants had not received any type of grant. Ten (10) beneficiaries received the OAG, four (4) received the DG, ten (10) received the SRD COVID-19 grant, fifteen (15) received the CSG, one (1) received the CDG. Four (4) of the participants who did not receive the grant applied for SRD COVID-19 and their grant applications were rejected, one (1) was discovered on the UIF system and one (1) from SARS, and the remaining two (2) who were also not active never applied because they did not intend to visit SASSA Ngcobo Local Offices.

Section C of the data collection instrument focused on the SASSA offices' accessibility. The majority of respondents were dissatisfied with how far away the offices were from where they stayed (since Ward 19 is dispersed and mostly rural). They also stated that they use a public van, which occasionally breaks down and prevents them from reaching the SASSA offices. Some of them stated that they spend more than R100 to and from the SASSA Ngcobo Local Offices, which is costly due to their living conditions. As a result, the offices are not as easily accessible, as all respondents indicated a need for access to the offices for assistance with the application process.

Again, the data collection instrument sought to ascertain participants' perspectives on the government-implemented SRD COVID-19 application procedure. The first six SRD COVID-19 beneficiaries were pleased with the SRD COVID-19 application procedure; they stated that it reduced the cost of visiting SASSA offices and saved them time waiting in long lines at SASSA. The four rejected clients were dissatisfied because they could not get satisfactory responses regarding their rejected outcomes because the procedure is done over the phone, and another challenge they mentioned was that English is the only language they use when applying for the COVID-19 SRD. This further supports Venter, Craffert, van Greunen, Veldsman, Cadi, and Sigurdarson's (2019) claim that due to the unequal development in the past, a large proportion of citizens in South Africa have very low educational levels, and as a result, lack the skills required to use new technologies and services.

Furthermore, one respondent stated that the system occasionally contains inaccurate information. She indicated that her application was denied, and the reason given was that she is receiving money from the unemployment insurance fund (UIF), which she is not. She felt that because communicating with the system was not helping her, it

would be much more appropriate if there was an office where she could present her case, and she emphasised that she preferred to get help from the SASSA offices.

The preceding respondent's explanation is consistent with Sehlabane's (2014) study. This study revealed that, while the means-test is important for avoiding corruption, it also has the potential to exclude people who are in need of SRD. According to Joseph (2012), means-test comprises evaluating a person's income and assets to determine whether or not the individual is eligible for a social grant.

SASSA officials' reactions

The SASSA, Ngcobo Local Officials questionnaire was divided into three sections: section A, section B, and section C. Section A of the questionnaire for officials covers bibliographical data (purposeful) such as gender profile, age, race, language, the employee's core function, and the highest qualification obtained by the employee. Section B of the questionnaire included closed-ended questions, and the final section included open-ended questions in which officials were asked to express their opinions in their own words and make suggestions where appropriate. Table 2 shows the gender profile of official participants, as well as their age, language, core function, and level of their education.

Table 2: Gender profile of officials, age, language, core function, and level of education

GENDER PROFILE	Female	Male	Other		Total
	07	03	0		10
AGE	18-34	35-59	60+		Total
	01	08	01		10
LANGUAGE	Xhosa	English	Indian	Afrikaans	Total
	10	0	0	0	10
CORE FUNCTION	Customer care	Attester	Verifier		Total
	02	06	02		10

LEVEL OF EDUCATION	Pre-Matric	Matric	Post-Matric	Postgraduate	Total
	01	05	03	01	

Source: Authors

According to the sample size, females outnumbered males by seven to three in Table 2. Furthermore, the employees' ages range from 35 to 59, which means that eight of them were between those ages, one was between 18 and 34, and only one was 60 or older. Regarding employees' core functions, two officials were championing the customer care function, where they act as gatekeepers, sorting clients who visited the office based on their needs. The second core function was data capture, in which officials dealt with grant application attesting. The last core function is application verification, in which two officials verify the information, issue the outcome letter, and explain it to the client in accordance with the PAIA.

Furthermore, Table 2 also shows the educational level of the official participants. The purpose of this data was to determine how well-equipped and skilled the officials in the SASSA value chain are. The results show that one of the ten officials in the sample does not have a matric, five have matric, three have post-matric qualifications, and one is a post-graduate. This provided insight into the level of competence required for officials to carry out their duties. It was discovered that some of the official participants lacked the necessary qualifications, and as such, this issue was identified as one that needed to be addressed. Other participants, on the other hand, were thought to be qualified for their positions.

Section B of the data collection instrument considered the following factors: working experience, number of grant applications per day, length of time it takes to complete one application, and whether officials were experiencing network glitches on the system. One official had one to five years of experience, two had five to 15 years, and seven had 15 years or more. The number of applications taken per day varied; two officials took six to ten applications per day, four officials took ten to fifteen applications per day, and one official took sixteen to twenty applications per day.

The time it took one official to complete the application was also examined; one official took ten minutes, four officials took fifteen minutes, and two officials took twenty

minutes. The time taken to process the application was found to be consistent with the findings of Munzhedzi (2016:63), who discovered that “front-line staff receive between 15 and 35 applications per day and spend 30 minutes or less recording an application” in Limpopo Province. Officials also reported that network glitches were a national challenge; however, Information and Communications Technology (ICT) was always available to resolve ICT problems, mostly remotely and sometimes physically.

Section C of the questionnaire's questions were presented in an open-ended format, allowing officials to respond to the questions as they saw fit, without the guidance of the research, whereas previous sections required officials to choose from the available options. This was an opportunity for respondents to freely table and express their feelings. When asked about the challenges that officials face during the grant administration process, the majority of officials blamed it on a network problem, claiming that it is the primary cause of application delays.

One official stated, "The network problem is beyond our control; sometimes we even receive emails from internal communications informing us that the system is down and that it is a national challenge." In light of the foregoing, load-shedding has been noted as a challenge to the availability of network services in the Eastern Cape (Vodacom Group, 2022). Another SASSA respondent stated, "Clients are constantly complaining, and some of them believe that we, as officials, are too lazy to work, but what can we do? We are only grant administrators; we do not choose the network; we simply use it".

In response to the question of whether the COVID-19 regulations and procedures made it easy for clients to access the grant service, most officials were satisfied with the procedures. This is consistent with the views voiced by the COVID-19 SRD beneficiaries as mentioned above in this study. Furthermore, the officials confirmed that COVID-19 was a calamity and any effort to reduce and eliminate the effects was welcomed; however, when it came to service delivery, they regarded the procedure as hindering service delivery, as they were sometimes working from home to comply with the regulations.

Another question addressed the challenges that service delivery on social grants may face. One respondent said "Indeed, we cannot avoid the fact that there are challenges in service delivery; in most cases, we have an influx of clients, because Ngcobo,

despite being a small town, has more than 60 administrative areas, and all of them rely on this office for social grant services,". This opinion collaborated with the expressed thoughts of grant recipients that the accessibility of SASSA offices is a challenge for potential grant applicants in Ward 19 in Ngcobo Local Municipality.

In response to a question about what they were thinking about improving community services, the officials stated that SASSA should consider opening a service point for the Ward 19 community. One official explained that they serve people as they arrive at the office. "It is unfair to choose people from Ward 19 from the queue to give them first preference, while other people were here early in the morning. We strive for equality, fairness, and impartial services for all". This is very critical when considering the requirements of Batho Pele (People First) Principles. In particular, access and value for money (Department of Social Development, 2023), among the Batho Pele principles, are so fundamental in this regard. SASSA should ensure that offices are easily accessible and provide services to all, as it is costly for people to reach these offices. Furthermore, it should go back to its slogan which states that paying the right person, at the right time and place, NJALO.

In view of the above, in order to address the challenge of long distances that people have to travel, in its Strategic Plan 2020-2025, SASSA (n.d. (b)), claims that it has established service points. This Strategic Plan 2020-25, indicates that in the country, 1 163 service points have been established to serve beneficiaries who stay far from existing local offices. However, based on the comments of the participants in the preceding paragraphs, it is clear that these service stations have yet to reach Ward 19 in Ngcobo Local Municipality.

CONCLUSION AND RECOMMENDATIONS

The study acknowledges that SASSA is working to improve service delivery, despite the fact that the agency is still experiencing glitches that impede service delivery.

As a result, this study recommends that SASSA should open closer service points in the Eastern Cape rural areas, especially in Ward 19 in the Ngcobo Local Municipality. According to this study's findings, respondents were dissatisfied with the distance between the offices and where they lived. Some of them reported that they spend more than R100 travelling to and from the SASSA Ngcobo Local Offices, which is prohibitively expensive given their living circumstances. The study sees this as a

violation of value for money, which is one of the Batho Pele principles that government institutions must follow.

Therefore, SASSA should live up to its commitment of implementing measures to remove administrative bottlenecks that hinder people from accessing social assistance benefits (SASSA, n.d.(b)). This might be accomplished by deploying mobile service units in places far from service points.

Furthermore, SASSA should establish means to identify persons who are eligible for SRD COVID-19 but are unable to apply owing to poor educational levels and, as a result, lack the skills required to use new technologies and services. According to the study's findings, some of the applicants were rejected and others were dissatisfied because they could not get satisfactory responses regarding their rejected outcomes because the procedure is done over the phone, and another challenge they mentioned was that English was the only language used when applying for the COVID-19 SRD.

The above may work against SASSA's goal of reducing administrative bottlenecks that prevent people from receiving social assistance funds. According to the literature, while the means-test is necessary for eliminating corruption, it also has the potential to exclude those who require SRD (Sehlabane, 2014). In the event that applicants encounter difficulties, it is still appropriate for them to be assisted at SASSA's offices. Therefore, it is highly recommended that the use of technology and traditional methods be maintained for such cases. As one respondent pointed out, connecting with the system was not assisting her; it would be much more appropriate if there was an office where she could submit her case, and she emphasised that she preferred to seek assistance from SASSA's offices.

Furthermore, this study recommends that the SRD COVID-19 be turned into a universal grant. South African government should determine the sustainability of this grant as it plays a critical role beyond only assisting with food, but also instilling stability on social ramifications. This would be consistent with SASSA's Strategic Plan 2020-2025 goal number one, which states that SASSA will help South Africa achieve its goal of ensuring that no South African lives in extreme poverty by 2030 (SASSA, n.d.(b)). As realised from the literature, grants to one beneficiary help an average of 5 persons per household, with the largest recorded single grant benefitting 11 people in Limpopo (Black Sash, 2011).

The foregoing will be consistent with the NDP Vision 2030, which seeks “to promote active participation in the economy and society for those who are unemployed and underemployed through labour market activation measures, employment services, income support programmes and other services to sustain and improve quality of life” (National Planning Commission, 2011 cited in SASSA, n.d.(b):15).

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Challenges in incorporating the Fourth Industrial Revolution (4IR) in operations management education: A systematic literature review

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ABSTRACT

The Fourth Industrial Revolution (4IR) is characterised by the fusion of digital technologies with physical systems, leading to significant changes across most industries. These advancements present opportunities for operations management and have significant implications for operations management education. Thus, it is vital for higher education institutions to incorporate 4IR concepts into the curriculum and prepare operations management graduates with the knowledge and skills required for an evolving technology-driven industry landscape. However, incorporating 4IR concepts and technologies into the operations management curriculum is fraught with numerous challenges. Moreover, while such challenges may be referred to in the literature, there is a gap regarding a comprehensive synthesis of the challenges and more specifically with reference to operations management. The aim of the study was to ascertain the challenges associated with incorporating 4IR concepts into the operations management curriculum. The objective of the study was to execute a systematic review to ascertain current challenges and to develop an implementation framework for integration. The PRISMA methodology was used to execute the systematic literature review and thematic analysis was used to extract the dominant themes. The themes that were extracted include the need to monitor and keep up with the exponential pace of technological advancements, the scarcity of operations management faculty members with sufficient knowledge and expertise in 4IR technologies, resistance to change, limited resources, the need for new pedagogical

approaches and ethical and social implications. The proposed framework maps key drivers to address the challenges, the elements of which include collaboration between academia and industry, inter-faculty collaboration, flexibility in curriculum design and regulation, and leadership impetus.

Keywords: industry 4.0, 4IR, operations management, curriculum

INTRODUCTION

The Fourth Industrial Revolution (4IR) can be best described as the transformation of industries and societies, driven by advancements in digital technologies, characterised by the convergence of physical, digital, and biological systems (Schwab, 2019). Some of these technologies include artificial intelligence (AI), robotics, Internet of Things (IoT), big data analytics, 3D printing, and quantum computing (Kayembe and Nel, 2019). The World Economic Forum (2020) has emphasised the need to equip workers with the necessary competencies for the jobs of the future and predicts that 4IR has the potential to create disruptions to many occupations but at the same time will create new occupations, particularly in the fields of science, technology, engineering, and maths (STEM). It is also envisaged that there will be a demand for graduates who have a blend of digital skills with traditional subject knowledge, for example operations personnel with the latest analytical tools (Menon, 2019). Operations management as a discipline is inextricably linked to industry and operations management education is the vehicle through which students are capacitated with the necessary knowledge and skills that would be required to navigate the challenges and opportunities presented by advanced technologies. However there seems to be an integration lag on the part of South African higher education and the reasons for this is not clear. Thus, there is a gap regarding a comprehensive synthesis of the challenges and more specifically with reference to operations management. The aim of the study was to ascertain the challenges associated with incorporating 4IR concepts into the operations management curriculum. The objective of the study was to execute a systematic literature review to ascertain current challenges and to develop an implementation framework for integration.

LITERATURE REVIEW

The literature review starts with an overview of the industrial revolutions, followed by a brief synopsis of operations management as a discipline, before moving on to the more granular elements pertaining to operations management education.

Industrial revolutions

The common theme that is shared by the industrial revolutions has been advancements made in technology as summarised in Table 1.

Table 1 Summary of the industrial revolutions

Industrial revolution	Transition period	Technology advancement	Production	Examples
First	1784	Steam power	Mechanical	Textile industry: weaving loom
Second	1870	Electricity, Internal combustion engine	Mass production	assembly line
Third	1969	Telecommunication, computers and electronics (transistor and integrated circuits), Internet and www	Automation	PLC, IT systems and robotics
Fourth	Present	Big Data, Cloud computing and internet of things,	Cyber physical systems	Internet, 3D Printer, Machine learning, Big Data analytics, Cloud technology, robotics, Smart factories, buildings, grids, products, logistics, mobility

Source: Adapted from Prisecaru (2016), Schulze (2019), Moloi and Marwala (2020), Marwala (2020), Ajayi, Bagula and Maluleke (2023)

The Fourth Industrial Revolution

In 2015, Klaus Schwab wrote: “We stand on the brink of a technological revolution that will fundamentally alter the way we live, work, and relate to one another. In its scale, scope, and complexity, the transformation will be unlike anything humankind has experienced before” (Schwab, 2015). The phrase ‘Fourth Industrial Revolution’ was coined during the Hannover Fair in 2011 and in 2013 announced as part of a German high-tech strategic initiative to take a leading role in transforming the manufacturing sector (Mosconi, 2015). The founder and chairperson of the World Economic Forum, Klaus Schwab, is credited with popularising the term 4IR (Schwab, 2019). The phrase

'Industry 4.0' is the label given to a specific form of transformation that departs from traditional ways of working, by embracing the use of current available elements of 4IR that are practical to implement immediately (Lorenz *et al.*, 2015). Industry 4.0 is characterised as being fast paced with swiftly changing innovations driven by 4IR which has a direct impact on products, services and production systems (Charkraborty *et al.*, 2023). The technological pillars of 4IR as identified by Lorenz *et al.*, (2015) comprise: systems integration, the Internet of things, big data and analytics, simulation and virtualisation, cloud computing, cybersecurity, autonomous robots, and augmented reality.

Operations management

Krajewski and Malhotra define operations management as "the systematic design, direction and control of processes that transform inputs into services and products for both internal and external customers" (2022:23). The planning, execution, and control of processes needs to be done in such a manner that it achieves efficiency, quality, and customer satisfaction (Heizer and Render, 2017). To this end, operations management education, through various programmes, aims to impart knowledge and skills to effectively manage and improve processes by equipping individuals with the necessary theoretical underpinnings, tools, and techniques to optimise the utilisation of resources and enhance productivity (Stevenson, 2021). However, organisations compete in a volatile, uncertain, complex and ambiguous (VUCA) world which compels them to be innovative to compete in increasingly global markets (Brahma *et al.*, 2021). In this regard, 4IR has brought about sweeping changes in the areas of manufacturing with benefits expected in the areas of enhanced product quality, customisation, flexibility, agility and efficiency (Brahma *et al.* 2021). Thus, the required workforce skill set is becoming increasingly more complex, typically including higher order skills such as complex problem solving, critical thinking, creativity, collaboration, judgement and decision-making, service orientation, and the management of information (Rodney-Gumede, 2019). The Changing Nature of Work report by the World Bank (2019) also emphasises the set of desirable working skills for the future being, critical thinking, problem solving, technological know-how and soft skills.

Operations management education

The pervasive nature of technological disruptions induced by 4IR, requires reimagining education to build human capacity in terms of skilling the future workforce (AlMalki and Durugbo, 2023). Higher education institutions must ensure that 4IR skills and characteristics required for the successful implementation of 4IR are well integrated into the curriculum (Al-Maskari, *et al.* 2022). Programs should be aligned with 4IR demands to increase chances of employability, since the job market would seek those who are knowledgeable and well acquainted with 4IR-related technologies (Tilak and Singh, 2018; Shahroom and Hussin, 2018). The World Economic Forum (2016) estimated that nearly half of the knowledge acquired during the first year of a four-year technical degree is outdated by the time the student graduates.

Academic institutions bear the responsibility of developing professionals who are adequately capacitated to function and thrive in a 4IR landscape. Broo *et al.* (2022) highlight that to survive in an increasingly competitive market, organisations require graduates who can manage the change and are capable of going from technology to solutions and from solutions to operations. Thus, it is critical that 4IR concepts are integrated into the curriculum across programmes. However, faculties and departments are traditionally organised according to disciplinary expertise and programme offerings and 4IR knowledge gravitates towards some disciplines more readily than to others and some disciplines have been more receptive with higher levels of engagement. For example, Computer Science advancing technologies such as machine learning, robotics, and automation (Brynjolfsson and McAfee, 2014); Information Systems and Data Science in analysing and managing the massive amounts of data generated by 4IR technologies (Davenport and Patil, 2012); and Engineering and Robotics contributing to the development and implementation of 4IR technologies (Stock and Seliger, 2016). Lubinga, Maramura, and Masiya (2023) note that the adoption of 4IR in South African higher education is inconsistent with a lack of knowledge on barriers. In the South African context, this may mean that there is a need to shift the current policy discourse from its almost singular focus on STEM education to a more all-encompassing approach (Xing *et al.*, 2018).

The rapid advancement in technology necessitates operations management education to focus on the incorporation of technologies such as artificial intelligence, robotics, IoT, and data analytics into operations (Gunasekaran, Subramanian, and Papadopoulos, 2017) so that operations practitioners can understand the foundational

principles and how to effectively leverage these technologies to improve efficiency, optimise decision-making processes, and drive innovation within organisations. Operations management education needs to reconsider the knowledge and skills that students need to acquire to better fit 4IR demands in the real-world (Vilalta-Perdomo, 2022). According to PwC (2017), the application of 4IR technologies often requires specialised skills, beyond basic digital literacy to innovation based on combinations of technologies (Gray, 2016).

Tyatya (2019) cites the report by Naledi Pandor, the then Minister of Higher Education and Training, that only 11 of 26 South African universities offered modules in 4IR fields. Some South African universities provide traditional degrees adding 4IR-related electives or core modules to their curricula (Lubinga, Maramura, and Masiya, 2023). For example, the University of Pretoria offers modules on design thinking, business innovation and business analytics with modules such as data mining, big data, and data stream analysis, and responsible leadership (Coetzee *et al.*, 2021). Additive manufacturing (AM) has been recognised as one of the nine technologies of Industry 4.0 that is set to revolutionise industrial production, yet a study carried out by Alabi *et al.* (2020) revealed that there was no specific framework that focuses on AM. Alabi *et al.* (2020) recommend the following five factors: AM process technology selection, university-industry collaboration, development and integration of AM curriculum, acquisition of AM facilities and training of personnel, and AM research and development.

That which is required is a rethink on programme offerings to ensure that graduates are skilled sufficiently to, for example, work with advanced machines that comprise a combination of technologies (Shahroom and Hussin, 2018). Other studies raise concerns about the development of skills and competencies of workers and how universities can contribute to this (Broo *et al.*, 2022). As 4IR ushers in a business environment that embeds emerging technologies which disrupt and challenge conventional thinking and practices, new business models emerge requiring different skill sets and it is paramount that institutions of higher learning equip students to meet these demands by fundamentally rethinking how curricula are designed to meet the challenge (Coetzee *et al.*, 2021).

METHODOLOGY

This study adopted a qualitative research approach within a pragmatic research design. This systematic literature review employed the Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA). The PRISMA methodology overcomes the issues of inconsistent reporting and potential biases in systematic literature by improving transparency, rigour, and reliability by adhering to guidelines (Moher *et al.*, 2009). The PRISMA methodology comprises the following six phases: identification, screening, eligibility and inclusion, data extraction and synthesis, risk of bias of assessment, and reporting. The identification, screening, eligibility and inclusion, and data extraction phases are explicated in this section and the rest of the phases are dealt with in the results section.

The identification phase comprises defining the research question, developing a search strategy, and retrieving relevant articles. The research question that was set for this study was: What are the challenges associated with incorporating 4IR concepts into the operations management curriculum? The search strategy involved deploying keywords and using Boolean parameters in selected data bases. The search strategy was: Challenges OR Integrat* OR Implications (Title) and "fourth industrial revolution" or "industry 4.0" or 4IR (Abstract) and curricul* OR education (Abstract), 2019 or 2020 or 2021 or 2022 or 2023 (Publication Years) and Article or Review Article (Document Types) and English (Languages). The primary human curated databases that were used were: Web of Science, EbscoHost and Scopus. The secondary database used was Google Scholar. Identified articles were imported to EndNote. Their eligibility was screened by assessing for relevance by reading the titles and abstracts. Articles that were included for full text review were accessed through Endnote where pdf version were available and Google Scholar where no full text versions were available. A post-doctoral student assisted by carrying out independent screening and eligibility and inclusion phases and differences were resolved by consensus. The data was extracted using manual thematic analysis as the total number of articles was found to be small and manageable. An Excel spreadsheet was used to facilitate the process. This risk bias in individual studies were ascertained by considering factors such as study design, sample size, and methodological rigor.

RESULTS AND DISCUSSION

The search in the selected databases yielded a total of 62 articles after elimination of duplicates. After applying inclusion and exclusion criteria, a small number of 26 articles were selected for the review. The scant literature linking 4IR to operations management education bears testimony to the topic being under-researched, despite the proximity of industry to operations management and by implication operations management education. The 26 selected articles were critically analysed to extract key findings related to the challenges of incorporating 4IR in operations management education. The MS Excel spreadsheet was converted to MSWord and is presented as Appendix A. The summary of the themes that were extracted from the analysis are presented in Table 2, together with sub themes.

Table 2 4IR themes and sub-themes

	Themes	Sub-theme	Number of article mentions (at least once)
1	Complexity of technological change	• Rapid pace • Convergence of technologies	16
2	Knowledge deficit	• Limited expertise in 4IR concepts • Limited exposure to industry needs	10
3	Limited resources/ infrastructure	• Funding for hands on equipment • Infrastructure to support teaching.	3
4	Change inhibitors	• Resistance to change • Rigid regulatory environment • Disciplinary silos	7
5	Teaching methods	• Dependence paradigm • Low adoption rate of new technology	4
6	Ethical and Social Implications	• Personal data • Cyber security • Job losses	2

A total of six themes were extracted. The first theme pertains to the complexity of 4IR which has manifested at a rapid pace with the convergence of technologies. The second theme relates to the 4IR knowledge deficit among academics. This is attributed to the lack of expertise in 4IR concepts as well as a limited exposure as to what is going on in industry and its needs. The third theme relates to limited resources to support teaching. The fourth theme identifies change inhibitors arising from resistance to change, disciplinary silos and a rigid regulatory environment. Teaching methods was identified as the fifth theme, highlighting the low adoption rate of technology and

a teaching dependence paradigm. The last theme brings to the fore the ethical and social implications of 4IR.

While six themes were extracted, the strength of the themes, as measured by the number of mentions, was found to be uneven. A Pareto analysis was subsequently conducted to ascertain the predominant themes. Figure 1 presents the graphical representation of a Pareto analysis of the themes.

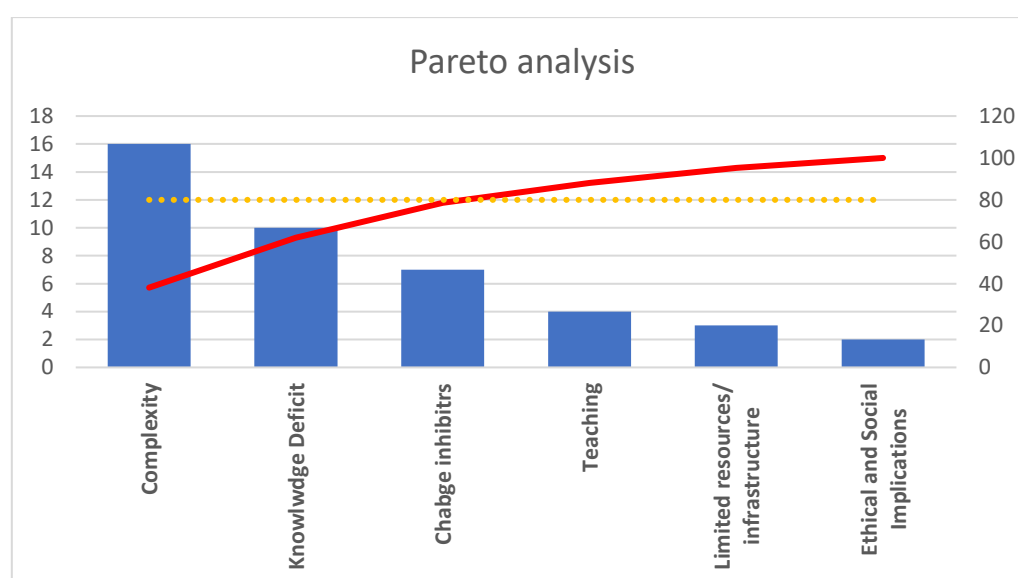


Figure 1: Number of articles where theme is mentioned at least once

According to the Pareto Analysis, 80% of the mentions of challenges lies within the themes of complexity of technological change, 4IR knowledge deficit, and change inhibitors. Technologies and teaching methods, limited resource/ infrastructure and ethical and social implications comprise 20% of the mentions.

DISCUSSION

Complexity of technological change

A key characteristic of 4IR is the rapid pace of technological change where increases in speed and acceleration can be best described as being exponential as opposed to being linear. The complexity resulting from the integration, combination, convergence of multiple technologies has led to unprecedented shifts in technological advancement. Both aspects of complexity present a challenge for operations

management to continuously monitor and update curricula to ensure relevance and effectiveness in meeting the needs of industry. The need for universities to be responsive to ensure that curricula is adapted in tandem with the demand for new skills demanded by 4IR is paramount (Coetzee *et al.* 2022). The concern is that South African higher education, in general, has been slow to respond (Rodney-Gumede, 2019).

4IR technology knowledge deficit

The lag in embedding 4IR concepts in education is exacerbated by the lack of 4IR expertise and 4IR exposure among academics (Chen and Lin, 2018). The competence of faculty members in understanding and teaching 4IR concepts is crucial (World Economic Forum, 2021). A lack of exposure to what is happening in industry and insufficient awareness of industry needs has resulted in a disjuncture between academia's research and industry needs (Zavale and Macamo, 2016; Peksatici and Ergun, 2019).

Change inhibitors

Resistance to change is a common feature in change processes and incorporating 4IR concepts into the operations management curriculum would be no exception. Broo *et al.* (2022) paint the picture of the current scenario of education systems trying to hold on to the old patterns of teaching and learning. There are also those that may be all too comfortable with the status quo and may want to hold on to the existing curriculum and traditional teaching methods (Benitez-Amado, Llorens-Montes, and Perez-Arostegui, 2020). AlMalki and Durugbo's (2023) study, using the Delphi methodology from the viewpoint of experts within the triple helix, i.e., university, industry, and government identified mind-sets that oppose Industry 4.0 education as a major barrier.

4IR also presents a challenge for higher education policymakers and regulators (Benioff, 2017), that are typified by high levels of inertia. For example, curriculum change is constrained by rigid curriculum change process regulated by the Council of Higher Education (CHE) and it is ironic that, that which is designed to assure quality has the unintended consequence of impeding speed and agility in change response (Menon, 2019). The Classification of Education Subject Matter (CESM), amongst other frameworks requiring approval, registration, and accreditation, impedes convergence as processes can take between 18 and 30 months (Menon & Castrillon

2019). Furthermore, the current structure in the form of predefined disciplines and degrees may not be optimal for a VUCA context (Reaves, 2019)

Teaching

The conventional mode of delivery comprising face to face teaching, provision of readings, lectures, achievement of outcomes, content related assessment and reliance on academics as experts in higher education is premised on a dependence paradigm of learning (Menon, 2019). Oke and Fernandes's (2020) study, using the unified theory of acceptance and use of technology (UTAUT), found there to be limited knowledge on the acceptability and consequences of 4IR in the education sector, especially in the African continent. The convergence between humans and machines is bound to decrease disciplinary distances between the humanities, social sciences, science and technology, necessitating more interdisciplinary teaching, research and innovation (Xing and Marwala, 2017). In this regard, Broo *et al.* (2022) argue that the boundaries between different disciplines have to be more permeable to allow for the convergence of different disciplines.

The cutting-edge teaching approach of Challenge Based Learning (CBL), which aligns the acquisition of disciplinary knowledge by confronting students with real-life challenges, to introduce students to desirable abilities for future work has been under researched in the context of non-STEM disciplines, including business studies and operations management (Vilalta-Perdomo, 2022).

Limited resources and infrastructure

The successful implementation of 4IR in education in South Africa is hampered by the lack of funding for the provision of training and technological infrastructure (Kayembe and Nel, 2019). The integration of 4IR technologies in the curriculum necessitates resources in the form of equipment, software and facilities to replace obsolete or non-existing infrastructure (Pandaya, 2019) both for training of academics and use by students. For example, there is a need for smart campuses, laboratories, classrooms and libraries, together with adequate hardware, software and technical support (Al-Maskari *et al.*, 2022). The university context must address digital and technological and data access for online learning (Chetty, 2019).

Ethics and Society

As future operations practitioners, the curriculum needs to prepare students to deal with challenges of ethical concerns such as privacy, security and job displacement (Trapp, Wells, & Hettich 2020). Given South Africa's high unemployment rate, operations management practitioners need to be circumspect about machines replacing workers, upskilling and the creation of jobs (Chetty 2019). Furthermore, the increased collection and utilisation of personal data in the digital economy presents challenges related to privacy and cyber security measures (Manyika *et al.*, 2016).

RECOMMENDATIONS

The recommendations that follow are mapped to the three most predominant challenges identified in the previous section. The framework that links the recommendations to the challenges is presented in Figure2.

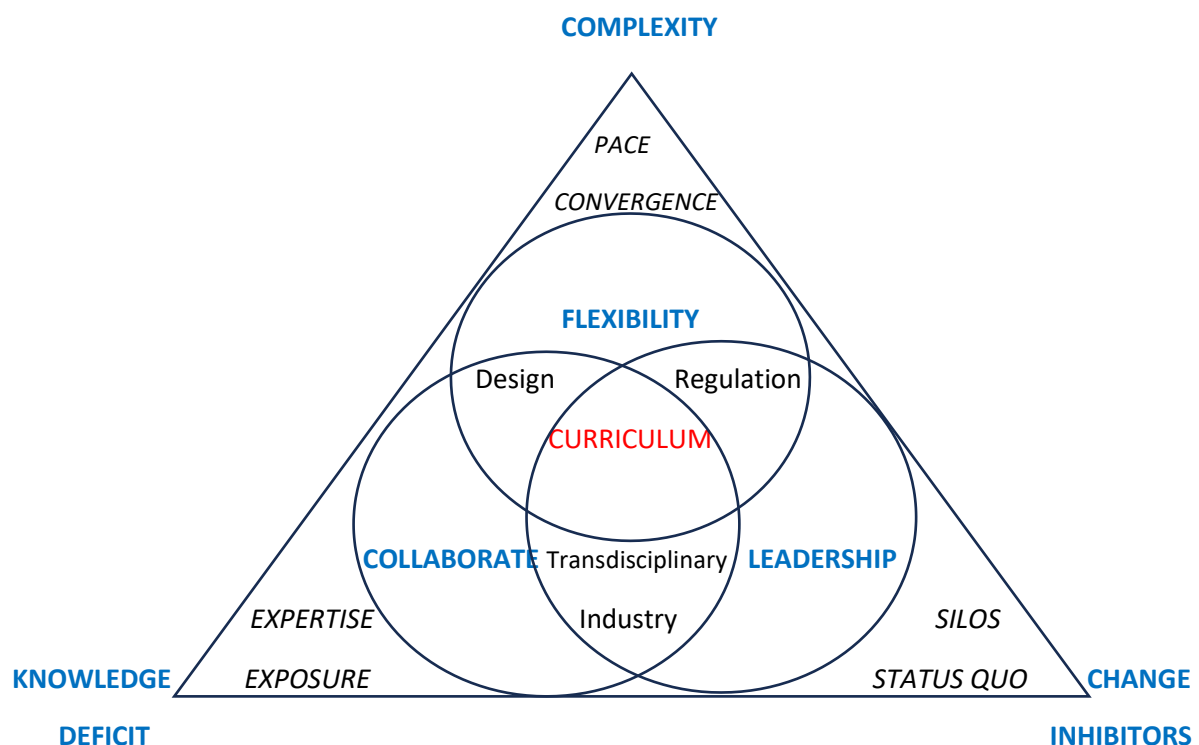


Figure 2: Proposed framework to integrate 4IR into the curriculum.

In this framework, that which appears in the triangle depicts the barriers (challenges) to integrating 4IR concepts into the curriculum. Positioned at the outside apexes of the triangle are the three predominant themes pertaining to challenges, namely complexity, knowledge deficit, and change inhibitors. Positioned within the apexes of the triangle are the identified sub-themes associated with each of the main themes.

That within the circles depicts the drivers to resolve 4IR curriculum integration barriers, namely flexibility, collaboration, and leadership.

To keep up with the pace of 4IR, flexibility should be key. The curriculum should be designed in such a manner that it makes provision for continuous improvement where the addition of new topics and the removal of obsolete topics are facilitated in a timely manner while keeping the core relatively unchanged. This is however constrained by long approval cycle times which take place within a regulatory framework involving many bodies such as the CHE and HECQ. Differentiated submission and process pathways for accreditation should be created for the different levels (extent) of curriculum re-design to reduce turnaround times. This requires foresight of what is going to be core to operations management and what is likely to fall away. Given the 4IR knowledge deficit amongst academics, this foresight might be better informed by collaborating with academics from disciplines (STEM disciplines) that are strong in 4IR expertise. This would entail the breaking down of disciplinary silos to enable cross disciplinary teaching and workshops. Furthermore, by collaborating with industry, better 4IR exposure can be gained through factory visits and industry guest lecturers. Such radical changes would not emerge naturally, given strong inhibitors such as the tendency to maintain the status quo and disciplinary silos. Thus, leadership impulse is required to bring about a change in momentum through visionary leadership. Leadership needs to create the enabling environment that fosters embracing mindsets through workshops and aims to soften disciplinary boundaries by sharing resources to the extent of making it possible for academics with 4IR expertise to lecture in the operations disciplines without being core members.

CONCLUSION

The aim of the study was to ascertain the challenges associated with incorporating 4IR concepts into the operations management curriculum. To this end a systematic literature review was undertaken. The number of articles that were identified to fulfil the aim of the study was found to be very limited, nonetheless, the review was found to be very useful in identifying challenges that were generic across many disciplines and the information was found to have significance for operations management education. The exponential pace of 4IR stands in strong contrast to the glacial curriculum integration pace. Factors contributing to this misalignment were the

complexity associated with 4IR, 4IR knowledge deficit amongst academics and change inhibitors. Recommendations are proposed in the form of a framework that maps the key drivers to address the challenges. The limitation of the study was that only peer reviewed texts and journals were searched and it is recommended that industry publications and reports may be more useful sources to keep in touch with the 4IR trajectory.

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Appendix A

AUTHORS	THEMES					
	Rapid pace and complexity of technological change	Knowledge deficit	Change Inhibitors	Limited resources/ infrastructure	Teaching methods	Ethical and Social Implications
Alabi, M. O., <i>et al.</i> (2020)		x		x		
AlMalki and Durugbo's (2023)		x	x			
Benioff (2017)	x		x			
Broo <i>et al.</i> (2022)		x	x		x	
Chen and Lin (2018)		x				
Charkraborty <i>et al.</i> (2023)	x					
Chetty (2019)	x	x	x	x		x
Coetzee <i>et al.</i> (2022)	x					
Kehdinga and Fomunyan (2019)	x	x				
Li <i>et al.</i> (2017)	x					
Lubinga, Maramura, and Masiya, (2023)	x	x				
Marwala (2020)	x					
Menon (2019)	x		x		x	
Menon & Castrillon, 2019	x		x			
Moloi and Marwala (2020)	x					
Morar <i>et al.</i> (2017)	x					
Oke and Fernandes's (2020)				x		
Peksatici and Ergun (2019)		x				
Reaves (2019)			x		x	
Schulze (2019)	x					
Schwab (2016)	x					
Trapp, Wells, & Hettich, 2020.		x				x
Vilalta-Perdomo (2022)					x	
World Economic Forum (2016)	x					
Xing and Marwala (2017)	x					
Zavale & Macamo, 2016		x				

Rising Asia and Africa: The political economy of education and resurgence

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ABSTRACT

Africa and Asia are both continents that have made a lot of progress in various sectors along with the field of education in recent years, but they still face unique challenges and exhibit some notable gaps. Access to education remains a prime concern in Africa. Many children, especially in rural regions and marginalised communities, still lack the fundamental right to access education. Lack of infrastructure, insufficient assets and absence of qualified teachers contribute majorly to this issue. Additionally, poverty and cultural norms sometimes prioritise other responsibilities over education. Still, many African nations have made remarkable progress in terms of enrolment and efforts to provide basic education. Asia, on the other hand, has experienced rapid growth and development in its educational system. Many countries in Asia have achieved impressive advancements in educational outcomes. These countries have invested largely in infrastructure, teacher education, and curriculum development. Their recognition for science, technology, engineering, and mathematics (STEM) education has contributed to their success in generating professional graduates. Even after these successes, disparities still exist inside Asian nations and they are also facing similar challenges as in Africa. Both Africa and Asia grapple with the issues related to educational quality. While access to education has improved, the quality of education provided is often a matter of concern. No doubt both continents have made strides in education, but they still face distinct challenges. Addressing these challenges requires continuous investment, policy reforms, and targeted efforts to improve both access and quality of education in these regions.

In this paper, researchers have compared the education systems of Africa and Asia in general and India and South Africa in particular. An attempt has been made to suggest a few recommendations for policymakers of both entities.

Keywords: colonisation, decolonisation, linguistic diversity, indigenous, STEM education

INTRODUCTION

Africa and Asia have experienced remarkable achievements in various sectors in recent years. The two continents that are home to the majority of the world's population are going through various transformations that are shaping the global landscape. Africa, referred to as the "Rising continent," has seen impressive economic development and advancement in recent years. This positive trend can be attributed to various factors such as improved governance, increased political stability, and advancements in the education system. The Economic Development in Africa Report (2022) reveals that African economies currently hold immense potential for change and growth, with ample opportunities for diversification and enhanced competitiveness. The aim of the African Union's Agenda 2063 is to create a prosperous and united Africa and continue the continent's dedication and determination to rise on the international stage. According to the African Economic Outlook Report (2023), despite major shocks like the COVID-19 epidemic, climate change, and the Russian invasion of Ukraine, Africa has managed to withstand them relatively well. The analysis projects that economic growth in Asia would be greater, at 4.3%, and predicts that Africa's economy will rise from 3.8% in 2022 to 4.1% in 2023 and 2024, outpacing the world average by 2.9% and the European average by 1.1%.

Similarly, Asia is an emerging continent, led by countries such as China, India, Japan and South Korea. According to Tonby *et al.* (2019), Asia is the greatest regional economy in the world, and as its economies' commerce, innovation, cultural exchanges, and people flows deepen, so will its influence. The rise of Asian economies and tremendous growth in various sectors, has not only increased regional integration but has also contributed to stronger economic ties with other parts of the world. According to Gopaldas (2018), it is in the interests of Africa and Asia to establish deeper partnerships as Africa starts to re-emerge as a chessboard for world powers.

As in various other fields, Africa and Asia have seen growth in the field of education, but education in Africa and Asia varies depending on the region and socioeconomic status of people. Both continents are going through various demanding conditions in providing quality education to all of their citizens. In many African nations, education structures are still suffering to recover from the outcomes of colonialism and a long time of political instability. Many faculties lack fundamental assets which include textbooks, proficient teachers, and adequate infrastructure. As a result, dropout rates are excessive, and many children are not getting appropriate education. For women, various hurdles to education consist of early marriage and cultural values that lead to priority education for men. According to Mukuni (2019), Africa also has problems with digital infrastructure in contemporary times, the disparity in internet access between urban and rural people, the high cost of ICT, and unstable internet services are some of the issues limiting the expansion of internet-based delivery systems in Africa.

Although there has been a lot of improvement in education across Asia in recent years, regional differences still exist. Efforts have been made by various countries to provide access to education and as a result, more children are enrolled in schools than ever before. Even then, there are still substantial differences in the quality of education, and many children do not learn basic skills like fundamental literacy and numeracy.

Thus, it can be said that educational systems in Asia and Africa are diverse with a lot of challenges and potential for improvement. Addressing problems such as poverty, gender inequality and political violence will be essential in ensuring that every child receives a high-quality education and has opportunity to reach its full potential. Comparing the educational system of the two continents, a few factors have been mentioned viz.

GDP OF AFRICA AND ASIA

The GDP of Africa as an entire continent was predicted to be 2.86 thousand billion USD in 2023, according to the International Monetary Fund. South Africa, the second-largest economy in Africa, had a GDP of approximately 380.91 billion in the same year. Moving on to Asia, the total nominal GDP of the continent was around 37.04 thousand billion USD in 2023. India is one of the largest economies in the world with a GDP of over 3.73 thousand billion USD in in the same year. It has been observed that there

has been substantial economic growth in recent decades, but challenges such as inequality, poverty and unemployment still exist.

THE POPULATION OF AFRICA AND ASIA

According to the World Bank's estimates for 2023, the population of Africa is approximately 1.46 billion people which is 18.24 % of the world's population. Africa's population has been expanding quickly in recent decades, with a 2.37% average annual growth rate. This growth is projected to continue in the future. Population density in Africa varies across different regions, with countries like Nigeria, Egypt, and Ethiopia having higher population densities compared to countries like Chad, Niger, and Mauritania. In South Africa, the population was estimated to be approximately 60.62 million people in 2023. Moving on to Asia, it is the maximum populous continent, representing about 60% of the world's overall population. According to the World Bank's estimates for 2023, the population of Asia is approximately 4.75 billion people which accounts for 59.36 % of the world's population. The population of Asia has been spread across numerous countries, every country with its very own specific demographics and populace trends. The rate of population increase in Asia varies greatly amongst its nations, with some seeing tremendous expansion and others seeing population reduction. India is the most populated country in the world with a population of 1.433 billion according to the World Bank's 2023 estimates.

GROSS ENROLMENT RATIO (GER) IN AFRICA AND ASIA

According to UNESCO 2023 report, GER in Primary to tertiary in sub-Saharan Africa is 59.29%, in northern Africa 77.20% and in South Africa 84.35% whereas GER in Primary to tertiary in central and southern Asia is 67.65%, eastern and south east Asia 85.26 and in India 70.16.

In Asia, countries such as Japan, Singapore and South Korea have set relatively high GERs, generally 80% or more. These countries have historically emphasised the importance of higher education and have invested heavily in their education systems, resulting in higher enrolment rates.

In contrast, some Asian countries, especially in south central Asia, experienced low GER due to several factors such as lack of education, income disparities, and

challenges in the education system. Some countries in Afghanistan, Pakistan and India had a GER below 30% in tertiary education.

The GER in higher education throughout Africa was lower than in many parts of Asia. South Africa, Egypt, and many other countries had slightly higher GERs, usually around 20-30%. However, several countries in sub-Saharan Africa have experienced lower GERs, sometimes less than 10%, mainly due to poverty income, inadequate educational systems and socio-economic factors.

EXPENDITURE ON EDUCATION IN AFRICA AND ASIA

According to the UNESCO Report 2021, the average public education expenditure for 14 countries in Africa was 5.08%. However, this changes considerably depending on the demographic circumstances. 9.64% was the highest percentage recorded in Namibia, 2.67% was the lowest in Uganda and 6.6% in South Africa. The average for Asia in 2021, based on eight countries, was 3.49%. This differs all through the countries depending on area. Bangladesh had the lowest value (2.12%) and Bhutan had the highest (7%). In 2021, the public education expenditure in India was approximately 3.1% of the country's GDP. This includes private and public spending, with differences across economic groups and regions. Between 1951 and 2014, the budgetary allocation for education climbed from 7.9% to 15.6%. An important portion of total spending goes towards elementary education and a sizable portion of educational institutions are under the jurisdiction of the private sector. To keep enrolled students and reduce dropout rates, many incentives to secondary and upper-secondary students, are offered. Also, financial aid is granted to students who belong to the economically weaker section, along with this books, free uniforms and other required materials are also provided in various states. Religious trusts or charities make donations to aided institutions. A target of spending 6% of GDP on education as per the National Education Policy 2020 has been set by the Government of India recently. Although continuous efforts are being made to increase investment in education, still additional reforms are needed to achieve growth and quality, especially for marginalised communities.

EDUCATION POLICY IN AFRICA AND ASIA

Africa's Continental Education Strategy in Africa (CESA 16-25) was adopted in 2020 by the African Union. This plan aims to improve education and skills development across the continent in line with the African Union's Agenda 2063.

In South Africa, the national and provincial (regional) governments share responsibility for the education system, with the provinces primarily enforcing national policies. While the charge of carrying out basic education is with provincial governments, the national government is responsible for higher education. Local governments do not directly oversee education; they are in charge of providing essential facilities (such as power, water, sewerage, garbage removal, and the construction of schools). To provide growth and employment opportunities for the young generation, who can benefit from practical training, important departments (such as Electricity, Water and Sanitation, Solid Waste, Stormwater etc.) have implemented an Integrated Development Plan, which includes skills development and training through various programmes. "Basic Education" or "Schooling" is "a "concurrent" function shared between" national and provincial governments. South Africa follows a 12-year school system, with 7 years of primary education (from R-7) and 5 years of secondary education (from 8-12). While public schools follow the National Curriculum Statement (NCS), private schools have different curricula. The National Education Policy Act 2020 is the recent one in the field of education in South Africa. It has included various plans for resource provision, curriculum development and teacher training. The main focus is on addressing the issues of access and equity, especially for disadvantaged students. Along with this, there are other education policies and initiatives in South Africa such as the National Development Plan and Basic Education Sectoral Plan.

Educational policies in Asia vary depending on the region. Many Asian countries emphasise academic achievement and have competitive education systems. With investment in science, technology, engineering and mathematics (STEM) education is one of the major focuses. Skills training and vocational education are given equal importance to prepare students for their future. In India, free, compulsory, inclusive, and protected for minorities; were originally devolved to the states; and altered in 1976 to centralise power. The National Education Policy of 1968 reorganised the system and free access to attain a comparable quality of education up to a certain level was

ensured, irrespective of caste and gender. The National Policy of Education 1986 and Programme of Action of 1992 placed a strong emphasis on strengthening vocational education, eradicating illiteracy among those aged 15 to 35, and emphasising girls' education, vocational training and non-formal education. India follows the 10+2 system, with 10 years of primary and secondary education (K-10) followed by two years of secondary education (11-12). The curriculum varies according to states and boards. The central government of India creates policies and carries out legislation and programmes about education throughout the nation. The State Council of Educational Research and Training (SCERT) and the Department of Education are key players in the education sector at the state level. Each state has the authority to establish, oversee, and dissolve universities. Standards in education are regulated and upheld by the Ministry of Education. Professional courses are governed by various professional councils, including the Medical Council, Bar Council, and others. Education is provided by public, private, and public-private partnerships. School education, higher education, pre-primary education and Anganwadi (rural childcare centres) are also regulated by concerned national and state authorities. The emergence of non-profit organisations (NGOs) is serving as important educators for underprivileged people (e.g., Save the Children, Care India, Pratham etc).

The latest education policy is the National Education Policy (NEP) 2020 which was launched in July 2020. The policy intends to transform the education system by introducing reforms such as curriculum innovation, flexible learning and greater use of technology. The policy aims to deliver a personalised education program that meets the individual needs of students and encourages growth. Certificate programmes, adult education and in-service training are accessible and opportunities for impaired students to pursue education are also there. It is based on the principle that education must develop cognitive abilities like foundational literacy and numeracy and higher-order thinking skills along with emotional, ethical and social skills. It focuses on the pursuit of knowledge (Jnan), wisdom (Pragyaa) and truth (Satya) as Indian ideals.

COLONISATION OF EDUCATION IN AFRICA AND ASIA

The colonisation of Africa and Asia by Europeans “took place at different times in world history. It also took different paths because Europeans encountered in each case different levels of organisation and resistance” (Cogneau and Guenard, 2003). “The

advent of industrialisation and its consequential imperialism and colonialism overshadowed the history of human civilisation for three centuries. This onslaught began in the seventeenth century and continued till the early twentieth century. This was not only a commercial and political entrapment of the colonies and the colonised but was also an extension of socio-cultural hegemonic dominance” (Sharma and Mir, 2019). “The socio-cultural milieu of the colonised got overawed by the seemingly progressive European modernity. Education, its process and institutionalisation were also influenced by the political economy of the colony and the coloniser. The indigenous knowledge and ways of knowing were characterised as brute, unprogressive and the reason for economic and cultural backwardness” (Sharma and Mir, 2019).

The colonisation of Africa had a profound effect on education in the continents. European colonial powers sought to establish an education system that would serve their interests by training Africans for lower positions in the colonial administration and economy. Consequently, education in Africa was largely designed to promote European culture and values and to provide a small number of African elites to serve colonial powers. Education was mainly in a European language, and African languages were often excluded from the curriculum in the 19th century. After independence, efforts had been made to reform the education system, but challenges continued, including inadequate investment, teacher training, and pertinent curricula. According to Evans and Acosta (2020), in lots of African nations, even though the majority of students enter school with little to no familiarity with the colonial language, teaching children in that language has long been an accepted practice. This way colonial powers subjugate the local populace. The indigenous knowledge system attains the least or no priority. This way the only purpose of education was to serve the interests of colonial powers; to colonise any region, education has always been the first target of colonial powers. Because it is the education which can mould learners into the thinking of colonial powers. Recent years have observed the importance of education for development, leading to coping with the legacy of colonialism and promoting local languages and relevant curricula.

The colonisation of education in South Africa was also done in the same way in which the education system was shaped to serve the interests of the colonial powers and reinforce racial divisions. During the colonial period, education primarily catered to the

white population, while limited education was provided to other racial groups. Black schools received fewer resources and funding, and the curriculum emphasised vocational skills rather than academic subjects. For the children freed from the Portuguese, the Dutch East India Company founded the first school on the Cape in 1658. To anglicise the community, the British built an educational system in the Cape in 1795. A missionary drive to educate all children began in 1799, which led to conflict between the missionaries and slave populations as well as between the British and Dutch ancestors. The Cape formed its first department of education in 1839. After that, education became institutionalised, and several educational systems, the Transvaal Republic (1858), including Natal (1858), and the Orange Free State (1863), were founded to foster the development of a white identity while simultaneously educating black and white children. The Bantu Education Act, implemented during the apartheid era, segregated education along racial lines and disadvantaged Black African students. The system was eventually consolidated to colonise the native populace both culturally and administratively (The South African History Online website, n.d.).

The purpose of the Apartheid (1948–1994) legislation was to prevent non-white individuals from receiving quality training and education. White students received greater funding, which improved the quality of the schools and other educational facilities and increased the number of highly qualified and trained teachers working with this population. Extreme disparities along racial, class, and geographic lines still exist after Apartheid. Within the African population as well as between rich and poor, there are substantial differences in the quality of education. Democracy, adherence to all human rights, and redistributing social policies all existed. To undo the history of dispossession and racial segregation efforts are needed, and land ownership issues remain contentious and challenging to address. Even now, segregation still exists, and efforts to level the scales have not brought much difference.

Colonisation in Asia led to the imposition of European educational systems and standards, allowing Western education and English-like languages to dominate. Similarly, local culture and traditions have been marginalised in teaching about colonial heritage in Asia. The legacy of colonialism has influenced the way education is delivered, subjects are taught, and values and attitudes are promoted. The education system in many Asian countries has been modelled after the Western system, resulting in the marginalisation of local cultures and traditions. The emphasis on

teaching English and Western subjects neglected knowledge of the local languages and cultures.

Indigenous knowledge was disregarded, and traditional Indian educational methods were marginalised. This colonial education system perpetuated social divisions and reinforced inequalities based on caste, class, and gender. It created a divide between the English-educated elite and the majority of the population, hindering social mobility and access to opportunities. In India, the colonisation of education is viewed as worthless and savage. According to Rao (2016), the inhabitants were "civilised" through Christianisation to improve their loyalty. Missionaries have lived in the nation continuously since 1833. Shimla Conference (1901) also organised and formalised the entire educational system along with technical education. In 1906, the Indian National Congress emphasised the importance of a structured educational system for "the realisation of national destiny" for both boys and girls. India got freedom from British rule in 1947. After independence, there was a need for highly skilled workers as the colonial heritage was seen as inadequate and culturally alien. Reforms intended to expand the accessibility of education and encouraged women to pursue education. All children between the ages of six and fourteen were made to obtain a free and compulsory education. To foster the emotional health and performance of underprivileged students in secondary schools the concept of "happy schooling" is adopted. The creation of a "knowledge economy" is emphasised after independence, and this entails a variety of measures such as the development of highly qualified human capital, the establishment of a democratic system, the widespread use of English, a vibrant private sector, and a diverse infrastructure for research and technology (Dahlman & Utz, 2005). Currently, the government is committed to Sustainable Development Goal 4 of the 2030 Agenda, which calls for universal access to high-quality education and the encouragement of lifetime learning by 2030.

DECOLONISATION OF EDUCATION IN AFRICA AND ASIA

One of the most important historical trends of the twentieth century is described by the process of "decolonisation" (Sharma and Mir, 2019). They further add, "Decolonisation is opposite to colonial ways of thinking and acting. It demands an indigenous starting point and an articulation of what decolonisation means for indigenous peoples of different countries." It is a process by which colonies become independent of the

coloniser. Calvino (1974) mentions decolonisation as “The inferno of the living is not something that will be; if there is one, it is what we form by being together. There are two ways to escape suffering from it. The first is easy for many: accept the inferno and become such a part of it that you can no longer see it. The second is risky and demands constant vigilance and apprehension: seek and learn to recognise who and what, amid the inferno, are not inferno, then make them endure, give them space”. Decolonisation involves engagement with the experiences of colonisation and “its past and present effects, both at the local level of ex-colonial societies as well as at the level of more general global developments thought to be the after-effects of empire” (Calvino, 1974). It also involves recognising the effects on education. Decolonisation is essential for creating a fair and inclusive education system that enables students to reach their full potential. Decolonisation of education in Africa refers to the process of removing the effects of colonialism from the educational systems of African countries. It seeks to empower African countries to develop their education systems that reflect their history, language and culture. Challenges consist of confined resources and resistance to exchange, but many initiatives are being undertaken to support decolonisation, such as curriculum development, teacher training programs and policy recommendation changes. Africa was ruled by a series of absolute and imposed colonial powers for many years. However, her political arrangements, treaties, and national liberation campaigns have caused her systems of government to alter (Lumumba, 2023).

Decolonisation of education in Asia requires rethinking the way education is delivered and changing the curriculum to include a greater focus on local culture and traditions. This can be achieved by integrating the native knowledge framework, local language and cultural practices into the curriculum. It involves challenging dominant Western ideologies and encouraging critical thinking and reception of dominant narratives. Some Asian countries have already taken steps to eliminate their education systems.

To decolonise education in Asia there is a need to revamp the curriculum to actively embrace and celebrate local culture and traditions. This can be accomplished by incorporating native knowledge systems, highlighting indigenous languages, and promoting cultural customs. It also means dismantling the influence of Western ideologies and encouraging students to think critically. Progress is being made in some Asian nations as they strive to break free from colonial education systems. In Malaysia,

for example, efforts have been made to promote the use of local languages in education and to integrate indigenous history and culture into the curriculum, there has been a push in India to promote and introduce indigenous knowledge systems and local culture-determined curriculum after the introduction of National Education Policy 2020. After independence, India made efforts to decolonise education by promoting inclusivity, regional languages, and cultural perspectives in the curriculum. The main obstacles to the decolonisation process were attempts to decolonise education from several perspectives of universalism, political activism and religious nationalism. However, challenges remain in ensuring equitable access to quality education, addressing regional disparities, and integrating indigenous knowledge systems into the mainstream framework. Ongoing efforts aim to create a more inclusive and diverse education system that reflects India's rich cultural heritage.

Decolonisation of education in Asia is therefore a complex and ongoing process in which challenging the colonial legacy and promoting local culture and traditions is an important step towards an inclusive education system and it is perfect to meet the needs of all students.

CURRICULUM IN AFRICA AND ASIA

The curriculum in Africa varies from country to country but generally reflects colonial heritage through a focus on traditional education. Efforts are made to incorporate practical vocational training, inculcate indigenous knowledge and promote local languages. Challenges include a lack of infrastructure and a shortage of various resources. South Africa has a Curriculum Assessment Policy Statement (CAPS) that identifies learning areas at different stages. It strives to provide comprehensive and balanced teaching and develop critical thinking and problem-solving skills. Curriculum in Asia mainly emphasises core subjects, with a strong focus on rigour, testing and high-pressure situations. Stress on technology and STEM-based education is given. The curriculum in India varies from state to state and recent changes have focused on skill development and practical knowledge. Vocational education has been familiarised at the secondary level as recommended by the National Education Policy (NEP) 2020 which outlines various educational approaches and aims to provide students with experiential learning.

THE MEDIUM OF INSTRUCTION IN AFRICA AND ASIA

Africa is known for its cultural and linguistic diversity, with over 1,500 languages spoken across the continent. Education in Africa varies according to the region, with some using official languages, while others incorporate the vernacular and try to enforce multilingualism based on their mother tongue to improve academic achievement. English and Afrikaans have traditionally been used in South Africa, but there are various policies which encourage the use of other languages and diversity. Teaching methods also vary across Asia, with some countries adopting English, while others use their official language or a mixture of languages. In India, the mode of instruction depends on the institution and the state, with English predominating in urban areas and regional languages in rural and government schools. The diversity of languages and cultures in Asia and Africa determines the choice of teaching method in education.

INDIGENOUS EDUCATION IN AFRICA AND ASIA

Indigenous education in Africa and Asia is characterised by efforts to combine conventional knowledge and practices into formal education systems. In Africa, there's a growing recognition of the implication of incorporating indigenous information into curricula to keep the cultural background and decorate the relevance of education. According to Anthony (2021), African indigenous education is the base for the foundation of Education for Self-reliance in contemporary education. Several African countries, such as South Africa, have developed outlines to teach indigenous languages, their history and culture. Challenges include various resources, training constraints for teachers and the need for additional research and documentation. African countries use many different languages, along with the official language inherited from colonial history as the medium of instruction. To preserve linguistic diversity and to improve learning outcomes use of the mother tongue and regional languages is encouraged.

In Asia, Indigenous education is a challenge due to various languages and cultural differences. Efforts are being made to include traditional expertise and practices into present-day curricula and address the language barrier. There is a growing emphasis on indigenous self-determination in education, permitting indigenous communities to form their academic framework. Hence, indigenous education in Africa and Asia

pursues to preserve cultural identity, decorate instructional relevance, and foster inclusive and equitable societies.

CHALLENGES AND OPPORTUNITIES

While both Africa and Asia have made a lot of progress, they still face various similar challenges. Both continents grapple with the need to ensure educational quality, relevance, and alignment with the demands of the rapidly changing world. Both continents are going through various demanding conditions in providing quality education to all of their citizens. In many African nations, education structures are still suffering to recover from the outcomes of colonialism and a long time of political instability.

In both continents socioeconomic factors, geographical factors, climate change, water scarcity, biodiversity loss, natural disasters, food crisis, low benefits from globalisation, urbanisation, inadequate aid and conflicts disrupt the education systems and lead to dropouts hence many children are not getting the appropriate education. For women, various hurdles to education consist of early marriage and cultural values that lead to priority education for men

Collaboration and knowledge sharing between Africa and Asia offer tremendous potential for addressing these challenges. By exchanging best practices, lessons learned, and innovative approaches, these continents can create a synergy that accelerates progress and leads to impactful solutions. Partnership in research, curriculum development, teacher training, and student exchange programs can foster mutual learning and support the aspirations of rising Africa and Asia in the field of education.

CONCLUSION

Africa and Asia's rising prominence is remarkable and their combined strength, abundant resources, and expanding influence are changing the world's balance of power and improving the chances for a multilateral society. These continents are anticipated to play a bigger part in influencing international relations and the global economy as they become more diverse, ushering in a new era of opportunities and challenges. Hence it becomes imperative to put more emphasis on the education system of both continents. Despite various efforts education in Africa and Asia faces a

lot of challenges. The main issue is poor access to education, particularly in rural and marginalised communities. Gender inequality, disability and poverty are the main obstacles preventing children from having access to education. Insufficient infrastructure and a lack of skilled teachers contribute poorly to quality education. Traditional teaching methods, limited available resources, and cultural and linguistic diversity further hinder the provision of quality education. Also, the gap between school education and the requirements of the real world impacts students' employability. Addressing these issues calls for a lot of investment, professional training, infrastructure development, inclusive regulations, and collaboration between various communities, governments and international organisations. The aim is to make sure that equitable and high-quality education is available to each individual.

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Exploring the role of green entrepreneurship in addressing financial challenges of Green Campus Initiatives (GCI) in Higher Education Institutions

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ABSTRACT

Orientation

This paper critically examined the Green Campus Initiative (GCI) and the challenges it encounters in effectively advancing sustainable development goals. Despite the notable attention received by GCI within universities, their contribution towards achieving sustainable development goals remains limited.

Research purpose

The purpose of this study was to investigate and address the challenges associated with implementing the Green Campus Initiative (GCI) in universities.

Motivation for the study

The study aimed to address environmental degradation, global warming, and their negative impacts on economic growth. The Green Campus Initiative (GCI) was established as a sustainable development strategy, but numerous challenges hinder its effectiveness.

Research design

This study employed a qualitative study research design to examine the Green Campus Initiative (GCI) and its challenges in achieving sustainable development goals within higher institutions of learning.

Approach and method

This research study employed a qualitative research approach, utilising purposive sampling to select respondents who met specific criteria. The study included 61 participants who met the inclusion criteria out of a population of 150 Green Campus Initiative (GCI) members.

Main findings

The research found that GCI faces several challenges, with a lack of staff, resources, equipment, organogram, and working offices. To address these challenges, the study proposes that GCI embrace transformation by adopting novel solutions.

Practical/managerial implications

Challenges in implementing GCI in universities needs to be addressed to ensure the successful implementation of sustainable development strategies.

Contribution/value-add.

The value added by this study is twofold. Firstly, we are providing practical evidence that can be used to facilitate the implementation of Green Campus Initiatives in a context of higher institutions of learning. Secondly, we contribute to the existing body of literature by identifying and analysing the challenges involved in implementing GCI within universities and recommendations of financial regenerating strategies.

Keywords: Green Campus Initiative; Green Entrepreneurship; sustainable development; Challenges; Student housing; Leadership; Environmental sustainability; Innovation.

INTRODUCTION

Environmental degradation caused by increasing population and high resource usage has resulted in global warming, natural disasters, and rising sea levels (Fonseca *et al.*, 2018). The adverse effects of these activities have negative impacts on economic growth, leading to unemployment, inflation, and reduced government subsidies for higher learning institutions (Weng Wai Choong, 2012). Thondhlana and Hlatshwayo (2018) argue that these problems stem from daily human economic activities. To combat this issue, the Green Campus Initiative (GCI) was established as a sustainable development strategy for higher learning institutions (Isa *et al.* 2021). Despite various

institutions implementing sustainable development initiatives, they encounter challenges hindering their effectiveness, such as lack of adaptability, insufficient finances, and poor relationships with sustainable organisations such as waste businesses (Benjamin *et al.*, 2018).

The objectives of this study were to examine the challenges in implementing the Green Campus Initiative in universities and recommend solutions to tackle them. Specifically, the study aimed to provide strategies for promoting sustainability in the context of GCI at institutions of higher learning. A qualitative approach was used to achieve the objectives.

This paper contributes to literature on GCI by exploring the concept of green entrepreneurship as it relates to GCI. We also contribute by identifying challenges and recommending financial regenerating strategies and providing practical evidence for facilitating the implementation of GCI. The rationale behind linking green entrepreneurship and GCI stems from prior studies having shown its relevance in addressing financial problems encountered by institutions of higher learning (Febrega, 2018; Ivanavici and Baber, 2022). Further, the investigation is aligned with the United Nations' Sustainable Development Goals, particularly goals 13, 14, and 15, to fight climate change and protect life below water and on land (Weber, 2017; United Nations, 2022). It also contributes to the advocacy of sustainable patterns of development and consumption as a means to achieve environmental, social, and economic prosperity (Anderson *et al.*, 2017)

LITERATURE REVIEW

The literature on sustainability can be broad. To bring focus and context for the current paper, the following sections review and discuss concepts such as Green Entrepreneurship and sustainability, the significance of Green Campus Initiatives, and challenges of implementing Green Campus Initiatives.

Green entrepreneurship and sustainable development

The concept of the "green economy" has emerged as a means to achieve social equality and human development while minimising environmental impact (UNEP, 2011). It aims to reduce pollution and waste, increase the efficiency of resource and energy consumption, and promote growth and prosperity while ensuring the

sustainable use of natural resources (International Chamber of Commerce, 2012). A recent study by Alvarez-Risco *et al.* (2021) explored the role of education in supporting green entrepreneurship among students in a university in Peru. Using a quantitative approach through online surveys, the study found that students' personality traits were positively and significantly associated with green entrepreneurial intention, but risk-averse students showed insignificant results towards green entrepreneurial intention.

In the late 1980s and early 1990s, the United Nations (UN) organisations introduced new conceptual perspectives on society and economy, with sustainable development emerging as a significant theory. The United Nations Conference on Sustainable Development, held in Rio de Janeiro in 2012, marked a pivotal moment in the shift from a traditional model of development to a sustainable development model. The conference resulted in the adoption of five papers, including "The Rio Declaration on Environment" and "Agenda 21." The latter calls for national programs for sustainable development – Local Agenda 21 – to be implemented by governments worldwide (Lavrinenko, Ignatjeva, Ohotina, Rybalkin, and Lazdans, 2019).

Sustainable development is a continual process of meeting the demands of current and future generations, with the economic, social, and ecological aspects interdependent and interconnected (Rosha, Lace, 2015; Ohotina *et al.*, 2018). While the definition of sustainable development is widely accepted, there is still ongoing debate on the methods for implementing it (Lavrinenko *et al.*, 2019). The concept of sustainable development is viewed from two angles; with a focus on the environmental aspect in a restricted sense, and as a new form of civilisational functioning in a broader sense. As a result, sustainable development has become an objective demand of the current era.

Proper development is a subset of sustainable development that focuses on the rationalisation for the stability of popular development objectives including; resource, social, economic, environmental, legal, and cultural aspects, in a specific organisation aligned with sector-specific, local, and national development preferences. Governance of sustainable development, based on the process approach, is a collection of approaches, methods, and processes that offer a qualitative alteration of the system under the circumstances of evolutionary operating. Sustainable development is a

modern method of production and economic system (community, organisation, industry, etc.) that allows for long-term strategic advantages (Kozhevina, 2015).

Regarding the South African context, sustainable development has been identified as a primary goal, and the green economy is viewed as a route to achieving it (Sustainable Development, 2008). The South African government and other stakeholders have invested in supporting the notion of the green economy by providing sufficient resources for program implementation.

The significance of Green Campus Initiatives (GCI)

Sustainability, as defined by Holzbaur, Jordaan, and Wenzel (2013), is a challenging goal due to population growth and assisted development that exacerbate the strain on financial resources (Tiyarattanachai and Hollmann, 2016). Aleixo, Leal, and Azeiteiro (2018) assert that sustainability is a balance of economic, social, and environmental factors, and is linked to the preservation and protection of resources for future generations. The Stockholm Declaration of 1972 addressed sustainability in university education, focusing on ways for universities, their authorities, lecturers, scholars, and students to address the challenge of reconciling human pursuit of technical and economic progress with nature conservation (Tiyarattanachai and Hollmann, 2016).

According to Genta, Favao, Sonetti, Barioglio, and Lombardi (2019), education can be a potential solution to overharvesting of resources through conservation measures and entrepreneurship. Fonseca *et al.* (2018) and Hosna (2014) define a "Green Campus Initiative" as one that creates and maintains conditions for people and nature to coexist harmoniously, while also achieving social, economic, and environmental objectives. Isa *et al.* (2021) describe a "Green Campus Initiative" as one that promotes environmental sustainability by reducing harmful effects on human health and environmental pollution. The university should leverage its resources and expertise to impart knowledge, conduct research, and practice stewardship in ways that help the public adopt a green lifestyle as Ragazzi and Ghidini (2017) further emphasise.

The Green Campus Initiative is a conservation mechanism that has gained global prominence in all institutions of higher learning and has made remarkable contributions towards reducing environmental exploitation and resource consumption (Alberts, Gurguc, Koutroumpis, Martin, and Muulsand Napp, 2016). Li, Tan, and Raches (2015) argue that campus sustainability efforts have captured the attention of

the United Nations high-level government committee. This is due to the notable innovations introduced by the GCI, such as carbon-free PV power generation systems implemented in Tokyo universities (Teah, Yang, and Onuki, 2019). However, translating university corporate strategy into a green campus project strategy through process alone is impossible (Morris and Jamieson, 2004). Implementing strategy into practices and procedures requires a wide range of individual competencies and knowledge (Hornby and Thomas, 1989), as well as a clear definition of roles, responsibilities, and accountability both within higher education institutions and between academic and non-academic employees.

DUT's Green Campus Initiatives

The Durban University of Technology (DUT) has been recognised as one of the world's greenest universities (Ndlovu, 2019: 4). In 2012, DUT launched its Green Campus Initiatives (GCI) with the aim of creating an ecologically sustainable campus (Motha, 2013). The DUT GCI is led by the Department of Student Housing, which is managed by Residence Life as a student-led initiative (Makhuba, 2018). The primary goals of the DUT GCI, as outlined by Acuo-I (2019), include reducing high water and energy consumption, promoting environmental sustainability on campus and at DUT residences, reducing waste through recycling, promoting cleanliness, redirecting waste landfills, and encouraging students to practice recycling on campus.

Despite its successes, the DUT GCI faces several obstacles. Maistry and McKay (2016) note that South African institutions must overcome internal constraints such as a lack of research on energy efficiency in their programs. Legislation such as the South African Environment Management Act (No. 46 of 2003) and the National Water Act No. 36 of 1998 regulate the protection of South Africa's natural environment and the preservation, development, conservation, management, and control of the country's water resources. These laws serve as the basis for the formulation of institutional internal policies that protect the environment and water resources at universities. These policies are linked to the triple bottom line by advocating for the balance between environmental conservation and economic generation. They strive to change environmental behaviour by educating people about the need for environmental conservation and enforcing it through fines when necessary.

The DUT GCI is just one example of a broader phenomenon of green campus initiatives at universities worldwide. Green campus initiatives aim to empower students by meeting their enthusiasm and commitment to long-term change with sufficient support and funding. They create engagement platforms that boost innovation and entrepreneurship through cooperation and partnership (ACUHOI SAC, 2016).

Challenges of implementing Green Campus Initiatives

The concept of a "green campus" involves a community working together to maintain resources, increase environmental quality, and improve energy efficiency (Noor, Loong, and Naamandadin, 2019). However, the implementation of sustainable initiatives on campuses faces various challenges, including a lack of environmental education and awareness (Noor, Loong, and Naamandadin, 2019; Noor & Naamandad, 2001), high consumption patterns (Tung Ha 2019; Tiyyarattanachai and Hollmann 2016), insufficient funding (Isa *et al.* 2021; Finlay, Massey, and Massey, 2022), and a shortage of green product providers and sustainability indicators (Idris *et al.*, 2015).

Glazewski and Esterhuyse (2016) have pointed out that sustainability challenges are global, and environmental quality is worsening in the southern African region. Rwelamila and Purushottam (2015) have found that many universities are struggling to combat sustainability issues through various means such as curricula, services, research, and practice. Arroyo (2017) has identified the most common challenges to implementing sustainability initiatives, including a lack of financial resources, motivation, and policies.

According to Katiliute *et al.* (2017), universities may not be able to fully commit to sustainability projects due to inadequate budgets. Isa *et al.* (2021) have also highlighted that the main obstacle institutions face when implementing Green Campus projects and programs is a lack of funding. However, some universities have started engaging in entrepreneurship activities to overcome financial challenges, such as the partnership between the UITM Perak University and the Federal Agricultural Marketing Authority in Malaysia for green entrepreneurship (Isa *et al.*, 2021).

Isa *et al.* (2021) have conducted a qualitative study on strategies, challenges, and solutions for implementing Green Campus at UITM Perak University, revealing that financial, awareness, and knowledge-related challenges hinder the full implementation

of conservation initiatives. To overcome these challenges, universities must take several actions towards attaining sustainable development. Ivanovici and Baber (2022) have also found that campus sustainability and environmental sustainability influence students' entrepreneurship for sustainability, and the link between them is mediated by attitude towards sustainability.

In conclusion, the implementation of Green Campus initiatives faces various challenges that must be addressed to attain sustainable development. Universities must take multiple actions, including enhancing environmental education and awareness, seeking financial support, and engaging in entrepreneurship activities. Campus sustainability and environmental sustainability also play a significant role in shaping goals for sustainable entrepreneurship among universities, students, researchers, and curriculum makers.

METHODS

For this study, a qualitative research methodology was employed in accordance with the work of Isa *et al.* (2021) who ran a similar study in the context of Malaysia. In our research, we used purposive sampling to select respondents who met the inclusion criteria. The inclusion criteria were: (1) senior registered students at the Durban University of Technology, (2) members of the Green Campus Initiative, and (3) employees of the student housing department at the Durban University of Technology. Seasoned GCI members, student housing residence life development officers, and GCI practitioners were deemed appropriate candidates for this study, and they contributed to effective data triangulation. That is, the use of these various data sources helped to gain a comprehensive understanding of green entrepreneurship as it relates to the financial Challenges of GCI.

To determine the appropriate sample size for the study, we followed Singh and Masuku (2014:11) who advise that a sample size of 91 respondents in a population of 1000 would yield a 95% confidence level in the results with a 10% precision level. In the present study, the sample was 61 people who met the inclusion criteria out of a population of 150 GCI members from the 2020 Durban University of Technology GCI annual database. Of the 61 participants, 2 were GCI practitioners, 1 was a student residence life officer, and 58 were GCI members. The participants were recruited via email, which was sent to them through the leadership structures of the University's

department of student housing. Data collection was done using interviews and qualitative questionnaires. GCI practitioners and residence life development officers were interviewed remotely using Microsoft Teams, while data from student GCI membership was gathered using qualitative questionnaires administered virtually through Google forms. Dellorco *et al.* (2021) have previously used virtual interview data collection methods. The qualitative questionnaire used in this study was previously utilised by Hlengwa and Shange (2021) and was deemed adequate to elicit information to fulfil the research objectives.

Data collected from the interviews were manually analysed because of the small number of interviewees. NVivo 12 was also used for analysis. Data was analysed using cluster analysis generated by NVivo to illustrate keywords in the form of bubbles. Hierarchical charts were also used to identify the volume/concentration of responses in themed areas. Word cloud was used to indicate the higher frequency of words and their relationship to each other. All these methods aided in providing a comprehensive understanding of the challenges of implementing GCI in universities and identifying potential remedies.

RESULTS

Green Campus Initiatives (GCI) represent a crucial endeavour in higher education institutions, seeking to integrate sustainability and environmental consciousness into the fabric of campus life. However, the implementation of GCI projects is far from straightforward, as they often encounter formidable challenges. This discussion delves into the multifaceted landscape of GCI implementation challenges, offering critical insights into the hurdles faced by these sustainability-driven initiatives.

Green Campus Initiative implementation challenges

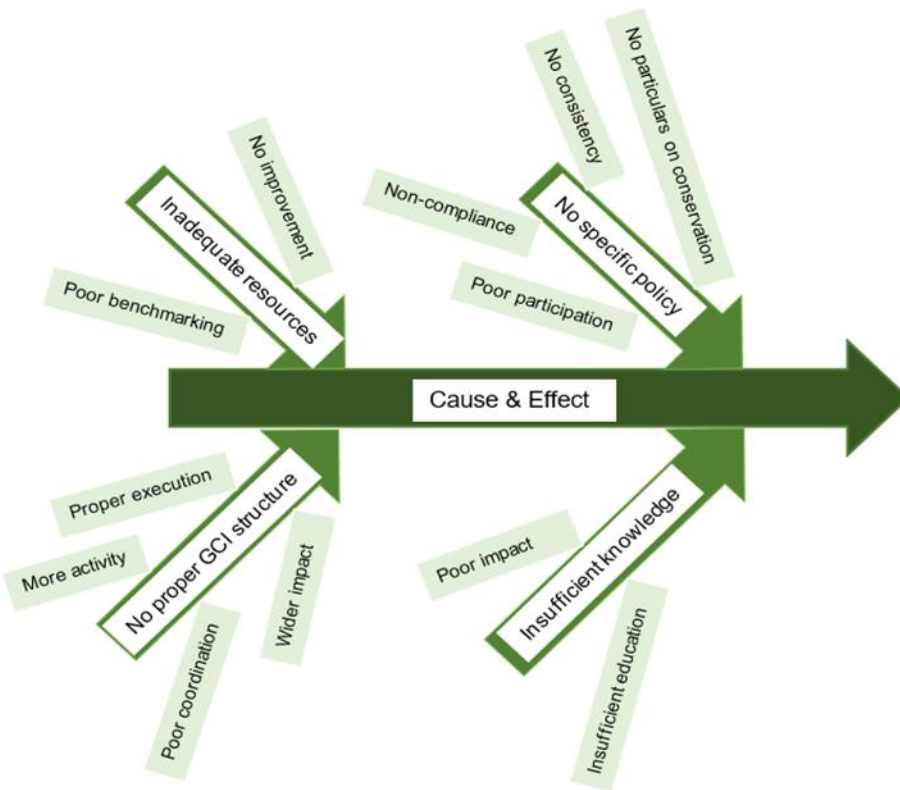


Figure 1-1: Challenges faced by GCI at DUT

Figure 1-1 highlights the main themes emerged from the challenges faced by GCI at Durban University of Technology. Figure 1-1 depicts the challenges experienced by GCI as inadequate resources, no proper GCI structure, no specific policy and insufficient knowledge. The implementation of Green Campus Initiatives (GCI) is an add-on to existing systems rather than a revolutionary paradigm shift. The finance and resources were found to be an effect of the lack of financial sponsorship from the institution's management. The lack of dedication and commitment to GCI was also a challenge highlighted by many respondents. The challenges faced in implementing GCI had a coverage of 20.56%, with eight references indicating that the lack of commitment from the university community was also a challenge. These findings concur with the findings of a study by Pantaleo *et al.* (2015) on green campus initiatives as projects; that revealed finances as the major challenge affecting GCI. Furthermore, the results are in line with those of research done by Isa *et al.* (2021), which discovered that a lack of funds was the biggest obstacle to applying for a green campus. Their findings indicate that the expense of creating a green campus is relatively high.

Policies for enforcing GCI projects

The interview results suggest that there is some uncertainty about the specific policies that regulate conservation in DUT. Respondent 1 indicates that there are no specific policies in place, while respondent 2 suggests that there may be international, national, and local regulations that are cascaded down to the university, but they may be fragmented or not well-known. Respondent 3 highlights the existence of structures within the student housing forum and other structures under student housing that have policies to back up their existence, suggesting that there may be some formal support for GCI projects, but it may be nested within larger institutional policies and not specifically tailored to GCI.

The study findings are similar to those conducted by Mafongosi, Awuzie and Talukhaba (2018) who suggest that while many universities have made efforts to implement sustainable practices, there is a lack of comprehensive Green Campus Initiative policies in place, particularly in developing countries.

Overall, the interview data suggests that there may be a lack of clear and comprehensive policies that directly support GCI projects financially. However, there may be some regulatory and institutional structures in place that provide indirect support. To promote adequate budgets for GCI projects, it may be necessary to advocate for more explicit financial incentives and support for GCI initiatives. Additionally, it may be important to identify and address any financial-related challenges that may be hindering the success of GCI projects in higher education institutions.

Challenges and Strategies								
Challenges			Strategies have been in place to deal with challenges					
financial and resources			mindset and interest		Ideas and Interventions		none	
financial and funding	Resources		lack of interest and parti...		entertainment based	research b...		ideas und...
		fundraising						
						targeted interventions		Physical interventions
lack of key elements			thinking and mindset		education and empowerment		Representation and recog...	
awareness, understanding und...	dedication and co...	unwil...		Covid	Programmes, activities and events	conversational session...		
						mindset and c...		Webi...
lack of recognition and pro...							efficient operations and re...	

Table 1-1: Finance and funding challenges

Table 1-1: Finance and Funding Challenges in Green Campus Initiatives (GCI) Implementation. The research findings, as elucidated in Table 1-1, provide critical insights into the formidable financial and funding challenges encountered in the execution of Green Campus Initiatives (GCI) within higher education institutions. This table serves as a pivotal reference point for understanding the intricate landscape of financial obstacles faced by GCI projects.

The study unequivocally reveals that finance and resources emerge as the foremost challenges confronting GCI projects. This overarching issue looms large, casting a shadow over the successful execution of sustainable initiatives on university campuses. The overarching prominence of financial barriers underscores the critical need for strategic solutions to navigate this landscape.

One of the most conspicuous findings unveiled in Table 1-1 is the stark absence of financial assistance from the institution's administration. This glaring void in support from the upper echelons of the university hierarchy represents a significant impediment to the realisation of GCI projects. The absence of financial backing from institutional leadership underscores the pivotal role such support plays in propelling sustainable initiatives forward.

Notably, finance-related challenges exhibit the highest coverage among the array of obstacles encountered in GCI implementation. This ubiquity underscores the far-

reaching and pervasive nature of financial constraints within the GCI project landscape. These financial challenges permeate various facets of GCI projects, from their initial conceptualisation to their practical execution. The prevalence of financial obstacles within this context mirrors the broader challenges encountered by sustainability initiatives in higher education.

Strategies to overcome mentioned challenges

The Green Campus Initiative (GCI) at DUT faces financial challenges to which participants identified and suggested solutions. These solutions include collaboration with academic departments, fundraising, and seeking sponsorships, as well as the use of edutainment to maintain public interest. However, there are still challenges such as the need for adequate funding, lack of trash bins, and the need to develop new ways to maintain sustainable campuses. The proposed solutions had low coverage rates, but the innovative thinking is encouraging. It is important to ensure the long-term viability of the initiatives for sustainability and impact in the long run, and these insights provide valuable information for promoting sustainable and eco-friendly initiatives in higher education institutions, informing policy and decision-making processes. The findings of the study corroborate those of the study by Filho, *et al.* (2017) that proposed several strategies for overcoming these barriers, including leveraging existing resources, partnering with other organisations, and implementing innovative financing models such as green entrepreneurship.

sustainable and competitive industry. A conducive business environment can facilitate the development and growth of eco-friendly initiatives within higher education institutions.

Participants emphasised the empowerment potential of research collaboration with academic departments. This strategy leverages the expertise and knowledge within the academic community to generate alternative solutions and innovations for GCI challenges. The figure reflects the dual approach to funding GCI projects. While participants ideally advocate for institutional funding, they also acknowledge the feasibility of self-generated fundraising. This duality recognises the importance of diverse funding mechanisms to ensure financial sustainability.

Edutainment, highlighted within Figure 1-2, emerges as a core element to sustain interest in the GCI movement. This approach combines education and entertainment to engage and educate stakeholders, thereby fostering lasting commitment to GCI principles. The strategies presented in Figure 1-2 collectively exhibit an impressive coverage rate of 80%. This indicates a strong consensus among participants regarding the importance of these strategies in addressing GCI challenges.

The figure further elucidates six key strategy references that encapsulate the multifaceted approach to overcoming GCI challenges. These references emphasise the need for engaging activities, seeking sponsorships, enhancing waste management (more litter bins), strong GCI leadership for fundraising, innovative methods for campus sustainability, and active student engagement.

DISCUSSION

The implementation of Green Campus Initiatives (GCI) at DUT presents a series of substantial challenges, as demonstrated by the research findings discussed in this section. These challenges predominantly revolve around the perception of GCI as an auxiliary addition to existing systems, rather than a transformative shift in paradigm (Figure 1-1). Notably, the most pressing challenge identified by study participants is the constraint of finance and resources, which can be traced back to the absence of financial sponsorship from the institution's management. Additionally, the deficiency of dedication and commitment to GCI within the university community emerges as a significant hurdle.

These findings resonate with prior research, particularly the work of Pantaleo *et al.* (2015), which also underscored finances as a pivotal obstacle impacting GCI projects. A similar challenge was unveiled by Isa *et al.* (2021), who identified a lack of funds as a primary impediment to establishing green campuses. Consequently, it becomes evident that financial constraints represent a recurring barrier to GCI implementation across higher education institutions.

In the realm of policies governing GCI projects, the study reveals a degree of uncertainty regarding the existence and clarity of specific regulations at DUT. Respondents offered varying perspectives, with some indicating the absence of well-defined policies and others alluding to potential but fragmented regulations. These findings are congruent with the research conducted by Mafongosi, Awuzie, and Talukhaba (2018), which emphasised the dearth of comprehensive Green Campus Initiative policies, particularly in developing nations.

The findings also suggest that there exists a deficiency in explicit and comprehensive policies that provide financial support for GCI projects. Addressing this void necessitates advocacy for more transparent financial incentives and backing for GCI initiatives. Furthermore, it is crucial to focus efforts on recognising and tackling financial-related challenges that obstruct the success of GCI projects in higher education institutions.

Table 1-1 reinforces the prominence of financial and resource-related challenges as the most formidable impediments to GCI implementation. The lack of financial backing from the institution's administration emerges as a major obstacle, underscoring the pivotal role of financial support in advancing GCI initiatives. The study also underscores the significance of enhancing awareness and commitment to GCI within the academic community to surmount these challenges.

The discussion extends to strategies designed to surmount these challenges, identifying potential solutions such as collaborative efforts with academic departments, fundraising initiatives, pursuit of sponsorships, and leveraging edutainment to sustain public interest in GCI. While these proposed solutions exhibit relatively low coverage rates, they reflect innovative thinking and offer valuable insights for the promotion of sustainable and eco-friendly initiatives in higher education institutions. These insights

hold the potential to inform policy decisions and shape processes that guarantee the enduring viability and impact of GCI initiatives.

Figure 1-2 presents participant perspectives on strategies to address GCI challenges, emphasising the necessity of transitioning to renewable energy sources, improving the business environment, and conducting collaborative research with academic departments. Fundraising and edutainment are also highlighted as integral components to maintain engagement in the GCI movement. These strategies, with an 80% coverage rate, underscore the need for engaging activities, sponsorships, expanded litter bin availability, strong GCI leadership for fundraising, innovative approaches to campus sustainability, and active student involvement.

While the participants' emphasis on innovation is commendable, it is imperative to ensure the sustainability of the proposed solutions over the long term. Achieving this goal requires addressing financial-related challenges, including securing adequate funding, and addressing infrastructure needs like the provision of trash bins. These insights represent invaluable contributions to the promotion of sustainable and eco-friendly initiatives in higher education institutions, guiding policy, and decision-making processes, and ensuring the enduring success and impact of GCI projects.

In alignment with the study's aim, it is evident that green entrepreneurship plays a pivotal role in addressing the financial challenges associated with GCI in higher education institutions. By fostering innovative approaches to funding and sustainability, green entrepreneurship can complement and enhance the strategies discussed in this research, ultimately contributing to the successful implementation of GCI initiatives. However, it is crucial to acknowledge the limitations of this study, including its small sample size and focus on specific stakeholder groups. Further research is warranted to generalise these findings across a broader spectrum of institutions and stakeholders. Nonetheless, this study provides valuable insights into finance-generating strategies and financial-related challenges in GCI projects, offering recommendations that can guide universities and green entrepreneurs in developing financially sustainable GCI projects that promote environmentally friendly practices and a sustainable future.

CONCLUSION

In conclusion, the Green Campus Initiative (GCI) stands as a robust sustainable development strategy designed to combat environmental degradation, global warming, and their adverse repercussions on economic growth. Nonetheless, the formidable obstacle of financial constraints hampers its efficacy, prominently underscored by the stark absence of financial support from institutional management. Our research reveals that 20.56% of respondents encountered hurdles in GCI implementation, predominantly linked to financial impediments and a lack of commitment within the university community. Moreover, an aura of uncertainty surrounds the regulatory framework governing conservation policies within educational institutions, albeit with indications of indirect support through existing institutional structures.

In response to these challenges, our study offers pragmatic remedies. We advocate for synergistic collaborations with academic departments, the pursuit of external funding via fundraising and sponsorships, and the strategic use of edutainment to sustain public interest in GCI endeavours. Additionally, we propose venturing into innovative financing models like green bonds while addressing essential infrastructure needs, such as the provision of more trash bins. The pivotal role of student engagement and our unwavering commitment to sustainability permeate through these recommendations, aligning cohesively with our mission to invigorate GCI's effectiveness.

Nevertheless, it's essential to acknowledge the study's inherent limitations, chiefly, the sample size's potential constraints on generalisability to diverse higher education institutions and varied green campus initiatives. Future research endeavours should aim to transcend these confines by conducting cross-regional and cross-country comparisons of finance-generating strategies and financial-related challenges in GCI projects. Additionally, longer-term studies should be undertaken to monitor and assess the evolving progress and far-reaching impact of GCI implementations.

RECOMMENDATIONS

Based on the results obtained from the participants in the study on 'Exploring the Role of Green Entrepreneurship in Addressing Financial Challenges of Green Campus Initiatives (GCI) in Higher Education Institutions', the following research recommendations can be made:

To develop finance-generating strategies for promoting adequate budgets

To address the financial challenges of GCI projects at DUT, a multifaceted approach is recommended. Firstly, further research should be conducted to identify successful finance-generating strategies used by green entrepreneurs in addressing the financial challenges of GCI projects. This research should focus on case studies of successful GCI projects in other higher education institutions. Collaboration between green entrepreneurs and universities should also be encouraged to identify innovative finance-generating strategies, such as partnerships with private sector companies, crowdfunding campaigns, or public-private partnerships. Additionally, research should be conducted to identify the most effective communication strategies for promoting finance-generating strategies to stakeholders, including campus administrators, students, and the public.

Secondly, starting a waste business industry could be a possible solution to address the financial challenges facing the implementation of GCI projects at DUT. This industry could provide a revenue stream for the institution while promoting sustainable waste management practices. The industry could focus on recycling and upcycling waste materials from the institution into new products or selling them to recycling companies. Additionally, the industry could provide employment opportunities for students and staff, further contributing to the institution's sustainability goals. However, it is important to ensure that the waste industry is environmentally sustainable and does not undermine the GCI's goals. Proper waste management practices should be followed to prevent pollution and ensure that the waste industry operates within a circular economy framework. Overall, venturing into the waste business industry could be a viable solution to address the financial challenges facing the GCI at DUT, as long as sustainability is a top priority.

To identify financial-related challenges in GCI projects across higher institutions of learning in South Africa

Further research should be conducted to identify the most common financial challenges faced by GCI projects in higher education institutions. This research should be conducted across a range of institutions, including community colleges, liberal arts colleges, and research universities. Research should be conducted to identify the most effective ways to address financial challenges in GCI projects, including strategies for

reducing costs, increasing revenue, and improving financial management practices. Collaboration between green entrepreneurs and universities should be encouraged to develop new financial models and management practices that can help address financial challenges in GCI projects.

Overall, the results of the study suggest that there is a need for further research and collaboration between green entrepreneurs and higher education institutions to address the financial challenges of GCI projects. By identifying finance-generating strategies and addressing financial-related challenges, universities can promote the growth of sustainable practices and contribute to a more environmentally friendly future.

Incorporating project management to address the financial issues facing Green Campus Initiatives

Our research suggests that applying project management principles can be an effective solution to address these challenges. By providing a framework for effective planning, execution, and control, project management can help green campus initiatives achieve their sustainability goals while also improving their financial outcomes. We recommend that universities and colleges consider adopting project management principles as a key strategy for addressing financial issues in their green campus initiatives.

LIMITATIONS AND FUTURE STUDIES

The study's sample size may limit the generalisability of the findings to other higher education institutions and green campus initiatives. The study used qualitative methods such as questionnaires and interviews, which may have limitations in providing a comprehensive view of finance-generating strategies and financial-related challenges in GCI projects. The study's participants were self-selected, which may have introduced biases into the study. Future research can compare the finance-generating strategies and financial-related challenges in GCI projects between higher education institutions in different regions or countries. Future research can be conducted over a longer period to monitor the progress and impact of finance-generating strategies and financial-related challenges in GCI projects.

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Critical review of quiet quitting as a new form of industrial action: Looking through the lens of dwindling trade union membership

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ABSTRACT

Recently, industrial action has undergone dramatic transformation across the globe. Quiet quitting has burgeoned in various workplaces at an accelerating rate. The tremendous decline of trade union membership, which forms an indispensable role in collective bargaining, has unwittingly forced employees to show their dissatisfaction through quiet quitting. In South Africa, trade union membership of 225 registered unions fell from 34% to 23% in the past few years. Similarly, in the United Kingdom only 14.1% of the employees between the age of 20–29 subscribe to trade unions. The fall of trade union membership is a huge existential threat to collective bargaining. While employees are usually protected by the employment regulation systems of the country, the power of collective bargaining is irreplaceable and incontestable. As quiet quitting is a new concept in human resource management, there is little extant literature on this subject. In addition, there is no scholarly review which has been conducted appertaining to the relationship between quiet quitting and trade union membership. The purpose of this study is to provide a comprehensive understanding of quiet quitting by synthesising the decline of trade union membership. The key objective of this study is to examine the linkage between dwindling trade union membership and quiet quitting. The study used a desktop method and qualitative content analysis. A review of the literature revealed a holistic picture of quiet quitting as a form of silent protest linked to declining trade union membership. From the

practical implication's perspective, to avoid long or short-term adverse consequences to productivity at the workplace, employers should address this issue.

INTRODUCTION

The issue of quiet quitting has gained traction around the world and though it has been endemic for decades, in research the topic only came into the limelight last year in 2022. It draws the attention of international bodies such as International Labour Organisation (ILO). ILO promotes the labour rights and the mitigation of decent work loopholes from both private and public sectors' standpoint (International National Organisation, 2023). The ILO actively encourage and uphold the core principles of workers' rights, irrespective of whether they have formally ratified these principles. In the year 2022, with the exponential rise of quiet quitting, international bodies expressed concern regarding the declining membership of labour unions, emphasising its potential to undermine social discourse (Detert, 2023). The ability to freely associate is crucial for the protection and exercise of fundamental rights. The landscape of industrial action in and around the world is undergoing transformation. The contemporary labour force, characterised by its youthfulness and diversity, has a desire for workplace transformation in response to issues of wages and working conditions. However, the approach of the contemporary workforce in addressing these concerns differs from that of preceding generations, as it places less emphasis on work-class solidarity. There is widespread discontent among individuals with the current state of work conditions which leads to the emergence of quiet quitting (Scheyett, 2023). The discontentment usually arises where there is a discrepancy between the demands of the labour and the offerings provided by management. However, it is important to acknowledge that this quiet quitting phenomenon does not strictly align with the act of quitting the job. There are many definitions of quiet quitting. According to Formica and Sfodera (2022), quiet quitting refers to the deliberate action taken by an employee to perform the bare minimum of tasks necessary to fulfil their job requirements. However, for this study, quiet quitting refers to an employee's deliberate action of exerting minimum effort; just enough to avoid dismissal (Lord, 2022). Lord (2022) further states that the prevalence of quiet quitting has increased due to the reduction in trade union membership and limited prospects for engaging in negotiations. Prior to state intervention, industrial relations primarily consisted of voluntary agreements between employers and employees. The notion of quiet quitting

is a prevailing perspective shared by both the Millennial Generation and the younger Generation Z, as well as by numerous older employees who are similarly discontented with work conditions. Moreover, a substantial proportion of individuals belonging to Generation Z and Generation X are out of sync with current work conditions hence they have contemplated making changes in contrast to the baby boomer generation.

The union density among workers across the globe is small and undergoing continuous decline (Webster, 2022). There is a global trend of decreasing trade union membership. This implies that a significant majority of the employed workforce do not have union membership. Consequently, this increases the powers of employers to establish employment conditions and determine salaries at their discretion. For this reason, trade unions have critical concerns regarding the lack of worker interest in joining their ranks or their willingness to accept any offer regardless of unfavourable working circumstances. Unfortunately, employers cannot have negotiations with individual employees (Carneiro & Costa, 2022). As a result, employees engage in quiet quitting to express their dissatisfaction with work conditions. The issue of quiet quitting is a new kind of industrial action taken by employees in response to disputes, typically centred around issues related to compensation and working conditions (Hamouche, Koritos & Papastathopoulos, 2023). Despite workers having a comprehensive understanding of the provisions pertaining to the grievances, including the nature of collective action and its anticipated duration, they may choose to remain silent rather showing their dissatisfaction through quiet quitting. Mahand and Caldwell (2023) states that quiet quitting takes a form of silent resistance in which businesses are compelled either to address the individual requests of their employees or reestablish connections with labour unions in order to cultivate work environments that foster employee engagement. According to Boy and Sürmeli (2023), numerous employees in their early career stages, engaged in professional occupations, encounter challenges pertaining to precarious employment agreements and uncertainties in job prospects. The aspect of quiet quitting has a severe adverse effect to performance of the organisation and economic growth of the country (Serenko, 2023; Detert, 2023). Hence, the study sought to explore the causes of declining trade union membership. The study also sought to examine the linkage between dwindling trade union membership and quiet quitting. There is no scholarly study that has been

undertaken to specifically show the relationship between quiet quitting and the fall of trade union membership.

Conceptualising quiet quitting

According to Richardson (2023), the act of quietly quitting is an indicator of dissatisfaction with one's current job. Young employees, specifically those aged 35 and below, experience the most significant cases of quiet quitting. Salem (2022) states that employees who choose not to resign from their positions manifest their discontent through a phenomenon commonly referred to as "quiet quitting". There is a cumulative increase in the proportion of employees who experience persistent dissatisfaction at their work environments. There is a growing number of companies that undervalue the employees' expectations and consistently demand gratitude from employees for any bestowed opportunities (Zhang & Rodrigue, 2023; Johnson, 2023). The younger generations, namely Gen Z and Millennials, are unwilling to tolerate societal norms that were formerly seen as indicators of social standing. Ellera, Jamali and Caldwell (2023) state that the phenomenon of quiet quitting can be delineated into three distinct stages: the physiological stage, mental stage and emotional stage of quitting. During the initial stage is the emotional stage, it is characterised by emotional turmoil in which employees experience uncertainty and struggle to make definitive decisions regarding their future course of action (Bell & Kennebrew, 2023). Internally, a conflict arises between the inclination to remain and the determination to quit. Secondly, in the mental stage, employees evaluate the level of support they receive within their work environment. Despite the ongoing active participation in their responsibilities, employees are experiencing a decline in emotional commitment towards their work. During the final physiological stage, the employees overtly express their discomfort and disengage from work responsibilities (Lindborg, 2022). Employees openly acknowledge their active contemplation of alternatives beyond their current workplace.

According to Tayfun, Cetiner and Yurdakul (2023), quiet quitting is a form of passive resistance. Passive resistance of this nature indicates discontentment with one's employment or work environment, limited geographical mobility, or an imbalance between professional and personal life. Haselden and Barsotti (2023) state that quiet quitting can serve as an indication of discontentment with several aspects of employment, such as the job itself, the workplace environment, managerial practises,

or working circumstances. This phenomenon impedes productivity as employees limit their efforts to meeting the bare minimum job expectations (Joaquim, Figueiredo, Silva & da-Fonseca, 2023). Passive resistance, even when shown by a single employee, has the potential to detrimentally affect the overall productivity of an organisation. Passive resistance is seen as a manifestation of discontentment arising from a perceived absence of unfavourable labour circumstances. In some instances, employers face a challenge when they repeatedly recruit new employees that either lack alignment with the basic values of the organisation or fail to share the same goals. (Thekkechangarapatt, 2023). Some employees may experience job unhappiness or dissatisfaction with their working environment, leading them to disengage from their work as a means of expressing their discontent without facing potential disciplinary measures or termination. Some employees require assistance in navigating the cultural alignment of the organisation, which can have an impact on their capacity to effectively carry out their work responsibilities (Haselden & Barsotti, 2023).

The phenomenon of quiet quitting poses a potential threat to the collective morale inside an organisation (Szabó, 2023). It is imperative for management to proactively identify and rectify any underlying factors that contribute to the accelerated rate of quiet quitting. However, the act of quiet quitting from a job might also indicate that an individual might be encountering professional challenges that are impacting their capacity to effectively fulfil their job responsibilities (Johar & Hassan, 2023). Managers with poor leadership skills experience a high number of employees who silently disengage from their work, up to four times more than their competent counterparts. Hence, poor management is seen as the core source of quiet quitting. It is apparent that the roots of employee unhappiness at the workplace are centred on three essential traits that are universally shared by individuals, namely, purpose, values and needs.

Trade union and current situations of membership

Trade unions play a critical role of collection bargaining and action at the workplace, as well as in propelling socio-economic development. They are indispensable for employees as they dominate the sphere of collective bargaining by exerting influence on policy formulation and decision-making processes to advance the interests of their members (Atzeni, 2021). Trade unions have historically been crucial in advocating for

democratic principles and safeguarding the rights of workers. In the work setting, the dynamics of power are in favour of the employers owing to their access to a wide range of resources, in comparison to single employees. For this reason, single employees engage in quiet quitting for their grievances to be heard. To achieve equitable bargaining power with employers, employees participate in or establish trade unions (Turner, 2022). Labour unions have a pivotal role in enhancing both salaries and working conditions for all workers irrespective of their membership status within the union. According to Wjayanti, Suhartono, Isnawati and Jayadi (2019), unions mitigate wage disparities between different genders, and workers belonging to marginalised racial and ethnic groups. Unions offer a distinctive approach in addressing the gender pay disparity and promoting fair compensation for women. This is due to their ability to engage in negotiations which establish clear wage structures applicable to all workers in a given occupation without discrimination. However, there is usually a wage disparity between unionised and non-unionised employees especially in the private sector (Poole, 2021). Unionised workers usually have sound job safety provisions and superior benefits in terms of paid leave compared to their non-union counterparts (Undy, Ellis, McCarthy & Halmos, 2022). Furthermore, they experience a heightened sense of security while asserting their rights within the workplace. Employees who are affiliated with labour unions see a distinct wage advantage in comparison to their counterparts who are not associated with unions. According to Thiel (2019), it has been observed that non-union workers receive a compensation that is approximately 85 percent of the earnings received by their unionised counterparts. The presence of union representation enhances the level of accessibility to and engagement with employers. Employees who are members of the labour union are significantly more inclined to enjoy suitable work conditions such as paid time off by their employers for illness or vacation reasons.

However, the decreased emphasis placed on prioritising union members' interests as the focal point of negotiations cause them to lose confidence in them. Cook, Lorwin and Daniels (2019) state that there is a lack of actual implementation of worker control within unions thereby preventing the true founders of these organisations from influencing their direction and determining how the resources derived from subscriptions should be utilised for their own benefit. In some instances, it is an undeniable fact that unions experience member attrition to competing unions within

the same workplace, sector, or industry. In addition, unions tend to focus their efforts on organising people who are already affiliated with unions, rather than actively engaging with young ununionised workers.

THEORETICAL FRAMEWORK

The study is guided by conflict theory. The conflict theory, as formulated by Karl Marx (1884), states that society is characterised by an ongoing state of conflict due to the battle for limited resources (Bartos & Wehr, 2002). According to Schlee (2004), conflict theory examines the dynamic relationship between employers and employees which is mostly characterised by conflict. The conflict theory is based on the premise that conflict is an inherent aspect of social dynamics which arise from competition for resources and power within and between groups. One fundamental tenet of conflict theory is that workforce within a given certain settings would actively strive to optimise their personal wealth and influence (Jackson, 1993). In the context of this study, employees seek improvement of their welfare through better wages and conducive working conditions, whereas employers seek maximise profits through cheap labour and minimising operational expenses. Employers are motivated to minimise labour costs, while employees want to maximise their benefits. The conflicts arise when a dominant minority group (the employers) exercises authority in a manner that contradicts the interests of the majority (the employees). The employees respond to their dissatisfaction by engaging in quiet quitting. However, in some instances it is common for employees and employers to have a pleasant relationship.

METHOD

For this study, desktop research was conducted to assess the relationship between quiet quitting and dwindling of trade union membership. The study is a narrative review of the literature which offers broad attention to quiet quitting and trade union membership. The data was analysed from peer-reviewed international conference papers, peer-reviewed local conference papers, journal articles, government publications, databases, periodicals and books. This study utilised the content analysis approach in analysing the data. The significance of content analysis lies in its ability to provide objective and systematic insights into various forms of communication (Neuendorf, 2016). It allows researchers to uncover hidden meanings, identify trends and patterns, and gain a deeper understanding of cultural and societal values. In this

study, qualitative content analysis is used to evaluate the relationship between quiet quitting and dwindling of trade union membership.

RESULTS AND DISCUSSION

Causes of the fall of trade unions

Firstly, employees are losing confidence and trust in labour unions and their representatives. The employees perceive that union leaders prioritise personal enrichment over addressing the everyday working issues faced by their members (Gumbrell-McCormick and Hyman, 2019). The employees have queries about the purpose of trade union subscriptions and the payment of their dues, particularly when they perceive their union to be ineffective in representing their interests. Mendonca and Adăscăliței (2020) note that unions have transformed into bureaucratic entities where officials lack the necessary level of accountability towards their members. The confidence of trade unions in representing and serving employees while maintaining an alliance with employer has become a subject of scrutiny among workers.

Another issue is the call for independence. There is contention and critics among workers regarding the association of trade unions with political parties. Employees expect the trade union to be independent to enable it to effectively advocate for workers' interests in situations where government policies harm them (Traianou, 2023). The notion of aligning with the ruling party is seen as a conflict of interest, which is intolerable and unacceptable to employees. The first scenario involves marginalisation, which is characterised by a continued decline in unionisation rates and the weakening of established unions, particularly those comprised of ageing members which results in diminished influence and credibility (Goldstein, 2022). The second scenario, referred to as dualisation, entails unions safeguarding their existing positions by concentrating on providing services to workers in sectors where they still hold sway, primarily those in permanent employment in major industries and the public sector (Frenkel, 2020).

Thirdly, the emergence of factional conflicts. It is evident that unions, which initially had stability, are currently embroiled in detrimental factional conflicts that have diverted the attention and focus of leadership at all levels (Wang & Ouattara, 2020). Consequently, this has resulted in a decline in the dedication to serve the interests of workers. There is a persuasive argument that necessitates the active involvement of

any committed trade unionist. Unions that lack management structures and a system of accountability are destined to perish and mostly fail to attract workers to their ranks. According to Schlachter (2019), poorly managed unions lack a comprehensive framework to facilitate expansion, efficient collective bargaining, education and training initiatives, and responsible financial management of union resources among other essential aspects. The previously active and well-established unions have undergone a significant shift in their organisational structure, currently most of them have been placed under administrative control and effectively overseen by the officials within the department of labour.

Fourthly, the growth of business-oriented trade unionism. Once businesses provide adequate resources to the union, concerns arise regarding the union leadership getting resources to accumulate personal riches from employers, thereby compromising internal democracy (Bertolini & Dukes, 2021). The interests of employers in determining the leadership of the union left the employees suspicious. The emergence of business-oriented trade unionism could potentially contribute to the erosion of workers' confidence in unions, extending beyond the public sector to encompass the private sector as well. In the event that union officials show a preoccupation with the accumulation of personal possessions, neglecting the day-to-day issues of workers, it is likely that workers would discontinue their support (Räthzel, Stevis & Uzzell, 2021).

The relationship between quiet quitting and dwindling of trade unions

Table 1: The fall of trade union membership

Country	Previous total percentage of employees affiliated with unions	Current total percentage of employees affiliated with unions	Total percentage decline of employees affiliated with unions	Current total percentage of employees not affiliated with unions
South Africa	34% in 2016	23% in 2022	11%	77%
Australia	41.1% in 1992	12.5% to 2022	28,5%	87,5%
Canada	38% in 1981	29% in 2022	16%	71%
United Kingdom	32.4% in 1995	22.3% in 2022	10,1%	77,3%

United States of America	20.1% in 1983	10.3% in 2022	9,7%	89,7%

Source: Authors' analysis

According to the UK Department for Business and Trade (2023), the percentage of employees affiliated with labour unions has declined from 32.4% in 1995 to 22.3% in 2022. Although public sector workers constitute a smaller proportion of the overall workforce in United Kingdom, union membership is disproportionately concentrated among this group. In general, Statistics Canada (2023) reports that there has been a marked decline in the proportion of individuals employed in their primary occupation who are affiliated with labour unions, with the percentage decreasing from 38% in 1981 to 29% in 2022, representing a reduction of 9% points. Hence, between the year 1981 and 2022, there was a notable decline of approximately 11% points in the rates of unionisation within the realm of full-time employment. According to Statista (2023), the rate of union membership has shown a consistent downward trend, it decreased from 20.1% in 1983 to 10.3% in 2022. The year 2022 witnessed a further decrease in the rate of union membership, which stood at 10.1%.

In August 2022, out of a total workforce of 11.4 million workforce, approximately 12.5% were affiliated with a trade union in their primary occupation. The percentage has decreased compared to the 14.3% figure observed in August 2020. According to the Australian Bureau of Statistics (2022), the membership of trade unions has shown a general downward trend, with the proportion dropping from 41.1% in 1992 to 12.5% to 2022. Therefore, between the years 1992 and 2022, there has been a dramatic decline in the percentage of employees who were affiliated with trade unions. There is a positive correlation between age and trade union membership. In the year 2022, a mere 2% of workforce between the ages of 15 and 19 who were employed, and 5% of those aged 20 to 24, were affiliated with trade unions. The percentage rose to 19% among those in the age group of 55-59, and reached 21% among individuals in the age group of 60-64 (Australian Bureau of Statistics, 2022).

According to Section 23 of the constitution of South Africa, all individuals are entitled to the right to associate with or establish a labour union (South African Government, 2023). However, there is a declining trend in trade union representation among individuals in South Africa. The union density among workers in the South African

economy and public service is pegged at 23%. This implies that a significant majority, approximately 77%, of employed individuals do not have union membership. The trade union membership in South Africa has been experiencing a cumulative decline. South Africa's labour landscape is characterised by the presence of 225 registered trade unions, which collectively serve as representatives for an estimated three (3) million workers. However, recent data indicates a decline in union membership, with only 23% of the economically active population currently affiliated with a union, compared to 34% in 2016 (Cloete, 2021). However, to some extent the dynamic nature of employment contracts, marked by the emergence practises such as outsourcing, job informalisation, and remote working, has resulted in a decline of union membership figures. In addition, the movement has experienced a loss of support from overseas donors who previously provided assistance to trade unions during the period of democratic struggle. The circumstance has a detrimental effect on the unions' capacity to attract and educate proficient personnel, as a considerable number of officials have also departed from the movement in favour of more financially rewarding positions in the private sector (Keune & Pedaci, 2020).

Table 2 The fall of trade union membership among youth employees

Country	Age group (years)	Percentage
South Africa	18-35	15%
Australia	20-34	5%
Canada	20-34	14,5%
United Kingdom	20-29	14,1%
United States of America	20-34	4.4%

Source: Authors' analysis

Contemporary young workers have scaled down their inclination to engage with union activities, mostly stemming from the fact that labour unions no longer possess the confidence and power to adequately address their work grievances (O'Donoghue, 2023). Union officials usually face allegations of prioritising their personal interests over addressing significant organisational concerns that affect employees. The trade union movements are widely recognised as a significant catalyst for political transformation instead of addressing the employees' grievances. The reduction in trade union membership, particularly among younger individuals, is clearly apparent.

The trade union membership rate among individuals aged 20-29 is recorded at 14.1% (UK Department for Business for Business and Trade, 2023). The percentage significantly decreases by nearly 50% to 7.5% within the private sector, which is the primary employment sector for the majority of young individuals.

Workplaces that have established unions tend to have more effective and streamlined communication systems (Saunders & Lloyd, 2023). Collective bargaining and social discussion play a fundamental role in the formulation of policies. However, the fall of trade union gave birth to the increase of quiet quitting (Lord, 2022). This issue affects both employers and employees. Quiet quitting is an industrial action characterised by a more introspective and psychological perspective which is closely linked to the individual employees' pursuit of optimal welfare (Scheyett, 2023). Employees are expected to consistently invest additional time and effort in their professional endeavours, surpassing the expected level of performance in order to enhance their prospects for career advancement. However, despite their persistent dedication, some employees encounter difficulties in achieving their desired outcomes. In addition to conventional forms of organised action, several employees are manifesting their emerging moral conscience through nuanced acts of protest (Atzeni, 2021). Employees who engage in quiet quitting experience reduced stress levels, a revitalised sense of vitality and a sense of satisfaction derived from the resistance (Mahand & Caldwell, 2023).

Although labour laws would continue to provide protection for workers, the ability to engage in collective bargaining is essential for both employees and employers. The lack of dialogue between employees and employers with regards to working conditions and wages prompts the emergence of quiet quitting (Serenko, 2023). Weak trade unions give employers exclusive authority over matters such as working conditions, salaries, health, and safety, regardless of the extent of worker engagement and representation permitted in different forms of participatory forums that may be established (Atzeni, 2021). It is crucial to acknowledge the important role that unions have in enhancing inclusive and efficient social interaction. The current state of the workplace differs significantly from that of past years. Moreover, there is a pressing need to attract younger individuals to labour unions. Presently, statistics indicate that individuals between the ages of 45 and 54 years are mostly inclined to join unions. Consequently, there is a missed opportunity to engage a substantial portion of the

young population in countries with a predominantly youthful demographic. The contemporary labour force, characterised by its youthfulness and diversity, shows a desire for workplace reform with a specific focus on addressing issues related to wage disparities (Poole, 2021). The approach differs from that of past generations, as it places less emphasis on work-class solidarity.

CONCLUSION

The decline in union membership poses a huge challenge to the promotion of the decent work agenda. The quiet quitting phenomenon is consistently prevailing worldwide. The erosion of trade unions has resulted in the rise of quiet quitting as dissatisfied employees are left with no option but to put minimum effort in to avoid dismissal. Hence, the calls for robust worker representation in order to achieve favourable working conditions and promote decent work. In addition, the restructuring of capitalism at both local and international levels has rendered the one-union, one-industry policy obsolete. Although workers would continue to be safeguarded by the nation's extensive labour legislation framework, the loss of collective bargaining and collective action has a significant detriment effect to their welfare. Without the presence of union representation and the practise of collective bargaining, the prospect of negotiations between labour unions and employers to enhance the fundamental provisions outlined in labour legislation becomes non-existent thereby raising the prevalence of quiet quitting. The synthesis of literature revealed that there is a relationship between quiet quitting and the falling of trade union membership. The main limitation is that the study was based on a literature review only. For future studies, an empirical study is required to examine the relationship between quiet quitting and the fall of trade union membership.

IMPLICATIONS OF THE STUDY

Since there is contention among workers on the necessity for trade unions to maintain independence from political parties, trade union should maintain independence and autonomy to effectively advocate for workers' interests in situations where they need their interventions. It is imperative for trade unions to maintain political autonomy, ensuring their independence from any specific political party. This autonomy enables workers to effectively critique and challenge government policies, regardless of the party in power or in opposition, whenever the interests of workers are jeopardised or

undermined. Trade union membership can provide significant benefits as unions can engage in contract negotiations and engage in discussions with employers over working conditions. This can effectively maintain high levels of employee satisfaction and safeguard workers against unjust work conditions. Hence, this approach could reduce incidences of quiet quitting. The responsibility for engaging in dialogue with employees and comprehending the factors contributing to their decrease in performance lies with the management. Hence, the management of the organisations must constantly engage in individual consultations and group gatherings to solicit their concerns and grievances. The work conditions can be achieved by fostering engagement with employees in collective bargaining rather than continuously placing the burden on individuals to advocate for their own rights. In some cases, quiet quitting arises as a result of adherence to outdated practises inherited from preceding generations, thus it becomes imperative to effect changes and align with the evolving global landscape in order to ameliorate the work environment.

The management of the organisations should always ensure communication is effective. Effective communication fosters an environment in which employees are empowered to exercise greater autonomy and see a sense of agency in directing their professional trajectories, hence facilitating heightened levels of job ownership. This actively identifies and tackles issues that contribute to quiet quitting within the workplace, while collaboratively engaging with employees to explore and implement strategies aimed at improving satisfaction. Furthermore, it is crucial for workers to engage in meaningful discussions regarding the establishment of worker-controlled unions. An amicable and closely intertwined relationship between trade unions, management and government is needed, as the profound work conflicts undermine the potential benefits for workers. The waning presence of trade unions has emerged as a critical factor contributing to quiet quitting. A trade union that upholds its integrity should prioritise its interactions with management and government by adhering to mandates from workers. It should also consistently provide updates on the mandates and ensure that union leaders are held responsible for their actions on behalf of union members.

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Digital technology and economic development: The case of the regional economy of Gauteng province, South Africa

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ABSTRACT

New technology and access to the internet has become a basic need in nearly all households across the world. Furthermore, the COVID-19 pandemic has heightened the necessity of having access to technology as it continues to innovate and change the economic and social landscape. Having access to mobile technology has been identified as a key component in not only improving the lives of people but also aiding in the fight against poverty in especially developing countries. However, as poverty is worsened by people's limited access to healthcare, education, market access and general isolation, not having access to mobile technology is only likely to worsen their exclusion from economic activity. As the multidimensionality of poverty is extensively researched, access to internet and mobile technology as a basic human need requires new ways of exploring and understanding this economic deprivation. Hence this study aims to investigate the relationship between poverty, access to mobile technology, unemployment and inequality using a quantitative research approach. The study region is the Gauteng province in South Africa. As research on this topic is limited, especially in developing countries, the findings of this study are unique and important in providing a deeper understanding of the complexity of poverty and how new technology can both create and limit economic development.

Keywords: local economic development, digital technology, poverty, mobile access, regional development

INTRODUCTION

The rapid development of new technology and innovative systems has taken centre stage in economies worldwide. The global COVID-19 pandemic has caused a major shift in the use of digital technologies, altering how people work, learn, communicate, and undertake daily activities (UN, 2023:3). García-Escribano (2020) writes that as the pandemic has led to a mass migration towards the use of digital technology, the importance thereof in promoting socioeconomic inclusion has also been highlighted. However, in saying this, it has also brought about negative effects such as environmental degradation, criminal acts, and malpractice. According to the UN (2021:1), COVID-19 has accentuated how unprepared developing countries are in adopting to a digital world.

Numerous service providers in for instance banking, health care, retail and housing have moved their operations towards a focus on online and internet in fulfilling consumer needs (Anrijs *et al.*, 2023:1). New technology and specifically mobile phones have enabled the delivery of services across numerous economic and physical barriers that would have normally restricted the reach of economic activity (Haider, 2018:3; Lyons *et al.*, 2020:2). The problem is that many of these services are part of the basic needs required by individuals in societies and thus people who are unable to use or access these technologies run the risk of being excluded (Schou & Pors, 2019:466). As poverty and inequality is driven by people excluded from society, it is important to understand the role of digital technology in ensuring an inclusive and sustainable economy. However, research empirically investigating mobile technology and its link with poverty, unemployment and inequality is particularly scarce. It is for this reason that this study aims to empirically examine the relationship between mobile technology, poverty, unemployment and inequality.

LITERATURE REVIEW

The digital economy, consisting of digital technology, is quite arguably one of the most significant drivers of economic innovation and growth, globally (Roessler, 2018:1). The UN (2023:11) writes that people's well-being depends on the availability of digital technology, but that the potential thereof can only be optimised when it is shared throughout the community. In addition, the use of digital technology has an important role to play in sustainability, as it forms part of Goal 9 of the Sustainable Development Goals (SDG's). Target 9.c as part of SDG 9 has the aim to "significantly increase

access to information and communications technology and strive to provide universal and affordable access to the internet..." (UN, 2021:17). Regarding technology and its importance in economies, one need only look at economies such as Hong Kong, China, Singapore and South Korea to see the significant role the adaptation of new technology has played in their developmental and production stages (Adeleye & Eboagu, 2019:32).

In this new age of technologically driven economies, Marler (2018:3498) states that the use of smartphones or mobile technology is more prevalent than that of computers. Aker and Mbiti (2010:207) write that mobile phones not only allow individuals to connect to each other, but also connect to services, markets and information. Adding to this, the use of mobile technology allows for the use of global positioning systems, banking, email, internet and networking to name but a few (Aker & Mbiti, 2010:210; Roessler, 2018:4). The range of economic benefits resulting from mobile technology include; increased access to information, improved markets, increased household consumption, improved health, more efficient labour allocation, increased productivity and improved education (Roessler, 2018:5; Lee *et al.* 2021:40). Across all spheres of the economy, mobile technology has significantly impacted societies, but perhaps the most significant change has been in the sectors of education, agriculture, health and finance. The use of mobile technology in education has enabled the sharing of information and reading material in an easily available and affordable manner (UNESCO, 2014:1). Moreover, Roessler (2018:22) writes that education has been seen to increase the demand for digital inclusion as it educates people regarding the benefits of new technology and enhances their capabilities in order to use these technologies. As many households have access to mobile technology, it is one of more effective ways of increasing literacy rates (Kerstein, 2015). This is because although it cannot teach people how to read, they do increase literacy retention rates. Kerstein (2015) uses an example of a program used in Uganda that aids parents in completing daily reading activities, where the program uses audio messaging to allow illiterate adults to still participate in improving their children's literacy.

Regarding mobile technology's impact on the agricultural industry, Aker and Mbiti (2010:223) writes that farmer's access to market information has been drastically improved and made more efficient. Farmers are now not required to travel extreme

distances to gain information and liaise with markets as they are now able to access price and general information quickly with the use of mobile technology (UN, 2021:9). According to the FAO (2017), mobile technology also allows farmers to immediately notify each other of any challenges such as diseases. Looking at how mobile technology has affected the health industry, Kerstein (2015) writes that fieldworkers are able to ascertain, with the use of mobile devices, what the best course of treatment is and whether certain conditions can be treated on hand or requires the patients to go to hospital. During the COVID-19 pandemic, various communications networks waived their fees to allow for free access to health information (UN, 2021:9). In addition, mobile technology is being used in some instances to remind people of taking their medication (Wargny *et al.*, 2018:144). The use of mobile technology has quickly become one of the main instruments used in conducting financial activities across the world. Roessler (2018:4) surmise that with the use of mobile technology individuals are now able to transfer, withdraw, deposit and pay for services and products. This is often times refereed to as mobile money. In numerous African countries mobile money has revolutionised financial services as it enables small businesses and consumers to transact more cost effectively, easier and safer (Robb, 2015). As a result of measures implemented to promote the use of digital payments during the COVID-19 pandemic, mobile money transactions in Rwanda increased by 85 per cent (UN, 2021:9). The use of mobile banking could also slowly integrate the informal economy into the formal economy and increase financial inclusion.

A study by Vu (2011) found that digital technology could be a strong predictor for economic growth. Similarly, research by Jorgenson and Vu (2021) established that digital technology is a contributor to economic growth in developed and developing countries. Examining 54 African countries, Adeleye and Eboagu (2019) found a positive and statistically significant relationship between digital technology and economic growth. In contrast, a study by Ejemeyowwi and Osabuohien (2020) found a statistically insignificant effect between mobile access and inclusive growth in West Africa. Even more noteworthy is that mobile technology could play a key role in combatting poverty (Kerstein, 2015). Research by Kelikume (2020) found that mobile access has a positive and significant effect on poverty reduction. The author also established a significant and positive relationship with the informal sector, and theory suggests that the informal sector plays a key role in minimising poverty and creating

employment opportunities. The significant and positive relationship between poverty and mobile access has also been established in studies by Waema and Miroro (2014) as well as Mbuyisa and Leonard (2017).

Despite the apparent positive effects of digital technology such as mobile access in promoting economic growth and development, it could in some instances be regarded as a double-edged sword. This is because digital technology and mobile access (or a lack thereof) can lead to social exclusion, increased inequality and poverty. Roessler (2018:15) warns that rural communities often have poor infrastructure which could limit their access to this technology. The author also writes that although mobile technology has greatly reduced operating costs, the cost of mobile technology and the internet varies greatly between regions, which could fuel digital inequality. In a similar way, a study by Pearce and Rice (2013) suggests the idea of a “device divide”, as marginalised groups are more likely to depend on mobile technology for internet access as they normally do not have access to computers. The author Marler (2018) writes that inequality could be increased as a result of mobile technology. This view is supported by the research of Donner *et al.* (2011) and Gonzales (2017). Another study points towards the potential challenge of mobile technology in high income countries, where structural inequalities might constrain marginalised groups, making mobile access difficult for these groups (Faith, 2018). García-Escribano (2020) states that marginalised groups in especially rural areas often have limited internet access, therefore inequality within regions might be increased. In addition to the likelihood of increased inequality within regions due to a lack of internet access, García-Escribano (2020) explains that inequality might also increase between regions, as low levels of internet access could lower productivity in developing countries.

Employment opportunities are another factor that could be influenced by access to mobile technology. Marler (2018:3503) writes that having access to mobile technology is beneficial in the findings of employment opportunities and in the initial phase of contacting potential employers. However, the challenge might come from applying for a job opportunity that requires an online resume or application, which might make it considerably difficult for individuals without access to mobile technology. As Donner *et al.* (2011:574) explain, individuals applying for work are in most instances nowadays required to submit an online application, communicate the acceptance, time of

interviews and follow ups. From reviewing these studies, it becomes apparent that the majority of studies researching digital technology and mobile technology as it relates to poverty and inequality has been from an accessibility and range of coverage point of view. Very few studies have explicitly investigated the potential relationship between mobile technology, poverty, inequality and unemployment. Even less studies have focussed on this relationship from a regional perspective. Understanding the links between these variables is imperative, seeing that the role of digital technology and the internet within economies are only intensifying. In a country such as South Africa with 30 per cent of its population living in extreme poverty (World Data Lab, 2023), an unemployment rate of 32.9 per cent (Trading Economics, 2023) and ranking a mere 69th out of 82 countries in terms of its access to technology (WEF, 2020), understanding how these variables are interrelated is imperative in pursuing sustainable and inclusive economic development. Furthermore, gaining a better understanding of how these variables are interconnected within regional economies could aid policymakers in designing and implementing policies that ensure inclusive and sustainable development.

METHODOLOGY

In order to achieve the main objective of this study, which is to investigate the relationship between poverty, access to mobile technology, unemployment and inequality, this study follows a quantitative research approach. The study region is the Gauteng province in South Africa, also known as the economic hub of the country. Data ranging from 1993 to 2022 were obtained from Quantec. After coding the data using Excel, Eviews were used to analyse the data. The variables used were poverty, inequality (measured by the Gini coefficient), unemployment and mobile technology (measured by mobile access). The tests included the use of unit roots for stationarity, correlation, pairwise Granger Causality and Ordinary Least Squares (OLS). The basic OLS equation model as defined by Wooldridge (2013:28) is:

$$\hat{y} = \hat{B}_0 + \hat{B}_1x_1 + \varepsilon$$

(1)

Where:

- $\hat{y}$ is the dependent variable
- $\hat{B}_0$ is the intercept

- $\hat{B}_1x_1, \dots, b_n$ are the coefficients of the independent variables $x_1, x_2, \dots, x_n$
- ε is the error term

RESULTS AND DISCUSSION

The following section presents the results from the quantitative analysis. The first step was to ensure that all variables were stationary and integrated in the same order $I(1)$. Unit root tests were used to establish this. The next step was to conduct a correlation analysis. The correlation analysis aids in explaining the relationship between variables. According to Hassan (2023) a correlation analysis determines the direction and strength of the relationship between variables.

Table 1: Correlation analysis

	Poverty	Gini	Mobile access	Unemployment
Poverty	1	-	-	-
Gini	0.3780	1	-	-
Mobile access	0.9861	0.4235	1	-
Unemployment	0.9991	0.3586	0.9892	1

Correlation coefficients ranges from a value of -1 to + 1, with -1 representing a perfect negative relationship and +1 signifies a perfect positive relationship and 0 would signal no relationship (Hassan, 2023). As can be seen from Table 1, all of the variables have a positive relationship. Most significantly, poverty and mobile access have a very strong positive relationship, as does poverty and unemployment. In addition, mobile access and unemployment also indicates a very strong and positive relationship.

Table 2: Granger Causality Test

Null Hypothesis:	F-Statistic	Prob.
GINI does not Granger Cause POVERTY	12.9556	0.0002*
POVERTY does not Granger Cause GINI	2.78369	0.0827
MOBILE_ACCESS does not Granger Cause POVERTY	12.8004	0.0002*
POVERTY does not Granger Cause MOBILE_ACCESS	2.95235	0.0722
UNEMPLOYMENT does not Granger Cause POVERTY	17.9636	2.E-05*
POVERTY does not Granger Cause UNEMPLOYMENT	10.1045	0.0007*
MOBILE_ACCESS does not Granger Cause GINI	2.72966	0.0864
GINI does not Granger Cause MOBILE_ACCESS	4.46987	0.0229*
UNEMPLOYMENT does not Granger Cause GINI	1.66027	0.2121
GINI does not Granger Cause UNEMPLOYMENT	20.0089	9.E-06*

UNEMPLOYMENT does not Granger Cause MOBILE_ACCESS	2.89262	0.0758
MOBILE_ACCESS does not Granger Cause UNEMPLOYMENT	7.97933	0.0023*

**Significant at the 5% level*

Table 2 presents the results from the pairwise Granger Causality test. Looking at the results, there is a unidirectional causality between inequality and poverty at the 5%. Suggesting that inequality causes poverty. There is also evidence of causality running from mobile access to poverty at a 5% significance level. In practice this means that a lack of mobile access could indeed lead to higher levels of poverty. Regarding poverty and unemployment, there is a bidirectional causality between the two variables, which means poverty causes unemployment and vice versa. Furthermore, there is causality at the 5% significance levels, running from inequality to mobile access, suggesting that inequality could lead to increased digital exclusion. Interestingly, there is no significant causality from unemployment to inequality, but there is causality from inequality to unemployment at the 5% significance levels. There is a unidirectional causality running from mobile access to unemployment, suggesting that having a lack of access to mobile technology could lead to higher unemployment.

Table 3: OLS regression results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Poverty	28009699	525197.7	53.33172	0.0000
GINI	-7046850.	1229819.	-5.729990	0.0000
MOBILE_ACCESS	-0.457833	0.114299	-4.005583	0.0005
UNEMPLOYMENT	3.643939	0.074078	49.19026	0.0000

Regarding the results from the OLS regression in Table 3, all of the variables recorded statistically significant results. Inequality (Gini) and Poverty have a significant, negative relationship, which is interesting considering it is generally assumed that as poverty increases it is likely that inequality will also increase. This result is therefore in contrast to other studies and further investigation is necessary. Looking at the impact of mobile technology, there is a negative but significant coefficient between mobile access and poverty. The coefficient value of -0.4578 suggest that if mobile access increases by 1 unit then poverty decreases by 0.4578 units. This result is supportive of that of Kelikume (2020) who analysed a panel data set of 42 African countries from

1995 to 2017 and found that an increase in mobile technology and internet access leads to a reduction in poverty. This is also in line with Marler (2018) who states that mobile technology may contribute to the upliftment of marginalised populations. A study by Roessler (2018) supports this finding as well, as the study explains that poor individuals are less likely to have access to their own mobile technology. Examining the association between digital exclusion and socio-economic conditions in a region in Belgium, Anrijs *et al.* (2023) found that marginalised groups were three to five times more at risk of being excluded than those not in the same conditions. Studies further supporting the evidence of mobile technology's potential in reducing poverty and advancing economic development is that of May and Diga (2015) and Mbuyisa and Leonard (2017). Unemployment and poverty recorded a significant and positive coefficient. The results show that in the study area, if unemployment increases by 1 unit, it will lead to a 3.6439 unit increase in poverty. This result is supported by research of Hoynes (2007) who found that in America, one percentage point increase in unemployment will lead to an increase of between 0.4 to 0.7 percentage points in poverty. Investigating the Niger state in Nigeria, Muhammad and David (2019) found the presence of a significant relationship between poverty and unemployment. The result is also in support of Adelowokan (2019) who found significant and positive links between poverty and unemployment at the conventional level.

CONCLUSION

As the pandemic has increased the global demand for digital technology and online services, this study aimed to investigate the relationship between poverty, access to mobile technology and unemployment. Results from the quantitative analysis show the integrated relationships between poverty, inequality, unemployment and the important role that mobile technology plays within the development of regional economies. Most notably was the significant impact of mobile technology on poverty. Results show that access to mobile technology could be used to decrease poverty, and that a lack thereof could have adverse effects. Mobile technology has brought new possibilities to regional economies and the significant role it occupies in economic development deserves more attention. The significant causality between mobile technology, poverty and unemployment highlights the need for improved digital access and communications infrastructure in the region, in an effort to combat exclusion and inequality. Local governments should therefore look at policies and initiatives that aim

at promoting infrastructure, digital inclusion and more affordable mobile and internet devices.

This study has its limitations, which paves the way for future studies. As the availability of data increases, more advanced and precise analysis on the topic is required in order to gain a better understanding of how mobile technology and the internet can be a driver and solution to poverty in South Africa.

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The perceived value of management accounting practices in South African small businesses

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ABSTRACT

Small enterprises in South Africa continue to confront challenges in effectively managing their financials, which may impede their long-term viability and expansion. Despite the implementation of various managerial strategies, cost management remains a persistent struggle for these enterprises. In order to address this issue, the adoption of management accounting practices (MAPs) presents potential solutions by providing techniques for efficient cost control and informed decision-making. Nevertheless, the perceived utility of MAPs among small enterprises in South Africa remains uncertain. Consequently, there exists a research imperative to examine the employed performance measures, the sources through which small enterprises owners acquire knowledge regarding MAPs, and their perceived usefulness of such practices. To fulfil this objective, a quantitative cross-sectional design was employed, utilising a questionnaire instrument and involving 191 respondents from a specific township in KwaZulu-Natal. The research framework is guided by contingency theory, and data analysis was conducted using the SPSS software. A significant proportion of respondents acknowledged the benefits of MAPs in making well-informed cost-related decisions. Notably, sales and cash flow management emerged as prominent metrics within the identified MAPs. These findings underscore the importance of MAPs for small enterprises.

Keywords: management accounting practices, South Africa, cost control

INTRODUCTION

Small businesses are considered crucial for driving economic progress and they play a significant role in promoting the growth of the South African economy. In South Africa, approximately 60% of the workforce is employed by small businesses. These businesses make a notable contribution to the country's Gross Domestic Product (GDP), with the Small Business Institute (SBI) reporting that they account for more than 50% of the GDP. Moreover, small businesses have played a vital role in empowering previously disadvantaged groups in the country, including women, youth, and historically marginalised communities (UNCTAD, 2021). However, the survival of small businesses in South Africa has been influenced by various economic factors. The COVID-19 pandemic, for instance, has had a significant impact on small businesses, resulting in closures, job losses, the need for digital transformation, and government intervention (Mishi *et al.*, 2023). In addition to the devastating effects of the COVID-19 pandemic, South Africa experienced a wave of looting incidents in the KwaZulu-Natal province and other parts of the Gauteng region. These incidents had a profound impact on the country, including the destruction of property and infrastructure, disruptions in operations and supply chains, job losses, loss of life, and a decline in investor confidence (Visser *et al.*, 2021). Furthermore, the conflicts between Ukraine and Russia led to trade restrictions and reduced investment flows, further exacerbating the challenges faced by South Africa (Ali *et al.*, 2022). However, even prior to the pandemic and conflicts, emerging businesses in South Africa were already facing difficulties in achieving growth beyond average levels, as highlighted in reports from the Treasury (2019).

The situation for small businesses in South Africa has not shown significant improvement over the past two decades, as reported by Business Tech (2018). Mutezo (2013) highlights that more than 75% of small businesses in the country collapse within four years of their establishment. These businesses also face stiff competition from both local and international large companies, as noted by Krueger (2022). Additionally, small businesses in South Africa confront challenges posed by climate change. The increased occurrence of droughts and floods caused by climate change disrupts the production and transportation of goods, leading to scarcity and price hikes (WPF, 2021). Ndebele (2022) and IT-News-Africa (2023) report that while Fourth Industrial Revolution (4IR) technologies offer benefits, their implementation

poses challenges for small businesses due to inadequate infrastructure, lack of skills, and the cost of adapting to newer technologies. Moreover, according to Paterson (2013), small businesses face challenges in neglecting their social responsibility to the communities in which they operate. Chimucheka and Mandipaka (2015) have identified a lack of business management skills as a significant challenge faced by small businesses while a study by Maduekwe (2015) revealed that small business owners often rely on unconventional decision-making methods, such as gut feelings and guesswork, due to a lack of supporting information. These findings underscore the importance of addressing skill gaps and providing relevant information resources to support effective decision-making in small businesses. A descriptive study conducted by Msomi and Olarewaju (2021) revealed that financial skills and access to finance have a significant impact on small businesses. Another quantitative study conducted in the Middle East by Ismail Albalushi and Naqshbandi (2022) found that factors such as a lack of managerial skills and education influence the survival of small businesses.

In addition to general studies on small business practices, specific research has been conducted on Management Accounting Practices (MAPs) in small businesses. Azudin and Mansor (2018) conducted a study in Malaysia titled "Management accounting practices of SMEs: the impact of organisational DNA, business potential, and operational technology." Their findings recommend the implementation of MAPs to enhance business operations and decision-making processes. Similarly, a study by Ahmad (2012) from Malaysia suggests that medium-sized businesses utilise strategic management accounting to a greater extent compared to simple systems, unlike small-sized businesses. In Italy, Alvarez *et al.* (2021) found that traditional MAPs remain prevalent in most medium-sized businesses. Furthermore, there is a positive relationship between MAPs and business performance, indicating that users of MAPs tend to outperform non-users. Prihastiwi and Sholihin (2018) conducted a study in Indonesia, highlighting the persistence of traditional MAPs. They also identified factors such as the education level of internal accounting staff, management support, and business size as significant determinants influencing the adoption of MAPs in small businesses.

Small businesses in South Africa play a crucial role in achieving the developmental objectives outlined in the African Indicative Strategic Development Plan (RISDP).

These objectives include promoting sustainable economic growth, enhancing regional integration and infrastructure, improving human and social development, strengthening governance and security, and enhancing environmental sustainability (Regional-strategic-framework, 2022). To fulfil these objectives, it is essential for Africa as a developing continent to have a robust network of small businesses that are financially stable, among other factors. While small businesses play a crucial role in the economy of Africa, there is a notable research gap concerning the value added by Management Accounting Practices (MAPs) specifically in small businesses located in the Ntuzuma Township. Ntuzuma is situated on the northern side of Durban in KwaZulu-Natal, under the eThekweni Municipality, which is one of the largest metropolitan municipalities in South Africa. Among the four "PINK" townships (Phoenix, Inanda, Ntuzuma, and KwaMashu), Ntuzuma is the youngest and was established by the Durban City in the 1970s. It has a population of over 125,000, with a majority facing unemployment and being severely affected by the recent looting incidents in KwaZulu-Natal. Additionally, the township has also experienced challenges due to floods and earthquakes that occurred between 2022 and 2023 (Ethekewini-Municipality, 2023). Thus, research exploring the role of MAPs in small businesses in Ntuzuma would provide valuable insights into the dynamics and potential improvements in this specific context (Ethekewini-Municipality, 2023).

Figure 1: Floods and earthquake in Durban



Source: New-Livesa (2023), (Majola, 2022)

Conducting a study to evaluate the value of MAPs in small businesses at Ntuzuma Township of South Africa holds significance both in theoretical and practical domains. This study aims to enhance operational efficiency, support effective decision-making, optimize resource allocation, ensure financial stability, promote regulatory compliance, and facilitate performance measurement and benchmarking within small businesses. Specifically, the study objectives are to explore the performance measures currently utilized by small business owners, the sources from which they acquire knowledge about MAPs, and the perceived usefulness of MAPs. The study only focused on the retail small businesses also known as tuck shops. By investigating these aspects, the study aims to provide valuable insights for improving the adoption and implementation of MAPs, ultimately contributing to the growth and success of small businesses in the Ntuzuma Township.

LITERATURE REVIEW

Small businesses in South Africa

According to the DSBD (2019), small businesses in the context of South Africa are defined as follows.

"Small enterprise" means a separate and distinct business entity, together with its branches or subsidiaries, if any, including cooperative enterprises, managed by one owner or more predominantly carried on in any sector or subsector of the economy mentioned in column 1 of the Schedule and classified as a micro, a small or a medium enterprise by satisfying the criteria mentioned in columns 3 and 4 of the Schedule".

According to DSBD (2019), small businesses in the context of South Africa are categorised into three size classes: medium, small, and micro. The focus of this study specifically pertains to small businesses in the retail sector. For the purpose of this study, the included businesses fall under the micro classification, employing between 0 to 10 employees and having an annual sales turnover of $\leq$ R7.5 million. Statistics-South-Africa (2018) reports that there are over 2 million small businesses in South Africa, making significant contributions to job creation (approximately 61%) and the country's GDP (approximately 57%). Dlamini (2022) emphasises the important role of small businesses in addressing various local issues and having a profound impact on the community. These findings underline the significance of small businesses not only in driving economic growth but also in addressing community needs and challenges.

Challenges experienced by small businesses in South Africa

Small businesses face a range of challenges, both internal and external, as highlighted by Mhlongo and Daya (2023). Internal challenges include a lack of managerial skills, lower levels of education and training, financial difficulties, inadequate accounting systems, inappropriate pricing techniques, limited innovation, insufficient funding for capital and investment, shortage of skilled labour, and lack of technical guidance (Mhlongo and Daya, 2023). On the other hand, external challenges faced by small businesses include limited access to technology, constrained expansion into foreign markets, rising interest rates and inflation, unfavourable business location, crime and unemployment, poor product demand, and competition from larger and more established companies (Erokhin *et al.*, 2019). Similarly, a study conducted by Olawale and Garwe (2010) revealed that the primary obstacle impacting the success of small businesses in South Africa was related to finance, which was predominantly an internal factor. Following finance, management was identified as another significant internal obstacle. External obstacles included economic factors, market conditions, and infrastructure challenges, respectively.

Usefulness of MAPs

MAPs can be categorised into two types based on their evolution and features: contemporary MAPs and traditional MAPs. For the purpose of this study, the focus is specifically on contemporary MAPs due to their modern classification and relevance in today's business environment. Hence, throughout this paper, the term "MAPs" refers to contemporary MAPs. As defined by Pollanen and Abdel-Maksoud (2010), MAPs are information tools that provide relevant information to stakeholders and businesses. They have a longer-term perspective compared to traditional MAPs, making them more suitable for the dynamic nature of today's business environment. Contemporary MAPs contribute to the achievement of entrepreneurial strategies and enhance overall business performance (Jarrar and Smith, 2014). They are essential instruments for driving development programs, managing operations, formulating strategies, facilitating organisational change, and serving as the primary management system in decision-making processes. According to Adu-Gyamfi and Chipwere (2020), MAPs offer both financial and non-financial data that assists businesses in thriving within a continuously evolving and innovative business environment. With the growing volume

and velocity of data distribution, the role of MAPs is increasingly being scrutinised. Management accountants are facing the challenge of responding effectively to potential threats and safeguarding the economic assets they generate (Neziraj and Shaqiri, 2018). Consequently, in the current context, MAPs have become more vital than ever, serving as a system that identifies, measures, evaluates, accumulates, analyses, prepares, and interprets data. They play a crucial role in aiding managers to make forward-looking decisions aimed at achieving business objectives (Drury, 2018).

MAP tools to measure business performance

MAPs employ a variety of tools and applications to measure and evaluate business performance across various operational stages, from input to output. These tools assess both financial and non-financial aspects of business activities. Financial activities measured by MAPs include business sales, production costs, expenses, asset utilization, and liabilities (Anil and KP, 2019). Khan and Shah (2011) describe performance evaluation as a valuable tool for determining the productivity and effectiveness of activities. They also define performance management as a comprehensive set of measures used to assess the productivity and effectiveness of activities. Furthermore, other researchers have expanded the concept of performance evaluation, emphasising its connection to achieving organizational or operational objectives and strategies (Godil *et al.*, 2019, El-Shishini, 2017). Authors (van Der Poll, 2022, Ochago *et al.*, 2023, Rüßmann *et al.*, 2015) emphasise that MAPs tools encompass a diverse range of approaches, encompassing both financial and non-financial aspects. Financial approaches include analysing sales growth, cash flows, operating income, return on investment, variance analysis, and net profit margin. On the other hand, non-financial approaches include assessing customers' complaints and satisfaction, employee turnover rate, number of returned products, hours of employees' training, employees' absenteeism rate, job satisfaction survey, response time to customers, and staff competency rate. These tools serve as valuable instruments for measuring and analysing various aspects of business performance and providing insights for decision-making processes.

Managers' knowledge of MAPs

Assessing the owners' understanding of MAPs can provide insights into their adoption of these tools, as business owners aim to avoid the failure of their businesses by utilizing effective practices. Pavlatos and Paggios (2009) conducted a study to investigate the level of adoption and benefits derived from both traditional and contemporary management accounting practices in the Greek hospitality industry. The study employed an empirical survey involving 85 hotel managers who possessed knowledge of management accounting practices. The findings revealed that many participants had limited familiarity with recently developed practices. In general, traditional management accounting techniques such as budgeting practices, profitability measures, and nonfinancial performance evaluation measures were more commonly adopted compared to recently developed tools. The study concluded that traditional MAPs continue to be widely utilised in the industry. Nuhu *et al.* (2016) conducted a study focusing on the adoption and success of MAPs in the public sector of Australia. The research highlighted the significance of knowledge in management accounting. The primary objective of the study was to assess the level of knowledge and adoption of MAPs in the public sector. The researchers surveyed a total of 740 management accountants in various organisations. The findings suggested that public sector organisations are more inclined to adopt MAPs to a greater extent when they increase the use of management control systems in a more interactive and diagnostic manner. However, there remains a gap in the existing literature regarding studies that specifically explore the sources of managers' knowledge about MAPs. This gap is significant because some managers claim to possess strong knowledge of MAPs despite not acquiring it through formal education.

METHODOLOGY

In this study, a survey questionnaire was utilised as the research strategy. The questionnaires were self-administered by the researcher. In instances where respondents required further clarification to complete the questionnaire, the researcher was available to provide explanations, and in some cases, the questionnaire was completed in the presence of the researcher. The target population for the study consisted of small businesses in the Ntuzuma Township that specialised in the retailing sector, specifically tuck shops. According to SEDA's report in 2022,

there were a total of 753 registered small businesses operating in the Ntuzuma Township. The choice of Ntuzuma Township as the study location was motivated by the lack of previous research conducted in this particular area. Probability sampling was employed to ensure that each respondent had an equal chance of being selected for the study, without any bias towards specific groups. The sample size for the study was determined using the Cochran method:

$$\text{Sample size} = Z^2 \times p \times q / E^2$$

$$\text{Sample size} = (1.96)^2 \times 0.5 \times 0.5 / (0.05)^2$$

$$\text{Sample size} = 384$$

A modified version of the Cochran formula, specifically designed for determining sample size in small populations, was utilized in this study:

$$\text{Sample size} = S / [1 + ((S - 1) / N) * Z^2]$$

Therefore:

$$\text{Sample size} = 384.16 / [1 + ((384.16 - 1) / 753) * (1.96)^2]$$

$$\text{Sample size} = 254$$

The pilot study consisted of 13 participants who were not included in the main study. Its purpose was to test the readability, comprehensibility, and time required to complete the questionnaire. Hard copies of the questionnaires were prepared and provided to the pilot participants. For the main study, a total of 254 questionnaires were distributed. Out of these, 191 questionnaires were successfully returned. However, 11 of them were incomplete and deemed unusable, resulting in their exclusion from the analysis. The remaining 180 completed questionnaires, representing a response rate of 71%, were coded and analysed for the study. Due to

the target of $n = 254$ not being reached the results although robust (i.e., the standard deviations for the responses are well below 1 on average) need to be viewed with caution.

FINDINGS

This section aims to analyse the results of the study, including the demographic data of the respondents, as well as the findings related to the study objectives. These objectives encompass the examination of performance measures utilised by small businesses, the sources from which they acquire knowledge about MAPs, and the perceived usefulness of MAPs.

Table 1: Biographic data

		Frequency	Percent
Valid	Male	81	45.0
	Female	99	55.0
	Total	180	100
Age group of the respondents			
Valid	25 and below	38	21.0
	26 to 35 years	52	28.9
	36 to 45 years	47	26.1
	46 years and above	43	23.9
	Total	180	100
Education levels of respondents			
Valid	Primary level	20	11.1
	Secondary level	40	22.2
	High school level	66	36.7
	Tertiary level	54	30.0
	Total	180	100
Business premise			
Valid	Home space	52	28.9
	Leased space	114	63.3
	Other	14	7.8
	Total	180	100

Table 1 presents the collected data from a total of 180 small businesses in Ntuzuma Township. The majority of respondents, 99 (55%), were female, while 81 (45%) were

male. This suggests that the majority of small business owners in the township are women, indicating their strong inclination towards entrepreneurship. Regarding age distribution, the largest number of respondents, 52 (28.9%), fell within the 26-35 age range, followed by 47 (26.1%) respondents in the 36-45 age group. The smallest age group consisted of 38 (21%) respondents aged 25 and below. These findings imply that the small business managers in Ntuzuma Township are relatively young individuals who are leveraging their entrepreneurial skills to establish their own businesses. For this age group, the utilisation of management accounting practices may be crucial for building successful businesses.

In terms of education levels, a majority of respondents, 66 (36.7%), had completed high school as their highest level of education, while 53 (29.4%) respondents had tertiary education. These findings indicate that small business owners in Ntuzuma Township possess a solid educational foundation, particularly at the high school level, which provides them with a good basis for starting and managing small businesses. Regarding business locations, the majority of respondents, 114 (63.3%), operated their businesses in leased spaces, while 52 (28%) had businesses located in their own homes. Only 14 (7.8%) respondents reported using other types of spaces for their businesses. This suggests that most small business owners in Ntuzuma Township do not own the properties in which their businesses operate, indicating a reliance on leased spaces for conducting their business activities.

Table 2: Performance measures of MAPs used

Code	Statement	1	2	5	Mode	Mean	SD
		N	R	A			
	Financial measures						
BD26	Sales growth	0.6	36,1	63.3	4	3.7	0.8
BD27	Cash flows	1.7	38,9	59.0	4	3.6	0.9
BD28	Operating income	8.9	49,5	41,7	3	3.2	1.1
BD29	Return on investment	40.0	53,9	6,1	1	1.9	1.0
BD30	Variance analysis	45.0	47,3	7,8	1	1.8	1.0
BD31	Net profit margin	41.1	52,8	6,1	1	1.9	1.0
	Non- financial measures						
BD32	Customer care service	1.1	18,3	80,6	5	4.2	0.9
BD33	Employee turnover	24.4	64,4	11,1	2	2.2	1.0
BD34	Number of returned products	11.1	26,1	62,8	5	3.6	1.3

BD35	Hours of employees' training	27.2	59,4	13,4	2	2.2	1.1
BD36	Employees' absenteeism	36.1	55,5	8,4	2	2.0	1.0
BD37	Job satisfaction survey	31.1	51,6	17,2	2	2.3	1.2
BD38	Time management	6.1	28,9	65	4	3.7	1.1
BD39	Staff competency	27.8	56,1	16,1	2	2.3	1.2

N=Never

R=Rarely

A=Always

As depicted in Table 2, less than 70% of small businesses in Ntuzuma Township regularly employ both financial and non-financial measures. Among the non-financial measures, customer care service was the most commonly utilised, with a utilisation rate of 80.6%, a mode of 5, a mean of 4.2, and a standard deviation (SD) of 0.9. Time management was utilised by 65% of businesses, with a mode of 4, a mean of 3.7, and an SD of 1.1. Regarding financial measures, sales growth had a utilisation rate of 63.3%, a mode of 4, a mean of 3.7, and an SD of 0.8. Cash flows were utilised by 59.4% of businesses, with a mode of 4, a mean of 3.6, and an SD of 0.9. Operating income had a utilisation rate of 41.7%, a mode of 3, a mean of 3.2, and a higher SD of 11. Other measures such as return on investment, variance analysis, net profit margin, employee turnover rate, and the number of returned products had lower utilisation rates.

In summary, the results indicate that the majority of small businesses in Ntuzuma Township have limited exposure to MAPs. Additionally, the low utilisation rate of the employee turnover strategy at 64.4% suggests that these businesses struggle with staff retention and fail to invest in human capital.

Table 3: Sources of understanding MAPs

Code	Statement	Number
CA52	School background of management accounting	119
CA53	Attending training programs (workshops) for management	26
C154	Company conducts management programs	32
CA55	Came with previous working experience	156
CA56	Online courses attended	28
CB57	Not applicable	4

The findings indicate that the main sources of MAPs understanding for the respondents were primarily their work experience. Specifically, a majority of 156 respondents ranked previous work experience as their primary source of MAPs

understanding. This highlights the importance of practical knowledge gained through hands-on experience in the business environment. The second most cited source of MAPs understanding was a school background, with 119 respondents indicating this as their source of knowledge. This suggests that formal school education, such as business-related courses, played a significant role in equipping respondents with basic MAPs knowledge. Furthermore, 28 respondents reported acquiring MAPs knowledge through online short courses they had attended. This highlights the increasing popularity and accessibility of online learning platforms as a source of acquiring specialised knowledge and skills. Overall, the results indicate that the respondents' understanding of MAPs primarily stems from their work experience, followed by formal education and participation in online short courses.

Table 4: Perceived usefulness of MAPs

Code	Statement	D	DK	A	Mean	SD
		1	2	3		
D64	Improve decision-making	1.7	12.8	85.6	2.8	0.4
D65	Improve costs control	2.8	12.8	84.4	2.8	0.5
D66	Improve planning	2.2	11.7	86.1	2.8	0.4
D67	Assists in choosing the best investment opportunities	2.8	11.7	85.6	2.8	0.4
D68	Ensures sustainability	3.3	15.0	81.7	2.8	0.5
D69	Improve competitiveness	2.8	13.3	83.9	2.8	0.5
D70	Expands business growth	3.9	12.8	83.3	2.8	0.5
D71	Improves business performance	3.3	15.0	81.7	2.8	0.5
D72	Motivate employees	5.6	12.2	82.2	2.8	0.5
D73	Improves communication	3.3	15.0	81.7	2.8	0.5
D74	Increase profitability	2.8	11.7	85.6	2.8	0.4
D75	Improves business management	2.8	9.4	87.8	2.9	0.4
D76	Serves as problem identifier	2.8	13.9	83.3	2.8	0.5
D77	Improves internal financial reporting	2.8	12.2	85.0	2.8	0.5
D78	Alleviate business processes	1.7	10.0	88.3	2.9	0.4
D79	Assist in business strategy development	2.2	11.1	86.7	2.8	0.4

D-1 =Disagree DK-2 =Don't know A-3 =Agree

The respondents were asked to express their perceptions regarding the usefulness of MAPs. The results revealed a high level of agreement, with over 80% of respondents agreeing on the usefulness of MAPs across all statements. This indicates that the respondents recognise the significance and benefits of employing MAPs to enhance various aspects of their business operations. The perceived usefulness of MAPs encompasses several areas, including decision-making, cost control, planning, investment selection, sustainability, competitiveness, business growth, performance improvement, employee motivation, communication, profitability, business management, problem identification, internal financial reporting, business processes, and business strategy development. The high level of agreement among respondents regarding the usefulness of MAPs suggests that small businesses in Ntuzuma Township find these practices valuable in supporting their business operations. These findings align with previous research, literature, and government sources that stress the importance of MAPs in preventing business failures. They are in line with the views presented by Drury (2018) and other scholars, who emphasise the crucial role of MAPs in achieving business success and sustainability.

DISCUSSION OF FINDINGS

The discussion of these findings highlights key observations and implications for small business owners, policymakers, and researchers. Firstly, the demographic characteristics of the respondents reveal interesting patterns. The majority of small business owners in Ntuzuma Township are female, indicating a strong presence of women in the entrepreneurial landscape. This aligns with global trends where women are increasingly taking on entrepreneurial roles. The relatively young age distribution of respondents suggests that young individuals are actively leveraging their entrepreneurial skills to start their own businesses. This highlights the importance of supporting and nurturing young entrepreneurs in the township. In terms of education, a significant portion of small business owners have completed high school as their highest level of education. This indicates that a solid educational foundation, even at the high school level, plays a crucial role in facilitating entrepreneurship and small business development. However, it also suggests the need for targeted training and educational programs to enhance the business skills and knowledge of small business owners, particularly in the realm of management accounting practices. The utilisation of performance measures in small businesses reveals interesting trends. While non-

financial measures such as customer care service and time management are widely utilised, financial measures such as operating income and return on investment show lower rates of utilisation. This suggests a need for small business owners to enhance their understanding and application of financial performance measures, which can provide valuable insights into the financial health and profitability of their businesses. The sources of MAPs understanding for small business owners in Ntuzuma Township predominantly stem from work experience and school backgrounds. This highlights the importance of practical knowledge gained through hands-on experience and formal education in shaping their understanding of MAPs. The reported utilisation of online short courses also indicates the increasing popularity of online learning platforms as a source of acquiring specialised knowledge and skills. Policymakers and educational institutions can leverage these findings to develop targeted training programs and resources that enhance the understanding and adoption of MAPs among small business owners. Moreover, the respondents' perceptions on the usefulness of MAPs reflect a high level of agreement. The reported usefulness of MAPs in various aspects of business operations, such as decision-making, cost control, and business strategy development, aligns with the existing literature and emphasises the value of MAPs in improving business performance and sustainability.

CONCLUSIONS AND RECOMMENDATIONS

In conclusion, this study has shed light on the utilisation and perceived usefulness of MAPs in small businesses in Ntuzuma Township. The findings highlight the importance of MAPs in enhancing business performance. Based on the findings, the following recommendations are made:

- **Enhance financial literacy**
Small business owners should seek opportunities to improve their understanding of financial performance measures and their application in business management. Training programs, workshops, and resources focused on financial literacy can equip them with the necessary skills to utilise financial measures effectively.
- **Foster entrepreneurial education**
Educational institutions and policymakers should emphasise entrepreneurial education, both at the high school and tertiary levels. Providing aspiring entrepreneurs with a strong educational foundation in business management,

including management accounting practices, will empower them to make informed decisions and effectively manage their businesses.

- **Support access to technology**

Efforts should be made to bridge the digital divide and improve access to technology for small businesses in Ntuzuma Township. This will enable them to leverage digital tools and systems that facilitate the implementation of MAPs and enhance their overall operational efficiency and competitiveness.

- **Facilitate collaboration and knowledge exchange**

Creating platforms for small business owners to network, share experiences, and exchange knowledge on MAPs can be valuable. This can be achieved through local business associations, mentorship programs, or networking events that promote collaboration and peer learning.

- **Government support**

Policymakers should provide targeted support for small businesses in Ntuzuma Township, including financial assistance, capacity-building programs, and policy initiatives that promote the adoption of MAPs. This will create an enabling environment for small businesses to thrive and contribute to the economic development of the township.

Future research should delve deeper into the specific challenges and barriers faced by small businesses in Ntuzuma Township in adopting and utilising MAPs. Exploring the potential solutions and best practices from other contexts can inform the development of tailored strategies and interventions to support small businesses in Ntuzuma Township.

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