

**THE INFLUENCE OF FIRM SIZE, STAKEHOLDER
INVOLVEMENT, AND INTERNAL ENVIRONMENTAL
MANAGEMENT ON DECISION OF SMALL-MEDIUM
SIZED ACCOUNTING FIRMS TO ADOPT
COMPUTERISED ACCOUNTING SYSTEMS IN
KWAZULU-NATAL, SOUTH AFRICA**

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DECLARATION

I, Malusi Gabriel Biyela declare that this dissertation is a representation of my work both in conception and execution. This work has not been submitted in any form at another university or higher institution of higher learning. All information cited from published or unpublished works has been acknowledged.

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I hereby certify that I diligently edited the dissertation titled **The Influence of Firm Size, Stakeholder Involvement, and Internal Environmental Management on the Decision of Small Medium-Sized Accounting Firms to Adopt Computerized Accounting Systems in Kwazulu-Natal, South Africa**, submitted by Malusi Gabriel Biyela (9704135419081), a master's student at Durban University of Technology in South Africa.

Proofreading entailed thoroughly evaluating the thesis's content, emphasizing grammar, punctuation, syntax, vocabulary, and overall clarity of language. The document was updated to improve readability while preserving the original content.

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Malusi Gabriel Biyela

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ABSTRACT

Financial statements are an important tool for making informed decisions in a company. In the modern business world, many companies rely on information technology, such as computerised accounting systems, to streamline the preparation of these financial statements. Despite the numerous benefits these systems offer, some organisations still choose to prepare their financial statements manually, exposing themselves to risks such as errors, inefficiencies, a lack of scalability, and limited real-time visibility. These challenges can hinder effective financial management and decision-making processes. This study examines the factors influencing the decision of small and medium-sized accounting firms (SMAs) in KwaZulu-Natal, South Africa, to adopt computerised accounting systems. In particular, this study examines the influence of firm size, stakeholder involvement, and internal environmental management on these decisions. The study uses agency theory to explain the dynamics between the SMAs, who act as agents, and their clients, the principals, who rely on their services to prepare financial statements. Based on the questionnaire survey, the results show that all three factors—firm size, stakeholder involvement, and internal environmental management—significantly and positively influence the decision to adopt computerised accounting systems. Stakeholder involvement proves to be the most influential predictor. This study offers practical implications for SMAs and emphasise the crucial role of computerised accounting systems in improving communication and networking with stakeholders, including customers, bankers, and government agencies. The introduction of these systems ensures the fast and accurate production of financial information, thus meeting the needs of all stakeholders. Furthermore, this study contributes to the existing literature on the factors driving the adoption of computerised accounting systems, with particular focus on the context of KwaZulu-Natal, South Africa.

Keywords: Firm size, stakeholder involvement, internal environmental management, computerised accounting systems, small medium accounting firms.

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LIST OF ACRONYMS

CFA	Confirmatory Factor Analysis
COSO	Committee of Sponsoring Organisations of the Treadway Commission
DCC	Durban Chamber of Commerce
DUT	Durban University of Technology
EFA	Exploratory Factor Analysis
ERP	Enterprise Resource Planning
MYOB	Mind Your Own Business
PCA	Principal Components Analysis
PLS	Partial Least Squares
PLS-SEM	Partial Least Squares Structural Equation Modelling
SEM	Structural Equation Modelling
SMA	Small and Medium-sized Accounting Firms
SMME	Small, Medium, and Micro Enterprises
SOX	Sarbanes-Oxley Act
SPSS	Statistical Package for Social Sciences

CHAPTER ONE

INTRODUCTION

1.1 STUDY BACKGROUND

The rise of worldwide economic progress, marked by advancements in information technology, swift transformations in production methods, and intense customer and market rivalry, is altering the prerequisites for attaining profitable management, a sustainable competitive edge in the markets, and enhanced financial performance in the business organisation (Atkinson, Banker, Kaplan, & Young, 2001). With the expansion of company prospects and operations in a broader market, there is a need for improved accounting procedures to handle massive transactions and reduce accounting mistakes. The calibre of accounting information is, therefore, a key determinant of organisational success, presenting risks from both inside and outside the organisation. Nevertheless, global records document numerous instances of fraud. One example: In South Africa alone, the number of fraud incidents reported by the Southern African Fraud Prevention Service, increased by 600% in 2022 compared to 2018 (Modise, 2023).

In 2002, the United Kingdom adopted the Consolidated Code of Corporate Administration. In the same year, the United States also introduced the Sarbanes-Oxley Act (SOX) to regulate financial reporting among companies (Anaeli, 2018). Following the example of the United Kingdom and the United States, South Africa introduced the Public Entities Corporate Governance Bill (Wu, 2014). Such action is attributed to the existence of poor corporate governance practices among the companies in South Africa (Sibindi & Aren, 2015). This is also attributed to the realisation that accountability and transparency are the foundations of any organisation. The SMAs are not an exception to this.

SMAs around the world have similar characteristics. For example, Thottoli and Ahmed (2022) defined an SMA as a firm with a revenue of less than RM50 million and fewer than 200 full-time workers. In Malaysia, SMAs in the service and other sectors are classified as businesses having a revenue of less than RM20 million and fewer than 75 full-time workers (Siew, Rosli, & Yeow, 2020). The Companies Commission of

Malaysia has emphasised that an organisation qualifies for exclusion from computerised accounting if its turnover surpasses RM100,000, its assets fall below RM300,000, and the total number of employees does not exceed five (Thottoli & Ahmed, 2022). In South Africa, the National Small Business Act of 1996 establishes the definition of SMAs. This definition classifies enterprises according to many factors, such as the number of workers, yearly revenue, and total assets (Smit & Watkins, 2012).

To achieve effective governance within the SMAs, they must prioritize accountability and openness, since these factors are critical for the company's success. To assist them with this, they need to be familiar with the technologies available (Musarurwa, 2017). This is consistent with the SOX Act, which stated the importance of information and technology, such as computerised accounting systems, in the governance section. Computerised accounting systems are seen as a mandatory need for an organisation (Lakhe Shrestha & Wai, 2011). The elimination of legal obligations for computerised accounting systems has created new opportunities for small, medium and micro enterprises (SMMEs), sparking ongoing discussions both in favour of and against these standards, which continue to be highly contested (Aliamutu & Mkhize, 2024). Computerised accounting has been a compulsory requirement in all sectors of the economy for a considerable period (Alammari & Parameswara, 2021). Several countries are gradually easing restrictions on computerised accounting systems, giving SMAs the autonomy to decide whether to adopt such systems. According to Lutui and Ahokovi (2018), adopting computerised accounting systems can improve the security of financial transactions for shareholders who are not directly involved in daily operations.

Adoption computerised accounting systems may foster confidence and provide evidence that workers are acting in the company's best interests (Collis, 2012). The accuracy and reliability of financial transaction data can be improved and communicated to key stakeholders so that they can make informed economic decisions (Collis, Jarvis, & Skerratt, 2004). Computerised accounting systems provide the necessary security and strengthen the confidence of external users (Vilakazi, 2019). As a result, the need for accountability and reporting by SMAs can contribute to their organisational (Modise, 2016).

Computerised accounting uses computers and specialised systems programs to record transactions (Chude & Chude, 2022). This system effectively retains the sent information due to its database-orientated nature. Akesinro and Adetoso (2016) opined that the computerised accounting system serves as the fundamental structure for an organisation's data. Both influential decision-makers and accounting firms, particularly those that prioritise openness, rely on the data provided by the accounting company. According to Shil, Ali, and Paiker (2010), computerised accounting systems are critical for SMAs because of the intricate nature of modern share markets, which require efficient and rapid accounting data frameworks. Therefore, it is imperative for South Africa, as a developing nation, to embrace these criteria to enhance investor trust (Amanamah, Morrison, & Asiedu 2016). Foreign investors need a business environment that is favourable to them, characterised by a high degree of responsibility, openness, and proper business regulations (Itang, 2020).

1.2 PROBLEM STATEMENT

Computerised accounting is well recognised for its ability to assist SMAS in reducing the burden of generating statutory accounts and accelerating paperwork, which is sometimes a time-consuming process (Collis, 2012). Various computerised accounting systems include MYOB, QuickBooks, EPICOR, PASTEL, and SUN (Alfred, 2014). This computerised accounting system allows management to focus on the company's primary activities, freeing them from clerical and administrative duties (Sitharam & Hoque, 2016). The use of computerised accounting systems (Alfred, 2014) may lead to cost savings for SMAs because it eliminates the need to employ accountants to rectify financial documentation (Ishmaila & Ferreira, 2022). In addition, owner-managed enterprises may achieve higher efficiency when owners prioritise their company's performance and management.

A body of accounting literature has investigated the perceptions of SMMEs on the supervision of computerised accounting systems in South Africa. These surveys show that, although there is no official need, a clear majority of SMEs (69.6%) tend to continue using their computerised accounting systems (Motta, 2017). In their study, Mthimkhulu and Aziakpono (2015) discovered that 75% of SMMEs expressed a willingness to continue using computerised accounting systems due to their cost-saving

benefits. Despite the availability of computerised accounting systems, 35% of SMAs choose not to implement them.

In the United Kingdom, 32% of SMMEs still use computerised accounting systems. The importance of impartial evaluations conducted by a reliable person highlights the continued significance of computerised accounting, as it embodies the effectiveness of the process (Mthimkhulu & Aziakpono, 2015). Computerised accounting systems are necessary for monitoring management's financial activities and ensuring oversight of both assets and personnel (Jayabalan, Dorasamy, Raman, & Ching, 2009). Companies plan to set up a comprehensive monitoring system to control their operations as the volume of transactions grows with their expansion and the size of their workforce (Ishmaila & Fereirra, 2022). In an environment where there are no regulations, computerised accounting systems also increase trust and send a positive message to stakeholders.

1.3 STUDY OBJECTIVES

The main goal of this study is to investigate the factors that influence SMAs' decision to adopt computerised accounting systems in KwaZulu-Natal, South Africa. This study's specific aims are as follows:

1. To examine whether firm size significantly influences the decision of SMAs in KwaZulu-Natal, South Africa, to adopt computerised accounting systems.
2. To examine whether stakeholder involvement significantly influences the decision of SMAs in KwaZulu-Natal, South Africa to adopt computerised accounting systems.
3. To examine whether internal environmental management significantly influences the decision of SMAs in KwaZulu-Natal, South Africa, to adopt computerised accounting systems.

1.4 RESEARCH QUESTIONS

The following research questions arise from the research objectives of this study:

1. Does firm size influence the decision of SMAs in KwaZulu-Natal, South Africa to adopt of computerised accounting systems?
2. Does stakeholder involvement influence the decision of SMAs in KwaZulu-Natal, South Africa to adopt of computerised accounting systems?
3. Does internal environmental management influence the decision of SMAs in KwaZulu-Natal, South Africa to adopt of computerised accounting systems?

1.5 SCOPE OF STUDY

This study investigates the factors influencing SMAs in KwaZulu-Natal, South Africa, to use computerised accounting systems, since these systems have a substantial effect on business operations. This study selected SMAs based on their qualification for the computerised accounting exemption, which applies to both inactive and small businesses.

This study was conducted in the province of KwaZulu-Natal, located in South Africa. KwaZulu-Natal, also known as the Garden Province, is located on the eastern coast of South Africa and shares a border with the Indian Ocean. It is one of South Africa's constituent regions, specifically one of the nine provinces.

The research instrument used in this study was a questionnaire survey. The questionnaire survey was conducted with SMAs' representatives over three months.

1.6 RATIONALE OF STUDY

SMAs play a crucial role in fostering economic development through job creation. Consequently, there will be an increase in the number of individuals with expendable money, resulting in increased demand for goods and services. To tackle this problem,

it is essential to prioritise the promotion of SMOs in South Africa, as they make a significant contribution to the country's economic development. Nevertheless, it is critical to evaluate the computerised accounting systems used in SMAs and their impact on organisational success. Once the effect of SMAs in KwaZulu-Natal, South Africa, has been assessed, strategic suggestions can be provided to enhance growth and decrease the failure rate. This is crucial for fostering job opportunities and driving economic advancement in the nation.

Additionally, related parties' concerns about SMAs have led academic scholars to concentrate solely on specific computerised accounting systems rather than focusing their efforts on improving the computerised accounting practices of SMAs to increase their relevance. An effective approach to improving the adoption of computerised accounting systems entails identifying the factors that influence SMAs' decisions to use these systems. The findings of this study can assist SMAs in evaluating and selecting appropriate computerised accounting systems.

1.7 STUDY SIGNIFICANCE

This study emphasises the need to update computerised accounting systems to safeguard the organisational success of SMAs. An examination of the accounting literature reveals that most studies have concentrated on the regulation of computerised accounting systems, while many studies that have investigated the factors influencing SMAs' decision to adopt computerised accounting systems are sparse. The findings presented in this study may provide significant insights for SMAs when making decisions on the adoption of computerised accounting systems. Therefore, SMAs have the obvious capability to make the most beneficial decision by doing a comprehensive assessment of costs and advantages.

This study is also valuable for academics as it provides a thorough analysis of the factors influencing SMAs' decision to adopt computerised accounting systems. The three factors chosen in this study, namely firm size, stakeholder involvement, and internal environmental management, are examined, and hence, the findings can further contribute to the existing literature. In addition, the findings of this study can also

enhance the existing information base for future research and assist in updating their dedication to transferring knowledge to their students.

1.8 OPERATIONAL DEFINITIONS

Table 1.1 provides the operational definitions for three independent variables and one dependent variable used in this study.

Table 1.1: Operational Definitions of this Study

Variables	Definitions	References
Computer accounting systems	A computer system that precisely captures, processes, analyses, and generates financial information by integrating accounting principles, ideas, and information systems.	Ishmaila & Fereirra, (2022)
Firm size	The size of a company is measured using the total revenues and number of employees.	Aliamutu and Mkhize (2024c)
Stakeholder involvement	A stakeholder who is involved or participates in the company's affairs.	Itang (2020)
Internal environmental management	Management of internal environmental factors in SMAs.	Chude & Chude (2022)

1.9 ORGANISATION OF DISSERTATION

This dissertation has five chapters. Chapter One presents the study by offering a concise summary and context. Furthermore, this chapter presents the problem statement, research objectives, and research questions. In this chapter too, the study scope, study rationale, and significance of this study are provided.

Chapter Two examines relevant literature on SMAs' decision to adopt computerised accounting systems as a dependent variable. This chapter also reviews the literature on the independent variables: firm size, stakeholder involvement, and internal environmental management. This study also provides a review of agency theory as the relevant strategy for comprehending the goals of the variables. Subsequently, this study formulated the research hypotheses and conceptual framework.

Chapter Three explains the research methodology. This chapter starts with the research design. Then, this chapter explains the sample selection process. This chapter also includes an explanation of the research instrument utilised in the study, followed by the data collection process. The next step involved explaining the variable measurement and tools for data analysis.

Chapter Four deals with the study's results and discussions. It begins with an introduction, followed by details of the responses to the questionnaire. The chapter then deals with a descriptive analysis of the SMA profiles, and the variables involved. In this chapter too, results of normality test and Pearson correlation are presented. This chapter then proceeds to analyse the model measurement, scrutinising the data validity and reliability. The structural model examination includes hypothesis testing, measuring the magnitude of effects, and assessing predictive significance. This chapter concludes with an analysis of the outcomes.

Chapter Five closes the dissertation by explaining and discussing the findings. The concluding chapter also highlights the limits and recommendations for future research avenues.

1.10 CHAPTER SUMMARY

The study context was introduced in Chapter One, which was subsequently followed by the problem statement, research objectives, and research queries. This chapter also addressed the significance, purpose, and scope of this study.

CHAPTER TWO

LITERATURE REVIEW

2.1 INTRODUCTION

Chapter Two contains the literature review for this study. This chapter begins with Section 2.2, which provides an overview of computerised accounting and discusses the adoption of computerised accounting systems, which represents the dependent variable. This study assumes that the decision to adopt a computerised accounting system can be influenced by many factors. In this study, three factors were selected to become the independent variables. Section 2.3 provides an overview of the first independent variable, namely firm size. This is followed by Section 2.4, which gives an overview of stakeholder involvement, and Section 2.5, which gives an overview of internal environmental management. Section 2.6 then explains the theory used in this study, followed by the research framework and research hypotheses in Section 2.7. Section 2.8 concludes this chapter.

2.2 COMPUTERISED ACCOUNTING SYSTEMS

Computerised accounting has attracted the attention of academic scholars in recent decades due to the rapid development of computer technology and systems that have revolutionised accounting practices. This question has been the subject of substantial discussion in other industrialised countries, including the United Kingdom in 1985, before it became relevant in South Africa Aliamutu and Mkhize (2024b), highlighting the importance of computerised accounting for an organisation. Gelinas, Sutton, and Hunton (2005) define computerised accounting as the utilisation of computerised systems, such as accounting packages, to accurately record, organise, summarise, analyse, interpret, and communicate financial information regarding business transactions to both internal and external stakeholders. This system replaces traditional manual accounting processes with automated processes and provides several benefits in terms of effectiveness, precision, and ease of use.

In general, computerised accounting refers to the use of computers and accounting systems to document, store, and analysing financial transactions and information. It can also refer to situations where organisations have the opportunity or need to seek a competent and impartial expert assessment of their accounting practices, even if there is no legal requirement to do so (Aliamutu and Mkhize 2024g). According to Choe (2004), computerised accounting systems may provide many important management reports, such as variance analysis and budget analysis. The speed and quality of data processing and analysis have significantly increased, successfully meeting managers' needs for accurate and timely information that is suited for decision-making. Therefore, organisations that meet the necessary criteria for exemption from computerised accounting show a willingness to undergo computerised accounting for their financial statements (Aljarallah, 2020).

Computerised accounting systems are essential for managing shareholder relations, especially when looking to get funding (Aliamutu and Mkhize 2024a). Companies often want computerised accounting systems to maintain their connections with other users. Prior research suggests that financial statements generated by accounting systems provide significant guarantees and increase levels of confidence, especially when external customers are seeking the services of an accountant. Thottoli, Ahmed, & Thomas (2022) found that organisations opting for computerised accounting may get finance at much lower interest rates. According to Thottoli et al. (2022), bank authorities and potential investors see the accounting systems of financial statements to guarantee the organisation's financial performance. Furthermore, the implementation of computerised accounting systems can improve a company's capacity to secure funding and foster public trust (Al-Okaily, Al-Okaily, Shiyab, & Masadah, 2020).

A review of accounting literature revealed that laws or other official guidelines do not dictate an organisation's decision to adopt computerised accounting systems (Aliamutu and Mkhize 2024f). For example, an amendment to Canada's Business Corporation Act in 1994 allowed for the optional inclusion of computerised accounting systems for certain businesses (Belfo & Trigo, 2013). This scenario can also be seen in many countries such as Australia, New Zealand, and Singapore, which have implemented policies that eliminate the need for computerised accounting for businesses of all sizes (Khudir, 2016). Small businesses in the United States are not subject to any legal

requirements for accounting systems, except for publicly traded companies. Singapore has implemented the strict Australian method of accounting systems exemption, which relies on a qualifying level as a criterion for qualification (Teru & Hla, 2015). In Sweden, the government did not impose the adoption of computerised accounting systems on SMMEs since 2010. However, in South Africa, the government aligned itself with other industrialised nations in 2017 by introducing computerised accounting systems for private companies (Türegün, 2020).

The concept of the need for computerised accounting systems can be seen as the inherent value that arises when organisations express their desire to undergo accounting systems, even in the absence of regulatory oversight (Aliamutu and Mkhize 2024d). According to the study by Ștefănescu, Comanescu, Buhusi, and Bilcan (2019), a significant proportion of managers in small companies, namely 41%, are still in favour of computerised accounting of company finances. According to Ilić and Anđelić (2017), 69% of SMAs are willing to undergo computerised financial accounting, even if there are no legal obligations. The assumption that the majority of SMAs choose to continue to computerise their financial reporting is supported by Gelinas, Dull, and Wheeler (2018). Lin, Li, and Quo (2021) opined that SMA that adopt computerised accounting systems may see improvements in their ability to mitigate financial risk. Conducting computerised accounting contributes to the company's value by offering a decent level of confidence in its creditworthiness (Bhatt, 2021). It is akin to cultivating a positive reputation and enhancing the company's standing.

According to Gelinas et al. (2018), 71% of SMAs will continue to require accounting systems, regardless of whether they are no longer mandatory. This is because many boards believe that computerised accounting is essential for businesses and should continue to be mandatory for SMA (Aliamutu and Mkhize 2024c). Companies believe that computerised accounting system financial statements have more value and benefits for the company than unaudited financial statements (Rani, 2013). In Abad-Segura (2023), 82% of SMA agree that computerised accounting systems are beneficial. Computerised accounting systems serve as a control mechanism that provides confidence to external stakeholders and is consistent with management's attempts to improve internal control and record-keeping practices (Abad-Segura, 2023).

Furthermore, the use of computerised accounting systems helps reduce possible conflicts of interest that may occur between customers and contractors because of agency problems (Moid, 2018). Adoption of computerised accounting systems might enhance the reliability and protection of financial statements, thereby possibly improving the performance of SMMEs (Romney et al., 2012). Alfred (2014) found that implementing computerised accounting systems is the most efficient way to enhance investor understanding, minimise financial obstacles, and enhance organisational performance in resource and information management. According to Utama and Pratama (2021), most SMMEs choose computerised accounting over accounting systems due to concerns about the expensive, complex, and time-consuming nature of the latter. These SMMEs also see computerised accounting as offering limited advantages to their company.

According to the findings of Ou and Shuai (2014), the cost of accounting systems is not seen as a burdensome expenditure when contrasted to the significant advantages that surpass the expenses associated with conducting a financial analysis in computerised accounting. Generally, SMAs see computerised accounting as a valuable endeavour (Ismail, 2003). Sani and Chaharmahalie (2012) posited that companies may likely adopt computerised accounting from their current accounting systems if they receive other valuable services, such as tax and administrative help. As a result, Wickramasinghe, Pamarathna, Cooray, and Disanayake (2017) suggest that businesses will effectively control and reduce the allocation of personnel necessary for the accounting function.

A body of the accounting literature has also indicated that a firm may choose to adopt computerised accounting to meet users' expectations of financial statements (Moqbel, 2014). This is because they believe that various stakeholders have an impact on the necessity of statutory accounts for their businesses. Furthermore, Florentina and Madalina (2021) conducted a study examining the effect of internal control in facilitating decision-making processes and the impact of accounting system reporting on management's motivation to enhance internal control. Furthermore, it is worth noting that companies often request computerised accounting since it does not significantly vary from conducting thorough accounting systems (Lehenchuk, Chyzhevskaya, Meluchoova, & Zdyrko, 2022).

In sum, this study posits that computerised accounting systems are a necessity for all businesses, particularly SMA. However, since adopting computerised accounting systems is voluntary, it depends on the SMAs' decision whether they would want to adopt them. This study posits that three possible factors may influence the SMAs' decision to adopt computerised accounting systems: firm size, stakeholder involvement, and internal environment (Tsoraya, Asbari., & Novitasari, 2023).

2.3 FIRM SIZE AND COMPUTERISED ACCOUNTING SYSTEMS

Firm size is a crucial determinant of the need for computerised accounting. Firm size is often used as a significant and essential attribute of a company (Dang, Li, & Yang, 2018). There are several definitions of firm size. For example, Liu (2020) defined firm size as the extent or quantity of an organisation. Firm size can be evaluated by various measurements such as market share, total revenue, number of employees, and total assets (Mubonderi, 2015). If firm size is multidimensional, it is considered a proxy measure. Typically, researchers compute it by considering revenue, total assets, and the number of personnel (Lekhanya, 2014). This study assesses firm size by taking into account both total revenues and the number of employees.

Extensive accounting research has consistently shown that firm size as a significant factor influencing the adoption of computerised accounting systems (Hang et al., 2020). In their study, Alshirah et al. (2021) in their study found that turnover is an important factor role in determining whether small businesses in the UK are eligible for computerised accounting exemption. The cost-benefit analysis uses turnover as a surrogate to determine the viable costs that organisations should bear. Mustapha and Yaen (2013) have shown number of employees managing companies increases, there will be a corresponding increase for computerised accounting systems. It is crucial to note that both total revenue and the number of employees have a significant role in determining firm size, which in turn affects the adoption of computerised accounting systems among SMAs (Rawwash et al., 2020).

Companies choose to adopt computerised accounting systems for two distinct reasons. When a company increases in size, the frequency of its transactions also increases, leading to a higher occurrence of mistakes in its financial statements (Alshurafat et al., 2021). Companies may need accountants with specialised knowledge of SMAs, their

operations, and accounting systems (Hadid & Al-Sayed, 2021). Their contribution is crucial to the company's long-term sustainability. Consequently, it is necessary to examine and authenticate financial statements via an impartial external accountant (Ali & Anwar, 2021). The second reason is that increasing firm size makes it impossible for shareholders to supervise the full financial functioning of the organisation. Firms with more employees have more tiers of structure and more degrees of leadership, rendering the procedure more confusing and prone to a breakdown of authority (Al-Fatlawi, Al-Farttoosi, & Al-Magtome, 2021). As a result, demand for computerised accounting systems increases to combat loss of oversight and increase tracking functions (Lutfi et al., 2022). However, some studies found that regardless of firm size, firms view computerised accounting as a value addition and a sign of their viability and capacity to continue in the market (Yoon, Lim., & Park, 2020).

2.4 STAKEHOLDER INVOLVEMENT AND COMPUTERISED ACCOUNTING SYSTEMS

A stakeholder is an individual, group, or organisation that has an interest or concern in a project, company, or other undertaking (Miller, 2022). An organisation's actions, goals, and strategies can either influence or not influence stakeholders. Stakeholders often include individuals or entities who use financial accounts, including proprietors, executives, shareholders, lenders, financiers, suppliers, debtors, and tax authorities. (Weik, Eierle, & Ojala, 2018). They can have varying degrees of influence and interest, and managing stakeholder relationships is critical to an organisation's success (Ali & Haapasalo, 2023).

Stakeholders, when deemed necessary, have the right to be involved and participate in the company's affairs and request that management adopt computerised accounting systems (Daragmeh, Lentner, & Sagi, 2021). The purpose of adopting computerised accounting systems is to facilitate consolidation of financial reports to provide investors, owners, and creditors with information on firm performance and financial position (Jaradat et al., 2022). Financial statements provide essential data that enables customers to make well-informed economic decisions (Al-Delawi & Ramo, 2020). As

a result, seeking a professional evaluation of computerised accounting reports has the potential to enhance the precision and reliability of financial data (Jaradat et al., 2022).

Companies may choose computerised accounting systems to provide seamless communication with recipients of financial statements. The need for accounting systems financial statements emerges from both external and internal sources inside the company, as indicated by Al-Delawi and Ramo (2020). The need for computerised accounting systems will continue as both internal and external users of financial statements see the benefits and appreciate the reliability that such systems offer (Ezzaouia & Bulchand-Gidumal, 2020). For example: The financial statement generated by the computerised accounting systems is an essential document that allows a company to get credit facilities. The computerised accounting financial statements can provide a basis for making credit decisions (Gardi et al., 2021).

Stakeholders, such as banks, often advocate for computerised accounting systems due to two primary reasons. The primary reason is to reduce uncertainty over financial services. The second reason is to instill trust in loan applications. The bank relies on the accounting system financial statements as the most dependable source of information on the financial well-being of the firm and as a method of oversight (Choi, Chung, Seyha., & Young, 2020). In their study, Neger and Uddin (2020) put forth the proposition that using computerised accounting systems for financial accounts leads to more precise predictions of forthcoming cash flows. The company voluntarily adopts computerised accounting systems services to enhance the precision and reliability of accounting statistics. This recognised information reduces the amount of risk connected with information when shareholders assess the future cash flows of a company (Agyeman, 2020). Furthermore, it provides further value while conducting assessments.

In addition, computerised accounting systems' financial reporting is crucial for maintaining positive relationships with stakeholders (Lin, Wang., & Hung, 2020). The stakeholders have the right to request accounting system reports to verify if the company has paid the correct amount (Vuong et al., 2021). Therefore, the reliability of computerised accounting reporting would be improved. Sucipto, Yusuf, and Mulyati (2022) elucidated the significance of the company's connections with suppliers in

ensuring the security of supply. The companies must secure the availability of products and services necessary for their operations (Rahi, Khan., & AlGhizzawi, 2021).

For the suppliers, before approving loans and extending credit, they will solicit a financial report from the accounting systems to evaluate the company's credibility and ascertain whether its financial standing is sufficiently robust (Karim et al., 2020). Suppliers have the power to establish the length and conditions of credit arrangements. Companies that have majority ownership by external parties are more inclined to adopt computerised accounting systems to tackle agency problems attributed to the separation of ownership and control (Mombeuil, 2020). External parties exclude them from managerial decision-making and deny them the opportunity to participate in daily operations. Consequently, engaging an impartial expert to evaluate the company's information would enhance the degree of certainty and trust in the provided data (Ling et al., 2021). Computerised accounting systems play a vital role in enhancing communication between various stakeholders and the need for a skilled accountant in a business (Ngoc, Tien, & Hieu, 2022).

2.5 INTERNAL ENVIRONMENTAL MANAGEMENT AND COMPUTERISED ACCOUNTING SYSTEMS

An internal environment is an essential component of a business environment. It focuses on several elements of an organisation, including the value system and purpose, organisational and corporate structure, among others. The internal environment may influence the functioning of its workforce, or the core values upheld by the whole business. Therefore, internal environmental management is important to control the internal environment. Internal environmental management encompasses the strategies and systems used by a company to enhance record-keeping and maintenance, mitigate risk, and minimise fraud potential. An organisation establishes internal environmental management to facilitate the attainment of its aims and objectives, making it a vital component of business (Siew, Rosli, & Yeow, 2020). In this critical domain, organisations use internal environmental management to assist them in achieving their goals and objectives. Hence, companies need to develop, execute, and sustain proficient internal environmental management (Lutfi et al., 2022).

The Committee of Sponsoring Organisations of the Treadway Commission (COSO) emphasises the importance of internal environmental management. The purpose of ensuring strong and adequate internal environmental management is to assist organisations in achieving three primary objectives: ensuring accurate and dependable financial reporting, adhering to rules and regulations, and enhancing the efficacy and efficiency of business operations (COSO, 2019).

In SMMEs, the owners are responsible for setting the long-term direction of their organisation. However, as the organisation expands, the need for internal environmental management becomes increasingly apparent (Lutfi et al., 2022). This is due to increasing specialisation and the inability to fully keep track of all aspects of the business. Therefore, the organisation needs to implement effective internal environmental management (Alfartoosi & Jusoh, 2021). Internal environmental management composed of three basic elements. The first element is to establish control over the organisational environment by setting a tone at the top that emphasises transparency and ethical values (Hang et al., 2020). The second element is to conduct a risk assessment to evaluate the organisation's cash flow and level of risk exposure, including inherent, informational, reputational, and control risks (Harban, Ali, & Oudat, 2021). The third element consists of control operations that set the rules and procedures of a company, such as top-level assessment.

Internal environmental management tends to be deficient in small businesses such as SMAs, increasing the likelihood of management circumventing regulations (Ware, 2015). In SMAs, the absence of internal environmental management may result in the probability of a significant mistake happening, known as inherent risk, and the probability of an accounting control system detecting a significant error, known as control risk (Dandago & Rufai, 2014). The presence of a division between management and owners also results in unequal access to information, leading to a higher level of information risk (Al-Dalaien & Dalayeen, 2018). An independent evaluation of a company's financial accounts is necessary to guarantee successful functioning of the internal environment associated with the financial information reporting process (Amahalu, Abiahu., & Chinyere, 2017).

According to Oladjo, Yinus, and Aina-David (2020), computerised accounting is a managerial process that aims to decrease the likelihood of significant errors and risks, enhance the accuracy of financial reporting, and aid in managing the internal environment. Companies may save time to generate more revenue by seeking the help of skilled professionals like accountants, but they may also gain peace of mind and confidence in their ability to focus on their main business activities (Frank & Binaebi, 2019). Management acknowledges that internal environment management plays a critical role in decision-making, and accounting reporting encourages management to improve their internal environment (Agbaje, Busari, & Adeboye, 2014). As a result, companies could opt for computerised accounting systems to ensure the generation of accurate and reliable financial data. This displays the organisation's commitment to following established standards and showcases the business's alignment with past operations (Nwankwo & Agbo, 2021).

In sum, managers and stockholders rely on computerised accounting systems to make well-informed judgments. Additionally, the directors act as proxies for the investors to guarantee accountability. Consequently, the directors may deem it prudent to create a specialised role for overseeing internal environmental issues. Hence, the significance of internal environmental management plays a crucial role in driving directors to enhance internal environmental management, influencing the adoption of computerised accounting systems (Mueni & Atheru, 2019).

2.6 AGENCY THEORY

This study is grounded in agency theory. Agency theory pertains to a commercial agreement in which one or more persons known as the principal employ another individual known as the agent to act on their behalf (Jensen & Meckling, 1976). The statement presupposes that firm proprietors are investors whose primary aim is to optimise wealth, while managers are representatives who operate in the utmost interests of the proprietors. The notion highlights the agency conundrum that develops when ownership and control are separated, leading to information asymmetries where the agent holds more information than the principal. Conflicts of interest occur when principals and agents prioritise their self-interest and well-being (Mohan, 2018).

An effective approach to addressing and counteracting the agency hypothesis is to use computerised accounting. The monitoring role can become more challenging and intricate as the organisation expands in scale. The transaction volume of a larger organisation will exceed that of an SMA. Expanding the number of employees also increases the process's complexity and the risk of losing control. Computerised accounting serves as a monitoring mechanism (Gowri & Padma, 2018). Organisations may benefit from the unbiased evaluation of experts who have the knowledge and skills required to understand the transactional and accounting systems of SMAs (Panda & Leepsa, 2017). The foundation of this is established by the agreements made between the individuals in authority and the agents (Bendickson, Muldoon, Liguori., & Davis, 2016). The leader possesses the power to control the company's resources, while the principals keep a certain amount of distance from management choices and avoid becoming involved in daily operations (Ballwieser et al., 2012). The agency will face the challenge of information risk by restricting the ability of the principals to evaluate the financial data (Shogren, et al., 2015). The managers' extensive knowledge and skills may impede the owners' capacity to govern effectively, endangering their best interests (Mitnick, 2015).

The computerised accounting systems verify the individual's financial information and confirm that the agent acts on behalf of the principal's best interests (Bendickson et al., 2016). Therefore, it will depend on the assertion that accounting systems enhance the trust of stakeholders and shareholders by offering assurance. The imperative for accurate financial reporting has fostered shareholder responsibility, with members serving as representatives of the shareholders (Hill & Jones, 1992). Subsequently, the directors might deem it judicious to institute an independently operating internal environment management department. Consequently, agency theory can explain why management requests computerised accounting systems (Lan & Heracleous, 2010).

The level of financial reporting indicates the quality of the information used to prepare financial accounts. An organisation suffers inherent and control risk if it does not address the possibility of massive deception and if the principal has the essential authority to assess the information given by the agents (Miller & Sardais, 2011). Therefore, consistent with agency theory, the presence of financial statements in accounting means a reduction in inherent risk and control risk. Consequently, this leads

to lower agency costs and promotes logical economic decisions (Collis, 2010). The need for accounting systems for financial statements arises from information asymmetry (Miller & Sardais, 2011).

2.7 RESEARCH FRAMEWORK AND HYPOTHESES

2.7.1 Research Framework

This study investigates factors that influence SMAs' decisions to adopt computerised accounting systems in KwaZulu-Natal, South Africa. The study selects three factors that serve as the independent variables namely, firm size, stakeholder involvement, and internal environmental management. The dependent variable in this study is the SMAs' decision to adopt computerised accounting systems. This study relies on the relevant perspectives of agency theory. Figure 2.1 presents the study's research framework.

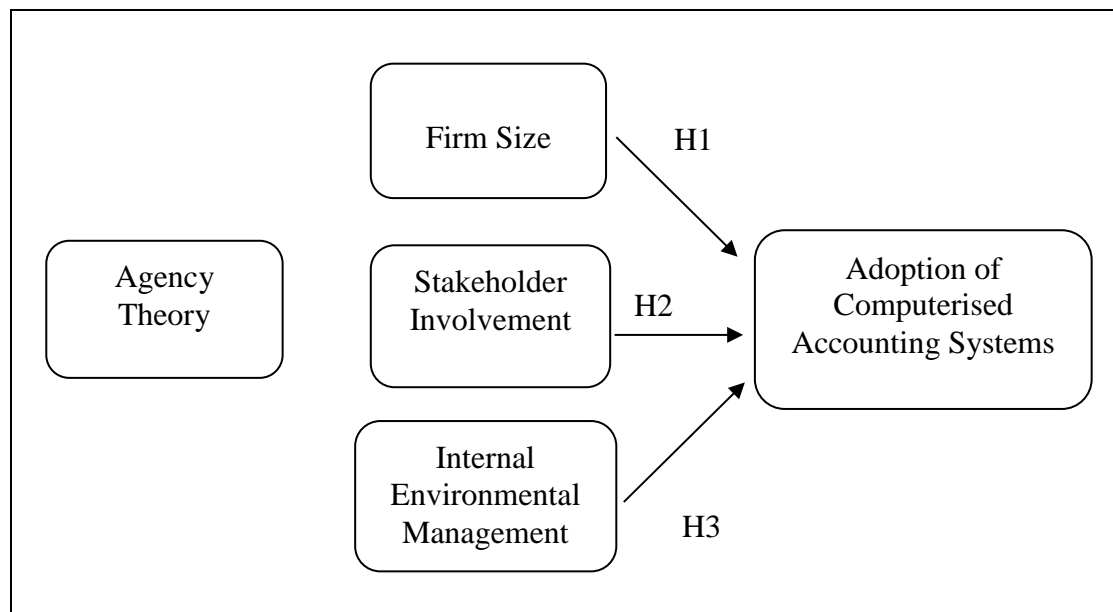


Figure 2.1: This Study's Research Framework

2.7.2. Research Hypotheses

The link between firm size and computerised accounting systems has been the subject of much debate and controversy. Previous studies have shown that firm size is the most important and predominant factor influencing the decision of SMEs to adopt

computerised accounting systems. Firm size is often measured by its total turnover and number of workers, which directly correlates with the level of need for computerised accounting systems. For example, Collis et al. (2004) discovered that firm size has a significant influence, which lends additional legitimacy to this assertion. They confirmed their hypothesis that there is a positive correlation between firm size and the adoption of computerised accounting systems. Moshi and Kiowi (2021) state that large companies with multiple branches, costly inventories, and a high turnover rate are seeing a significant need for computerised accounting systems.

A group of studies has examined the correlation between firm size and the adoption of computerised accounting systems. For example: Bulatovic and Treis (2016) found in Sweden that firm size, measured in terms of total turnover, significantly and positively influences on adoption of computerised accounting systems. However, Montero et al. (2020), found that accounting system financial statements are of significant value to companies that want to grow. Their findings suggest that firm size significantly but negatively influences the adoption of computerised accounting, as smaller companies are more likely to use these services. Their findings contradict the findings of Nworie, Anaike, and Onyeka (2023), who found that companies require accounting systems for their financial statements if their turnover exceeds specified thresholds; otherwise, they opt for exemption from computerised accounting. This shows that computerised accounting systems are a motivator for business sustainability, regardless of size, indicating that even with the exemption, smaller companies favour the practice.

Nworie and Okafor (2023), on the other hand, argue that firm size does not sufficiently explain the motivation to adopt computerised accounting. This is supported by the minimal negative connection and the lowest effect of firm size on the adoption of computerised accounting systems. In their study, Nworie, Kafor, and John-Akamelu (2022) investigated family-owned firms in Australia and specifically focused on the adoption of computerised accounting systems. Interestingly, their findings did not provide enough evidence to support their prediction that firm size would be associated with an inclination towards computerised accounting. Johnson and Adegbe (2021) argue that firm size alone may not accurately predict the demand for accounting systems. They suggest that considering directors' motivation to adopt computerised

accounting systems as a more thorough and suitable alternative is crucial to getting meaningful results. Therefore, the first research hypothesis is developed:

H1: Firm size has a significant influence on the decision of SMAs in KwaZulu-Natal, South Africa, to adopt the computerised accounting systems.

Another group of studies has shown that there is a link between stakeholder involvement and SMAs' decision to adopt a computerised accounting system (Chalu, 2019). The stakeholders acknowledge the benefits of computerised accounting systems and the confidence they instill. The stakeholders then demand that linkages be established and maintained with both internal and external financial reporting recipients (Itang, 2021). As a result, computerised accounting systems are critical for SMAs because they facilitate contact with stakeholders who are not directly involved in managerial tasks (Ware, 2015). Computerised accounting systems may help boost trust and give proof that the agent is operating in the best interests of the principal.

In the study by Ismail and Boon (2013) and Mustapha and Yaen (2013), they have shown that this outcome significantly affects the interaction between relevant stakeholders and the adoption of computerised accounting systems. Such findings align with the findings of Jayabalan et al. (2019), who discovered a notable and favourable correlation between the drive to utilise computerised accounting systems and the associated stakeholder connection. This relationship stems from the accounting system's ability to provide assurance and boost external parties' confidence. Ha and Nguyen (2020) discovered that Vietnamese directors are more inclined to choose accounting systems when they perceive that several stakeholders have a significant positive impact on them.

A group of studies has shown that computerised accounting offers a significant level of confidence to many parties involved, including owners, executives, investors, financiers, suppliers, unsecured creditors, and tax authorities (Oladipupo & Ajape, 2013). Oladipupo and Ajape (2013) conducted compelling research that establishes a robust and significant correlation between the adoption of computerised accounting systems and the expectations and preferences of the concerned parties. Their results contradict the findings of Chong and Nizam (2018), who showed no significant

association between computerised accounting and stakeholder status for suppliers and creditors in small enterprises in the United Kingdom and Denmark. Thus, the second research hypothesis is formulated:

H2: Stakeholder involvement has a significant influence on the decision of SMAs in KwaZulu-Natal, South Africa, to adopt the computerised accounting systems.

Another body of the accounting literature has examined the link between the internal environment and organisations' decision to adopt computerised accounting systems (Altamuro & Beatty, 2020). The internal environment of an organisation is critical because it guarantees the integrity of the financial reports it generates (Monteiro, Vale, Leite., & Lis, 2024). To effectively mitigate risk and address agency problems, the company's management establishes an internal framework of environmental management this highlights the effect of the internal environment management on the process of decision-making. For example, Deumes and Knechel (2008) found that there is a direct correlation between the inclination to adopt computerised accounting systems and the need for internal environment management. The capacity of the systems to mitigate risk may further enhance this connection through the implementation of computerised accounting (Varici, 2013).

According to Knechel and Willekens (2006), internal environmental management increases the demand for computerised accounting systems. When Colis et al. (2004) researched the link between internal environmental management and computerised accounting systems, they likewise came to the same conclusion. Their findings indicate a positive correlation between internal environmental management and computerised accounting systems. Furthermore, internal environmental management improves accounting's capacity to provide high-quality financial reporting with accurate and dependable data. Mustapha and Yaen (2013) discovered that control of accounting records and the reliability of financial statements had a substantial impact on management and other users' choices to embrace computerised accounting.

In contrast, Ndekwa (2015) demonstrates that the requirement to improve the credibility of financial statements for SMAs has no bearing on the need to adopt a computerised accounting system. His results show that there is no link between internal

environmental management and SMAs' choice to adopt computerised accounting systems, implying that the variance between this factor is not statistically significant. Similar results were reported by Abdulle, Zainol, and Mutalib (2019). As a result of the divergent outcomes from prior investigations, this study proposes the third research hypothesis.

H3: Internal environmental management has a significant influence on the decision of SMAs in KwaZulu-Natal, South Africa, to adopt the computerised accounting systems.

2.8 CHAPTER SUMMARY

Chapter Two presents a review of the literature review that examines the relationship between firm size, stakeholder involvement, and internal environmental management on the adoption of computerised accounting systems. This chapter has also discussed agency theory, which provides the relevant framework for explaining the reasons, outcomes, and importance of each of the variables. Then, this chapter provides the research framework by taking pertinent factors into account before developing the research hypotheses based on extensive discussions and analysis of existing literature.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 INTRODUCTION

Chapter Three discusses the technique used to experimentally examine the assumptions proposed in Chapter 2. Section 3.2 explains the research approach or quantitative study design. Section 3.3 present the population and the sample selection process. Section 3.4 explains the research instrument. Section 3.5 covers the variable measurements, while Section 3.6 describes the data-gathering procedure. Section 3.7 of this chapter presents the data analysis technique. Sections 3.8 explain the pre-test and pilot test data analysis, while 3.9 provides the results of the pilot study. This chapter then proceeded with the final study's data analysis which explains the measurement and structural models, in Sections 3.10 and 3.11, respectively. This chapter concludes with Section 3.12.

3.2 RESEARCH APPROACH

The positivist research paradigm is the most suitable approach for establishing accurate and reliable research (Rahi, 2017). This study paradigm posits that a systematic analysis can observe and elucidate authentic events. Park, Konge, and Artino (2010) define positivists as those who are interested in measurable statistics in a methodical analysis of a phenomenon and its connection. Positivists can make accurate predictions, provided they have established a clear cause-and-effect link between the occurrences.

In the positivist paradigm, researchers frequently employ a quantitative approach. A quantitative methodology may provide answers to research inquiries about the correlations between numerical variables, aiding in the comprehension, evaluation, and control of a phenomenon. The quantitative approach involves data gathering in statistical form and using statistical methods for analysis (Apuke, 2017). Questionnaire surveys, content analysis, and experiments are examples of quantitative approaches that test theories on the cause-and-effect relationship between events, presenting these ideas in a manner that elicits agreement or disagreement. In this study, the researcher gathers verifiable data, analyses them, and formulates a theory to explain how the independent

variable influences the dependent variable (Rehman & Alharthi 2016). This study employs a quantitative approach involving a cause-and-effect study, thus conforming to the positivist research paradigm.

This study relies on primary data, which refers to information that the researcher collected directly for the study (Ajayi 2017). This data is unbiased, which guarantees its consistency, accuracy, and impartiality (Kabir, 2016). As a result, this data remains unchanged and unbiased, which makes its validity better than secondary content previously published by another source. In this study, the researcher applies a widely used approach to collecting primary data, which involves conducting a questionnaire survey. The researcher communicates personally with respondents, either by telephone or by mail. Although this strategy requires a considerable amount of time, effort, and financial resources, it provides accurate, timely, and concise data (Kabir 2016). The questionnaires are self-administered, requiring respondents to complete the questions independently.

3.3 POPULATION AND SAMPLE

SMA officially registered with the Durban Chamber of Commerce makes up the population frame. Therefore, the organisation forms the unit of analysis, which consists of the SMAs located in KwaZulu-Natal, South Africa. This study chose SMAs because the qualification criteria for computerised accounting apply to SMA companies. According to the 2021-2022 SMA Annual Report, the Durban Chamber of Commerce has a total of more than 300 SMAs (Aliamutu and mkhize 2024d). The Chamber supports the SMAs through various initiatives, including business development services, access to markets, and policy advocacy. In this study, the management professionals from SMAs become the representatives of their SMAs.

According to Greiner (2015), research must have a sufficient sample size to provide more accurate and dependable findings. Because of this, this study uses Green's (1991) way of determining sample size, which entails using the following formula:

$$N \geq 50 + 8m \text{ where } m \text{ is the number of predictors (independent variables)}$$

With three independent variables, a sample size of at least 74 respondents is necessary. According to Delice (2010), sample sizes of more than 30 but less than 500 are appropriate for the bulk of research, making them ideal for this study. Respondents in this study are persons who have important responsibilities in the organisation and have a basic awareness of computerised accounting systems. These folks feel they can provide exact and reliable information. To attain the desired number of participants for this study, a total of 230 possible respondents were found.

3.4 RESEARCH INSTRUMENT

The questionnaire survey is used as a research instrument in this study. Saunders, Lewis, and Thornhill (2009) highlight the questionnaire survey as a prevalent approach for gathering data in business and management research. The questionnaire development is based on reviewing the literature. Specifically, this study adapts the questions from Mahadea and Piilay (2008), Ismail (2011), Mubonderi (2015), and Vilakazi (2019) with some modifications. There are four sections in this questionnaire.

In Section A, respondents are asked to complete their demographic profile. Osinowo (2018) asserts that the sample population of the study is mapped by collecting the demographic profile of the respondents and the SMAs. There are seven questions in this section with regard to the respondents, including gender, age, educational background, current job position, years of service, years of firm establishment, and type of firm. Respondents then have to answer two questions about the size of the SMAs.

Firm size was assessed using a common scale that includes two items, namely, total turnover and the number of employees. Respondents were asked to select options corresponding to certain categories or groupings that directly represent firm size. The highest values for turnover and number of employees are categorised as a large company (5), and the lowest values for turnover and number of employees are categorised as a small company (1).

Section B requests respondents to complete a series of questions related to stakeholder involvement. This section assesses the significance of preserving the firm's connection with its financial statement consumers, which has a substantial influence on the requirement for statutory accounts (Breen, Sciulli., & Calvert, 2004). Eleven statements

comprise the stakeholder measurement, such as *'stakeholders can have confidence in computerised accounting'*, *'suppliers and trade creditors might have trust in computerised accounting'*, and *'my company's image has an important idea for computerised accounting systems'*. The respondents are requested to complete this section using a 5-point Likert scale of '1' as strongly disagree to '5' as strongly agree.

Section C consists of statements on internal environmental management. In this section, the respondents are requested to complete a series of questions related to internal environmental management. The internal environmental management includes eight statements, such as *'computerised accounting has improved my firm's record-keeping and accounting system'*, *'computerised accounting has aided in the prevention of money laundering and fraud'*, and *'computerised accounting has given me more confidence in the financial statements' reported figures'*. The respondents are requested to complete this section using a 5-point Likert scale of '1' as strongly disagree to '5' as strongly agree.

The last section, Section D, requests the respondents to complete a series of questions on SMAs' decision to adopt computerised accounting systems. There are six questions in this section, such as *'my firm benefits greatly from computerised accounting systems'*, *'despite the fact that my company is legally required to use computerised accounting systems, I would continue to choose it'*, and *'the value generated by computerised accounting systems is more than the accountant fees paid'*. The respondents are requested to complete this section using a 5-point Likert scale of '1' as strongly disagree to '5' as strongly agree.

3.5 VARIABLE MEASUREMENTS

This study utilised four variables, namely, SMAs' decision to adopt computerised accounting systems, firm size, stakeholder involvement, and internal environmental management. Table 3.1 lists the numbers and sources of the items used for each construct.

Table 3.1: List of Variables

Variables		No. of Items	References
Dependent Variable	Adoption of Computerised Accounting Systems	6	Vilakazi (2019)
Independent Variables	Firm Size	2	Mubonderi (2015)
	Stakeholder Involvement	11	Ismail (2011)
	Internal Environmental Management	8	Mahadea and Piilay (2008)
Total Items		27	

Table 3.2 provides a list of the statements for SMAs' decision to adopt computerised accounting systems and their code. For SMAs' decision to adopt computerised accounting systems, the respondents were provided with statements with five options for them to choose from.

Table 3.2: Measurement of Adoption of Computerised Accounting Systems

Code	Statement
D1	My firm benefits greatly from computerised accounting.
D2	Despite the fact that my company is legally required to use computerised accounting systems, I would continue to choose it.
D3	Making computerised accounting systems is vital for a company like mine.
D4	My firm's computerised accounting exercise is worthwhile.
D5	The value generated by computerised accounting is more than the accountant fees paid.
D6	I would continue to adopt the computerised accounting since the cost of systems accounting is not prohibitively high for my company.

Firm size is measured based on the total revenue and number of employees in the SMAs. The participants were requested to select the options for specific categories or groupings depending on the range value from 1 as less than R250,000 to large as more than R1,000,001. For the employees, the respondents were requested to select the options from 1 as small firm to 5 as large firm.

Stakeholder involvement in this study is measured based on eight statements with five options for them to choose from. Table 3.3 provides a list of the statements for stakeholder involvement and their code.

Table 3.3: Measurement of Stakeholder Involvement

Code	Statements
B1	Computerised accounting may help to resolve the agency issue when the proprietors own the majority of the business.
B2	Stakeholders can have confidence in computerised accounting.
B3	Banks and lenders can have confidence in computerised accounting.

B4	Suppliers and trade creditors might have trust in computerised accounting.
B5	My company used computerised accounting systems due to requests from stakeholders.
B6	My company is being financed by a bank loan including personal loan, leasing, or hire buy, which necessitates the use of computerised accounting systems.
B7	Associated stakeholders would most likely base their decisions on my company's computerised accounting systems.
B8	My company's credit rating is improved by using computerised accounting systems.
B9	My company's ability to raise cash has maximum contribution to computerised accounting.
B10	My company's image has important idea to computerised accounting.
B11	People's perceptions of my organisation have improved as a result of computerised accounting.

The last construct is internal environmental management. Internal environmental management in this study is measured based on eight statements with five options for them to choose from. Table 3.4 provides a list of the statements for stakeholder involvement and their code.

Table 3.4: Measurement of Internal Environmental Management

Code	Statements
C1	My firm's internal environment factors have improved to computerised accounting.
C2	My firm's record-keeping and accounting has improved due to computerised accounting.
C3	Computerised accounting assists in the prevention of money laundering and fraud.
C4	Computerised accounting systems ensure that accounting records and processes are accurate.
C5	The quality of financial data is improved through computerised accounting.
C6	My company's financial information now has more credibility due to computerised accounting.
C7	Computerised accounting has given me more confidence in the financial statements' reported figures.
C8	Computerised accounting has given me more confidence in making business decisions.

3.6 DATA COLLECTION TECHNIQUE

Durban University of Technology provides a comprehensive set of ethical criteria before conducting a study. The researcher obtains ethical approval from both Faculty of Accounting and Informatics and Durban University of Technology. The collected data for the research is stored in a protected and confidential manner. The study was conducted with accuracy and thoroughness (Quinlan, 2011).

Once the sample need was determined, the questionnaire was circulated to the SMAs in KwaZulu-Natal, South Africa. The SMAs were acquired from the directory and reached out to via email and WhatsApp. They were formally invited to participate in the questionnaire survey and provided with a link to access a self-administered online questionnaire tool called Google Form. Given that respondents are prone to having demanding schedules due to their daily obligations, the use of Google Forms enables them to react to inquiries at their convenience.

Google Form provides unrestricted access at any location and time, as long as there is internet connectivity. It is considered the optimal option due to its time-saving capabilities (Callegaro, 2013). The online questionnaire survey allows the researcher to adapt to technological advancements by transitioning from traditional paper-based methodologies to digital platforms (Peruchi, Pacheco, Todeschini, & Caten, 2022). Furthermore, the outcomes of the Internet survey are accessible for examination and may be promptly imported into other analytic applications for assessment. Out of the 230 survey questionnaires sent, 200 were returned and usable, resulting in a response rate of 87%.

3.7 DATA ANALYSIS TECHNIQUE

This study employs two distinct software tools for data analysis. First, SPSS for conducting the pilot study and SmartPLS for analysing data in the final phase of the study. Each software is chosen for its specific strengths and suitability for the respective phase of the research process. This dual-software approach allows for the efficient and effective execution of both preliminary (pilot study) and final research stages. SPSS is leveraged during the pilot study for its powerful descriptive and reliability tools, ensuring that the research instruments are sound. Secondly, SmartPLS is then employed in the final part of this study to rigorously test the hypothesised model, ensuring the robustness and validity of the results, especially when dealing with complicated models, non-normal data, and small sample sizes. This combined methodology ensures a thorough, reliable, and valid research process.

3.7.1 Pilot Test using SPSS

The pilot test is used to fine-tune the research instrument, check scale dependability, and confirm the viability of the research design before the full study begins. SPSS was selected for this phase because of its competence in early data analysis, making it a suitable tool for rapidly evaluating data during the pilot project. The researcher uses it to generate basic descriptive statistics (mean, median, and mode) and provide preliminary information about data distributions. This study used Cronbach's alpha, a measure of internal consistency, to assess the reliability of SPSS rating scales. Cronbach's alpha scores of 0.60 or above are considered satisfactory (Aliamutu and Mkhize 2024f). Exploratory factor analysis (EFA) assessed the validity of the measurement scales to determine the underlying component structure. This study assisted in identifying any items that might require revision or removal due to potential issues. Additionally, SPSS was utilised to check assumptions such as normality, skewness, and kurtosis, which are crucial in determining whether the data meets the requirements for parametric or non-parametric analysis.

3.7.2 Final Test using SmartPLS

The final study tests the suggested model, evaluates the links between the underlying components, and use SmartPLS to determine the overall measurement and structural model. SmartPLS is highly suitable for assessing intricate models that include several latent components and indicators. It is especially efficient when the model includes formative components or when the data does not match the stringent criteria of covariance-based SEM. Unlike classic SEM approaches, SmartPLS does not need regularly distributed data, making it more adaptable and resilient in handling actual data. Additionally, it is well-suited for research with smaller sample sizes, since it exhibits lower sensitivity to sample size limits in comparison to covariance-based SEM approaches. SmartPLS prioritises maximisation of the explained variation in the dependent variables, which makes it an effective tool for predictive research.

This study conducted a reliability test in SmartPLS using composite reliability and indicator reliability that serve as a foundation. However, the assessment of validity used the convergent validity and discriminant validity methods. Both reliability and validity

in the final part of this study were analysed with SmartPLS are discussed in more detail in the next sections.

3.7.3 Descriptive Analysis

Descriptive analysis is the primary technique used in statistical analysis to convert raw data into comprehensible, interpretable, and manipulable information for readers. The data is presented via percentage, mean, and standard deviation to illustrate the data's distribution. The researcher visualises the collected data using appropriate tools like graphs, tables, and charts. The questionnaire not only identifies the characteristics of the variable under study but also assesses the demographic profile of the respondents.

3.7.4 Normality Test

Assessing data normality is a crucial step in data analysis as it determines the statistical techniques to be used. A common approach to assessing normality is to analyse skewness and kurtosis, which provide information about the symmetry or peak values of the data distribution.

Skewness is a statistical measure that determines the degree of asymmetry in a distribution; 0 denotes a symmetrical distribution. Positive skewness shows that the distribution has a higher percentage of values on the right-hand side, while negative skewness suggests a higher proportion of values on the left. Kurtosis is a statistical measure of the proportion of "peak" or "tail" in a distribution. A value of three represents a Gaussian distribution. Scientific dispute surrounds the analysis of skewness and kurtosis values, as well as the criteria for establishing normalcy. According to researchers, a distribution is regarded as roughly normal if the skewness is -1 to 1 and the kurtosis is -3 to 3 (Muslim, Habidin, & Latif, 2020; Blanca et al., 2013).

3.7.5 Correlation Coefficient Analysis

The researcher performed correlation analysis in this study to determine the direction, amplitude, and statistical significance of the link between variables, also known as

bivariate associations. Schober and Schwarte (2018) determine correlation by examining the relationship between fluctuations in one measure and fluctuations in another. This study used Pearson's correlation coefficient to establish the existence of a relationship and evaluate its magnitude and direction. It evaluates the arrangement of answers across variables and calculates the level of correlation between two variables. The researcher used it to assess variable multicollinearity to ensure the consistency of the evaluation and the quality of the analysis.

Correlation coefficients ranging from +1 to -1 are strong indicators of a link between variables. A score of +1 indicates a positive correlation between variables. On the other hand, sign -1 signifies a negative correlation between variables, suggesting an increase in variable A would result in a corresponding decrease in variable B. However, when the coefficient drops to a value between +1 and -1, the correlation between variables decreases (Schober and Schwarte, 2018). Both variables become completely unrelated when their values reach zero. This suggests that there is no relationship or connection between the variables.

3.8 PRE-TEST AND PILOT TEST DATA ANALYSIS

3.8.1 Pre-Test

A pre-test is conducted to assess the clarity, relevance, and comprehensibility of the research instrument before it is used in a larger study, e.g., a pilot or full study in a final study. It helps to identify problems with the questions, instructions, or layout that could confuse respondents or lead to misinterpretation. Researchers often administer the pre-test to a small group of respondents who are comparable to the target demographic but are not part of the main study sample. These respondents provide feedback on the design, wording, and content of the instrument. Researchers often focus on whether the questions are clear, whether the instructions are easy to follow, and whether respondents understand the scales or answer options. Based on the pre-test, researchers revised the instrument to address any issues identified. The result of a pre-test is a more polished and refined research instrument that is better suited for the subsequent pilot study or main study.

In this study, a pre-test was conducted with three professionals from the SMA in Kwazulu-Natal, South Africa. The SMA Representatives are senior executives of the SMA. The respondents' input was crucial for the understanding of the constructs under investigation and the accuracy of the wording, especially the terminology used (Pallant, 2011). In addition, the pre-test revealed potential limitations and feedback from the pilot study improved the question. Overall, the three respondents indicated that the structures of the questionnaire were understandable and that they were able to complete the questionnaires within the given time frame. Several comments were made on the content and wording of the questions. Therefore, the research instrument for this study was modified and prepared for the pilot study.

3.8.2 Pilot Test

After the pre-test, a pilot study was conducted to test the feasibility of the research design, including methodology, sampling, data collection procedures, and analyses. It helps to identify potential problems in the research process and allows adjustments to be made before the final study. A pilot study involves a small, representative sample of the target population. The pilot test increases the possibility of eliminating deficiencies and potential errors in the measurement instrument, thus minimising the possibility of statistical errors in the final data (Sundram & Romli, 2023).

In contrast to the pre-test, a pilot study focuses on the entire research process, not just the instrument. Researchers assess the practicality of the study design, including the recruitment process, the effectiveness of the data collection methods, the time required to conduct the study, and any logistical issues (Amahalu et al., 2017). The data collected in the pilot study are used to conduct initial analyses, identify unexpected trends or problems, and refine the research hypotheses or analysis strategies. In other words, the pilot study helps researchers fine-tune the research design and approach before the final study is conducted.

This study was a preliminary investigation in which information was gathered from 10 respondents from SMA in KwaZulu-Natal, South Africa. The respondents need an average of 25 to 30 minutes to complete the survey. The data obtained from the pilot study was further examined using SPSS to evaluate many facets of the research

instrument and data quality, including its reliability and validity which was accomplished via Cronbach's alpha test and factor analysis. Ensuring the validity, reliability, and appropriateness of the research instrument is crucial for the final study. Factor analysis approaches may be broadly categorised into two types: EFA and Confirmatory Factor Analysis (CFA). To validate the measurement equipment, the research employed an exploratory factor analysis technique. To assess the data collected during the pilot test, EFA was performed using SPSS, and while CFA was performed using SmartPLS to assess the measurement model during data collection for the final study.

If the researcher encounters several results that indicate potential problems with the pilot study, he should take some remedial action before proceeding with the final study. It is important to carefully analyse the limitations and find appropriate remedies to increase the likelihood of obtaining successful results in the final study. Table 3.5 gives some examples of unsatisfactory results from a pilot study and corresponding remedial actions.

Table 3.5: Examples of unsatisfactory results from a pilot study and remedies.

Types of Unsatisfactory	Indications (Tests)	Remedies for Final Study
Low reliability	Low Cronbach's Alpha	Revise or remove related items.
Low Validity	Poor Factor Loadings	Modify or replace related items.
Inadequate Sampling Adequacy	Low KMO Value	Collect more data.
Statistical Issues	Data does not meet the assumptions	Use non-parametric tests or alternative modelling techniques in the SmartPLS software.

3.9 PILOT STUDY RESULTS

This study used IBM SPSS version 25 to conduct EFA for the variables of adoption of computerised accounting systems, firm size, stakeholder involvement, and internal environmental management (Bahkia et al., 2019; Shkeer & Awang, 2019). Conducting

EFA on pilot study data involves several systematic steps, including data preparation (checking for missing data and outliers and meeting the minimum numbers) and evaluating data suitability for EFA using Kaiser-Meyer-Olkin (KMO) and Bartlett's Test of Sphericity.

3.9.1 KMO and Bartlett's Test

KMO is used to assess sample adequacy; a KMO value greater than 0.5 is generally regarded as appropriate for EFA. Values close to 1.0 imply that factor analysis is likely to be beneficial, while values less than 0.50 indicate that factor analysis may be inappropriate. Bartlett's test, on the other hand, determines if the correlation matrix is significantly different from an identity matrix. Hair, Sarstedt, Hopkins, & Kuppelwieser (2014) found a significant result ($p < 0.05$) indicating the usefulness of factor analysis. Table 3.6 shows that the results of both the KMO and Bartlett's sphericity tests suggest that data-related computerised accounting system adoption, firm size, stakeholder participation, and internal environmental management are appropriate for EFA.

Table 3.6: KMO and Bartlett's Test for Exploratory Factor Analysis Suitability

Code	Variables	KMO (> 0.50)	Bartlett's Test of Sphericity
A	Firm size	0.500	< 0.001
B	Stakeholder involvement	0.495	< 0.001
C	Internal environmental management	0.690	< 0.001
D	Adoption of computerised accounting systems	0.501	< 0.001

3.9.2 Exploratory Factor Analysis (EFA)

Following the KMO and Bartlett's sphericity tests, the researcher used principal component analysis (PCA) and varimax rotation to conduct EFA. PCA is used as the initial stage in EFA to establish and identify the number of factors (components) to be kept before rotation is performed. It is a dimensionality reduction technique where the data is transformed into principal components based on its variance. A commonly used rule of thumb is that only those components whose eigenvalue is greater than 1 should be retained and that a cumulative variance of around 60% is often considered appropriate (Hair, Black, Babin, & Anderson, 2010).

Varimax rotation, which is applied after PCA, is an orthogonal rotation to keep the components uncorrelated. After Varimax rotation, each variable ideally loads strongly on one component and only minimally on others. This makes it easier to interpret which variables are associated with which components (Hair et al., 2014). A factor loading of 0.50 or more is often regarded as important and noteworthy. This threshold indicates that the variable is strongly associated with a particular component. Higher loadings are even more desirable, as they indicate a stronger relationship between variable and component.

3.9.2.1 EFA Results for Firm Size

As firm size is measured directly by sales and the number of employees, and these are not latent constructs but directly observed variables, it is not necessary to carry out an EFA. Furthermore, these two variables are usually considered ordinal data where firms are ranked based on their size, although the exact distances between the rankings are not necessarily equal. EFA is not necessary for this construct because the relationship between firm size and its elements or indicators (sales and number of employees) is straightforward and clearly defined. EFA primarily identifies the underlying structure of latent constructs, which are variables not directly observed but inferred from multiple indicators (Hair et al., 2010).

Furthermore, the number of variables used to measure firm size is limited to only two. EFA is most effective when used with a larger number of variables, as it can reduce dimensionality and reveal correlation patterns between variables (Field, 2013). With only two variables, EFA would not provide meaningful results as there is insufficient data to reveal any underlying structure or factors. Instead, these two variables can be analysed directly or combined into a composite index if a single measure of firm size is desired. Furthermore, the ordinal nature of the data further limits the applicability of EFA. Although EFA can be adapted to ordinal data using special techniques, it is traditionally more suitable for continuous data on interval or ratio scales (Fabrigar, Wegener, MacCallum, & Strahan, 1999). Since sales and the number of employees is ordinal data that are directly observed, descriptive statistical methods or simple composite scoring would be more suitable for analysing firm size.

3.9.2.2 EFA Results for Stakeholder Involvement

PCA with varimax rotation was performed for eleven items of the stakeholder involvement variable. As shown in Table 3.7, there are three components or dimensions that result from EFA, depending on whether the calculated eigenvalue is greater than 1.0. The eigenvalues ranged from 1.809 to 2.341. The total explained variance for dimension 1 is 29.268%, for dimension 2 it is 28.400%, and for dimension 3 it is 22.611%. The total explained variance for the estimation of this construct is 80.28%, exceeding the acceptable base of the total explained variance of 60% (Bahkia et al., 2019; Shkeer & Awang, 2019).

Table 3.7: Total Variance Explained for Stakeholder Involvement

Components	Initial Eigenvalues			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.697	33.715	33.715	2.341	29.268	29.268
2	1.951	24.385	58.100	2.272	28.400	57.669
3	1.774	22.179	80.280	1.809	22.611	80.280

Extraction Method: Principal Component Analysis.

Table 3.8 shows the three components of the EFA technique, along with their corresponding items. Keeping each item requires a factor loading greater than 0.5 (Bahkia et al., 2019; Shkeer & Awang, 2019). As can be seen from the table, three (B4, B6, and B7) out of eleven items for stakeholder involvement were deleted, while eight items with a factor loading greater than 0.5 were retained.

Table 3.8: Components and Items Retained for Stakeholder Involvement

Items	Component		
	1	2	3
B1		0.909	
B2		0.710	
B3		0.791	
B4			
B5	0.893		
B6			
B7			
B8			0.798
B9		0.547	
B10	0.824		
B11	0.565		

3.9.2.3 EFA Results for Internal Environmental Management

PCA with Varimax rotation was performed for eight items of internal environmental management. Table 3.9 shows that three components with eigenvalues larger than one, accounted for 78.138% of the total variance. Component 1 contributed to 28.770%, Component 2 to 27.505%, and Component 3 to 22.863% of cumulative variance.

Table 3.9: Total Variance Explained for Internal Environmental Management

Components	Initial Eigenvalues			Rotation Sums of Squared Loadings		
	Total	Variance %	Cumulative %	Total	Variance %	Cumulative %
1	2.923	36.533	36.533	2.222	27.770	27.770
2	1.797	22.468	59.001	2.200	27.505	55.274
3	1.531	19.137	78.138	1.829	22.863	78.138

Extraction Method: Principal Component Analysis.

Next, the researcher calculated the rotated component matrix. As shown in Table 3.10, eight things were put onto three components. Component 1 was loaded with three elements, Component 2 with two, and Component 3 with three. Items with a value of more than .50 were categorised as suitable for further analysis. No item was found to have a value below the general rule of thumb of .50 (Tabachnick & Fidell, 2013), so no item was excluded from the internal environmental management variable.

Table 3.10: Components and Items Retained for Internal Environmental Management

Items	Component		
	1	2	3
C1			0.749
C2		0.907	
C3			0.944
C4	0.861		
C5	0.513		
C6			0.555
C7	0.895		
C8		0.924	

3.9.2.4 EFA Results for Adoption of Computerised Accounting Systems

The researcher used PCA with Varimax rotation to assess six items of computerised accounting system adoption. Table 3.11 shows that two components with eigenvalues larger than one, accounted for 70.398% of the total variance. Component 1 contributed to 46.926% and Component 2 to 23.472% of the cumulative variance.

Table 3.11: Total Variance Explained for Adoption of Accounting Systems

Components	Initial Eigenvalues			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.373	47.456	47.456	2.346	46.926	46.926
2	1.147	22.942	70.398	1.174	23.472	70.398

Extraction Method: Principal Component Analysis.

Following the variance analysis, the rotated component matrix was created. As shown in Table 3.12, six items were loaded onto two factors as components. The first factor consisted of three items loaded as Component 1, while the second factor consisted of two items loaded as Component 2. Items with a loading value of more than .50 were classified as good and considered suitable for further analysis. Only one item (D4) was deleted for the adoption of accounting systems variables, as the factor loading was below .50, and five items were retained for further analysis.

Table 3.12: Components and Items Retained for Adoption of Accounting Systems

Items	Components	
	1	2
D1	0.641	
D2	0.631	
D3	0.948	
D4		
D5		0.927
D6		0.788

3.9.3 Exploratory Factor Analysis (EFA) Results

Table 3.13 summarises the EFA results and shows that 4 items were deleted due to low factor loadings. Originally, 27 items were subjected to EFA, but after the extraction process, the number of items was reduced to 23 for the final study. No EFA was conducted for firm size, as it is directly measured by two observable variables: sales

and the number of employees. As these are not latent constructs but directly observable variables, an EFA was not considered necessary. The limited number of variables and their ordinal nature further limited the applicability of EFA for this construct.

For the stakeholder involvement construct, an EFA with PCA and Varimax rotation was conducted for 11 items. The analysis revealed three dimensions with eigenvalues above 1, explaining a cumulative variance of 80.28%, which is above the generally accepted threshold of 60%. Three items were removed due to low factor loadings, while the remaining eight items, each with a loading greater than 0.5, were selected for further analysis. In the case of internal environmental management, the EFA was applied to eight items. The analysis revealed three components accounting for 78.138% of the total variance. All items had factor loadings above the acceptable threshold of 0.5, so no items had to be cancelled.

Finally, an EFA was conducted for the adoption of computerised accounting systems, which originally comprised six items. The analysis revealed two components that explained 70.398% of the total variance. A factor loading below 0.5 led to the removal of one item, while we preserved the other five for further analysis.

Table 3.13: Items Retention Results from Exploratory Factor Analysis (EFA)

Code	Variables	Cum Variance (%)	No of items before EFA in SPSS	No of items deleted after EFA	No of items used in final study
A	Firm Size	-	2	-	2
B	Stakeholder Involvement	80.28%	11	(3)	8
C	Internal Environmental Management	78.13%	8	-	8
D	Adoption of Computerised Accounting Systems	70.39%	6	(1)	5
	Total Items		27	(4)	23

3.9.4 Internal Reliability Analysis (Cronbach's Alpha)

Internal reliability pertains to the consistency of results produced by a collection of items or measures inside a test or scale. Following the completion of EFA using PCA and Varimax rotation, it is crucial to assess the internal consistency of the components

revealed during the investigation. This stage guarantees that the items categorised under each component consistently assess the same underlying concept. Cronbach's alpha is used to evaluate the degree of correlation among the items within each component discovered by the EFA. A high Cronbach's alpha signifies that the items consistently assess the same concept and validate the accuracy of the factors. A low Cronbach's alpha for a factor suggests that some things may not align well with others, indicating the need to improve or maybe remove such items. Cronbach's alpha coefficients over 0.6 are often deemed satisfactory; however, this assessment may be contingent upon the specific circumstances. Smaller levels suggest potential issues with the dependability of the element.

Table 3.14 displays the results of Cronbach's alpha for many structures after the EFA was done. Cronbach's alpha values for individual constructs differ, with some demonstrating good internal consistency (e.g., firm size at 0.801 and internal environmental management at 0.799) and others demonstrating moderate to acceptable consistency (e.g., stakeholder involvement at 0.606 and computerised accounting systems adoption at 0.690). The aggregate Cronbach's alpha for the 23 items is 0.859, indicating that they are very dependable. According to these results, the study's measuring scales seem to be reliable and suitable for further analysis.

Table 3.14: Cronbach Alpha for all Variables

Code	Variables	No of items after EFA	Cronbach's Alpha
A	Firm Size	2	0.801
B	Stakeholder Involvement	8	0.606
C	Internal Environmental Management	8	0.799
D	Adoption of Computerised Accounting Systems	5	0.690
	Total Items	23	0.859

3.10 FINAL STUDY DATA ANALYSIS – MEASUREMENT MODEL

In the final study, the researcher assessed the constructs' validity and reliability using a PLS-SEM-specific tool named SmartPLS before investigating the hypothesised associations. This is done to assess both the measurement and structural models. The measurement model research aims to determine how reliable, convergent, and discriminant the constructs are based on factor loadings, composite reliability, and average variance extracted (AVE).

After testing the measurement model's correctness, this study proceeded to analyse the structural model. The postulated relationships' strength and importance are determined by measuring path coefficients, R-squared values, and effect sizes (f-squared). Furthermore, the Q-squared statistic is used to evaluate the model's predictive validity, ensuring that it not only accurately characterises the data but also predicts it. SmartPLS facilitates a thorough and systematic exploration of research issues, allowing for a full understanding of the underlying dynamics of the phenomena being studied.

As mentioned earlier, a two-stage process was applied in this study to analyse and report the results of the PLS-SEM pathway (Henseler, Ringle, & Sinkovics, 2009). The two-step processes are:

- Analysis of the measurement model is explained in this section.
- Structural model analysis is discussed in the next section.

The measurement model (also known as the outer model) is the component of an SEM that specifies how latent constructs (also known as latent variables) are measured or operationalised by the observable variables. Constructs are often latent variables that cannot be directly observed. Instead, they are assessed using observable elements. The primary goal of the measurement model is to verify the constructs being investigated and to describe the links between the latent variables and the observed items (Mustafa, Mohamed, & Ubaidullah, 2020; Benitez, Henseler, Castillo, & Schuberth, 2020). Specifically, the measurement model serves many vital goals, all of which are critical to assuring the validity and dependability of the data before performing the structural model and hypothesis testing.

3.10.1 Validity Testing

Running the measurement model enables a researcher to test the items' validity, specifically convergent and discriminant validity. A greater validity value suggests that the research is more valid (Hair, Ringle, and Sarstedt, 2013).

3.10.1.1 Convergent Validity

Convergence validity is the process of verifying that the elements intended to measure the same concept are interconnected. This method is used to assess the degree of positive correlation between items that belong to the same construct. It does so by calculating the reliability and the AVE value of the indicators (Hair et al., 2013). It is normally referred to as the magnitude of the outside loading and is a well-recognised concept. Each indication is anticipated to possess an outer loading value greater than 0.70, as stated by Hair et al. (2013). A high outer loading value in the sample data indicates a significant association between the indicators of this study and the construct. The AVE value represents the average value for each latent variable in the reflective model. The anticipated outcome of this investigation is that the AVE value will be greater than 0.50, as suggested by Hair et al. (2013).

3.10.1.2 Discriminant Validity

Discriminant validity is the process of ensuring that notions meant to be different and separate from one another are, in fact, distinct and separate. Cross-loadings and the Fornell-Larcker criteria are two commonly used methodologies for assessing discriminant validity. Cross-loadings are often the first strategy used to test discriminant validity. In particular, the outer loading of an indicator should be greater than all of its cross-loadings in a given configuration. The Fornell-Larcker criteria provide an alternative way of assessing discriminant validity. This approach looks at the links between latent variables and the square root of AVE values. Hair et al. (2013) said that the anticipated AVE value should be bigger than the squared correlation with another construct. The HTMT is a technique for determining discriminant validity. HTMT quantifies the relationship between attributes and calculates the exact correlation between two terms. The HTMT value must be below 1.0 (Hair et al., 2013).

3.10.2 Reliability Testing

Running the measurement model allows a researcher to test the reliability of both individual indicators and the overall construct. Reliability testing assesses the consistency and stability of the constructs used in the model. The two main metrics used

for reliability testing are CR and Cronbach's alpha. High internal consistency means the items are well-suited to measure the latent construct.

3.10.2.1 Composite Reliability

Composite reliability is a measurement used to assess the consistency of internal dependability. According to Ghozali (2019), a study is considered to have high reliability if its composite reliability value is more than 0.70.

3.10.2.2 Cronbach's Alpha

Cronbach's alpha is a method for evaluating the reliability of a scale and is a cautious approach. It measures the consistency of the whole scale and is extensively used in research (Ghozali, 2019). For the study to be deemed highly reliable, Cronbach's alpha must exceed 0.60. It is further advised that the values fall between the range of 0.70 and 0.90, as stated by Hair, Risher, Sarstedt, and Ringle (2019).

3.10.3 Summary of Measurement and Thresholds in Measurement Model

Table 3.15 summarises the essential metrics for assessing validity and reliability in SEM with SmartPLS, highlighting the necessary metrics and their thresholds established by the researchers in the field. These measurements provide a robust framework for evaluating the measurement model and ensure that the constructs are valid and reliable. The main focus of the Measurement model analysis is to assess the validity and reliability of the constructs used in the study.

Table 3.15: Summary of Measurement and Thresholds in Measurement Model Analysis

Validity / Reliability	Measurement	Explanation	Metrics	Rule/Threshold	References
Validity	Convergent Validity	This assures that the indicators used to measure the same construct are connected.	Indicator loading each item	Loadings should be > 0.70.	Hair et al., (2013).
			AVE	Value should be > 0.50	Ghozali (2019).
	Discriminant Validity	This ensures that constructs that are supposed to be distinct are indeed distinct	Fornell-Larcker Criterion	The square root of AVE should exceed inter-construct correlations.	Hair, Ringle, and Sarstedt (2013).
			Cross-Loadings	Indicators should load highest on their respective constructs.	Benitez, Henseler, Castillo, & Schuberth (2020).
HTMT	Values should be < 0.90	(Mustafa, Mohamed, & Ubaidullah (2020)			
Reliability	Internal consistency reliability	This measures how consistently the indicators of a construct work together. High internal consistency means the indicators are well-suited to measure the latent construct.	Composite Reliability	Value should be > 0.60.	Kansilembo and Msomi (2024)
			Cronbach's Alpha	Values should be > 0.60.	Henseler, Ringle, & Sinkovics (2009).

3.11 FINAL STUDY DATA ANALYSIS – STRUCTURAL MODEL

There are four important metrics to consider when analysing the structural model. These are R-squared (explained variance), statistical significance of the structural path coefficients (hypothesis tests), effect size, and Q-squared (predictive relevance) (Hair et al., 2013).

3.11.1 R-squared (Explained Variance)

The R-squared, also referred to as the coefficient of determination (Hair et al., 2013), quantifies the proportion of a dependent variable's variability that the model's independent variables can account for. The R-squared value in PLS-SEM quantifies the extent to which the independent variables accurately forecast the dependent variable. The R-squared value varies between 0 and 1. A higher numerical value corresponds to a more precise prediction. Hair et al. (2019) categorize the R-squared values as substantial (0.75), moderate (0.50), or low (0.25).

3.11.2 Statistical Significance of Structural Path (Hypothesis Test)

The significance test in PLS-SEM is used to quantify the impact of independent factors on the dependent variables by evaluating the hypothesis using a bootstrapping technique. The researcher used a bootstrapping technique to assess the significance of the path coefficient (Hair et al., 2013) and to use t-values in a two-sided test. The crucial t-values at significance levels of 10%, 5%, and 1% are 1.65, 1.96, and 2.57, respectively (Hair et al., 2017). However, to carry out the bootstrapping technique, a minimum sample size of 5000 is necessary, or at the very least, a sample size equal to the number of valid observations. P-values are often used for conducting significance tests rather than t-values. P-values are used to assess the likelihood of rejecting the null hypothesis to infer a significant impact, regardless of its significance. Typically, researchers choose a significance threshold of 5, indicating that a p-value below 0.05 indicates a meaningful link (Hair et al., 2013).

3.11.3 f-squared (Effect Size)

The f-squared metric quantifies the magnitude of the influence in structural equation modelling. It is used to ascertain the impact of a certain independent variable on a dependent variable within a model. In PLS-SEM, the impact size (f-squared) quantifies the extent to which an exogenous

construct influences the R-squared value of an endogenous construct. Therefore, by analysing the change in R-squared values, we may evaluate if the omission of a certain independent variable affects the dependent variable (Hair et al., 2013). The predicted value of f-squared is divided into three distinct categories: minor impact (0.02), medium effect (0.15), and high effect (0.35). To determine the impact magnitude in SmartPLS, use the PLS algorithm.

3.11.4 Predictive Relevance (Q-squared)

Predictive relevance (Q-squared) is a measurement tool used in PLS-SEM to assess how well a model predicts the dependent variable. In Smart PLS, the Q-squared value is derived by a blindfolding procedure in which data points are systematically omitted and predicted to assess the out-of-sample predictive accuracy of the model. If the value of Q-squared is greater than 0 (Q-squared > 0), this indicates that the model has predictive power for a particular endogenous construct. On the other hand, if the value of Q-squared is less than 0 (Q-squared < 0), this indicates a lack of predictive power, which means that the predictions of the model are worse than the mean value of the observed data.

3.12 CHAPTER SUMMARY

This chapter has provided a detailed explanation of the research technique. The study specifically uses SMAs located in the KwaZulu-Natal province as the sample. This chapter has elaborated on the sample size using the method proposed by Green (1991). This study used survey questionnaires as the research instrument. This study successfully gathered data from 200 respondents. Chapter Three has also discussed the measurement of variables used in this study, which included a total of 23 items for all the variables. The data analysis tools were also explained.

CHAPTER FOUR

RESULTS AND DISCUSSIONS

4.1 INTRODUCTION

The fourth chapter includes the study's findings and comments. This chapter starts with Section 4.2, explaining the responses to the questionnaire survey. This chapter then moves on to the descriptive analysis of the SMA profile and descriptive study of the variables in Sections 4.3 and 4.4, respectively. Section 4.5 gives the normality test findings, while Section 4.6 presents the Pearson correlation results. The final study findings for the measurement model and structural model are presented in Sections 4.7 and 4.8, respectively. Section 4.9 provides a discussion of this study, and Section 4.10 concludes this chapter.

4.2 RESPONSES TO QUESTIONNAIRE SURVEY

The data collection in this study was conducted using Google Forms distributed via online platforms such as email and WhatsApp to efficiently reach respondents. The choice of these platforms was strategic, as they are widely used and easily accessible to ensure that the questionnaire could reach a diverse and geographically dispersed audience. Over three months, 230 respondents were invited to participate, with reminders sent out regularly to maximise response rates.

The use of email allowed for a more formal and direct approach, often accompanied by a detailed introduction to the purpose of the study, while WhatsApp allowed for quicker, more informal communication, ideal for reaching respondents who prefer mobile-friendly interactions. The combination of these distribution methods ensured broad coverage, catering for different preferences and increasing the likelihood of a representative sample.

The data collection was completed after the planned period of three months. The survey yielded a satisfactory number of responses, i.e., 200 returned and usable questionnaires, which corresponds to a response rate of 87%. Table 4.1 presents an overview of the response rate.

Table 4.1: Response Rate of the Questionnaire

	Frequency / R
No. of the questionnaire distributed	230
Returned & Useable questionnaire	200
Response rate (Useable/Total)	87%

4.3 DESCRIPTIVE ANALYSIS OF SMA PROFILE

This section is a descriptive profile of the SMAs in KwaZulu-Natal, South Africa. Table 4.2 shows that most responses come from SMAs that have been in operation for 6 to 10 years (40%, or 80 SMAs). This is followed by SMAs that have been in existence for more than 20 years with 33.5%, or 67 SMAs, and then SMAs that have been in existence for 11 to 15 years with 19.5%, or 39 SMAs. The fewest SMAs that participated in this study were those that had been in existence for 16 to 20 years, with 14 SMAs, or 7%.

Table 4.2: SMAs' Profile

Items		N	%
Years of Establishment	6 to 10 years	80	40.0
	11 to 15 years	39	19.5
	16 to 20 years	14	7.0
	More than 20 years	67	33.5
Total		200	100.0
Type of Business Formation	Sole Proprietorship	54	27.0
	Partnership	14	7.0
	Private Limited companies	132	66.0
	Total	200	100.0

Table 4.2 also shows the majority of SMAs in KwaZulu, South Africa, are predominantly limited liability companies, accounting for 132, or 66%, of the sample. The remaining portion consists of sole proprietorships, which account for 54 SMAs, or 27% of the respondents, while the minority consists of partnerships, totalling 14 SMAs, or 7%. The descriptive findings of this study align with the SMA definition, which requires all SMAs to register with SMEs or other comparable entities like sole proprietorships, partnerships, and limited liability corporations.

4.4 DESCRIPTIVE ANALYSIS OF VARIABLES

This study's descriptive analysis uses the statistical values of mean and standard deviation to provide a basic statistical description of the variables. According to Table 4.3, all variables have a mean value between 3.20 and 4.69, and the standard deviation for all dimensions is between 0.243 and 0.777. The descriptive statistics show that internal environmental management, with a mean score of 4.69, was relatively higher compared to the mean score of the other three variables (i.e., adoption of computerised accounting systems, 4.50; stakeholder involvement, 4.40; firm size, 3.20). This data shows that the mean values are above the average value.

Table 4.3: Descriptive Analysis of Variables

Variables	No. of items	Min	Max	Mean	Std. Deviation
Firm size	2	1	5	3.20	0.777
Stakeholder involvement	8	1	5	4.40	0.364
Internal environmental management	8	1	5	4.69	0.243
Adoption of computerised accounting systems	5	1	5	4.50	0.319

4.5 NORMALITY TEST

The normality test results for all items are presented in Table 4.4, which is based on skewness and kurtosis. Researchers have argued that a distribution is considered considerably normal if the skewness is between -1 and 1 and the kurtosis is between -3 and 3 (Blanca et al., 2013; Muslim et al., 2020). The data in this study demonstrates that most items are skewed, with a significant number of them being negatively skewed. This suggests that there is a greater amount of data on the right side of the distribution. Kurtosis values vary, with some items showing flatter distributions (negative kurtosis) and others showing sharper peaks (positive kurtosis). However, based on the overall results for skewness and kurtosis, the data can be considered approximately normally distributed.

Table 4.4: Normality Test

Items	Skewness		Kurtosis	
	Statistic	Std. Error	Statistic	Std. Error
A8	0.242	0.172	-1.436	0.342
A9	-0.107	0.172	-0.710	0.342
B1	-1.473	0.172	0.170	0.342
B2	-1.511	0.172	0.287	0.342
B3	0.308	0.172	-0.925	0.342
B4	-0.390	0.172	-1.867	0.342
B5	-0.739	0.172	-0.435	0.342
B6	1.103	0.172	-0.792	0.342
B7	0.729	0.172	-1.484	0.342
B8	0.141	0.172	-2.000	0.342
C1	0.390	0.172	-1.867	0.342
C2	-1.551	0.172	0.410	0.342
C3	0.121	0.172	-1.005	0.342
C4	-1.152	0.172	0.659	0.342
C5	-1.073	0.172	-0.857	0.342
C6	-1.511	0.172	0.287	0.342
C7	-1.551	0.172	0.410	0.342
C8	-0.433	0.172	-1.831	0.342
D1	-1.556	0.172	1.751	0.342
D2	-0.610	0.172	0.425	0.342
D3	-0.727	0.172	-0.440	0.342
D4	-0.739	0.172	-0.435	0.342
D5	-1.511	0.172	0.287	0.342

4.6 PEARSON CORRELATION

The Pearson correlation coefficients in the matrix show how three variables are connected: SMA's decision to adopt computerised accounting systems, internal environmental management, and stakeholder involvement. The results show that positive values imply a direct link between the variables, while negative values suggest an inverse correlation. The symbols * or ** represent all key connections.

Table 4.5 shows the Pearson correlation coefficients for four variables: business size, stakeholder participation, internal environmental management, and the usage of computerised accounting systems. A substantial association ($r = 0.533$, $p < 0.01$) suggests that larger companies use computerised accounting systems more often. There is a minor positive correlation between stakeholder involvement ($r = 0.200$, $p < 0.01$) and internal environmental management ($r = 0.192$, $p < 0.01$).

Table 4.5: Correlations Coefficient

		Firm Size	Stakeholders Involvement	Internal environmental management	Adoption of computerised accounting systems
Firm Size	Correlation	1	.200**	.192**	.533**
	p-value		0.004	0.007	0.000
Stakeholders Involvement	Correlation	.200**	1	.241**	.590**
	p-value	0.004		0.001	0.000
Internal environmental management	Correlation	.192**	.241**	1	.674**
	p-value	0.007	0.001		0.000
Adoption of computerised accounting systems	Correlation	.533**	.590**	.674**	1
	p-value	0.000	0.000	0.000	

***. Correlation is significant at the 0.01 level (2-tailed).*

Adoption of computerised accounting systems is positively connected with stakeholder involvement ($r = 0.590$, $p < 0.01$), indicating that higher adoption rates lead to more stakeholder involvement. The findings show a somewhat positive link with internal environmental management ($r = 0.241$, $p < 0.01$). This study found a substantial positive correlation ($r = 0.674$, $p < 0.01$) between computerised accounting system adoption and internal environmental management practices. This implies that firms with stronger internal environmental management are more likely to see greater adoption rates. Stakeholder involvement has a somewhat positive connection ($r = 0.241$, $p < 0.01$) with firm size ($r = 0.192$, $p < 0.01$).

The adoption of computerised accounting systems is significantly correlated with all three variables, with the strongest correlation being with internal environmental management ($r = 0.674$, $p < 0.01$). The results demonstrate that all correlations are statistically significant at the 0.01 level, suggesting a statistically significant relationship between these variables.

4.7 MEASUREMENT MODEL

The measurement model of this study, which was implemented with SmartPLS software's PLS algorithm, is illustrated in Figure 4.1.

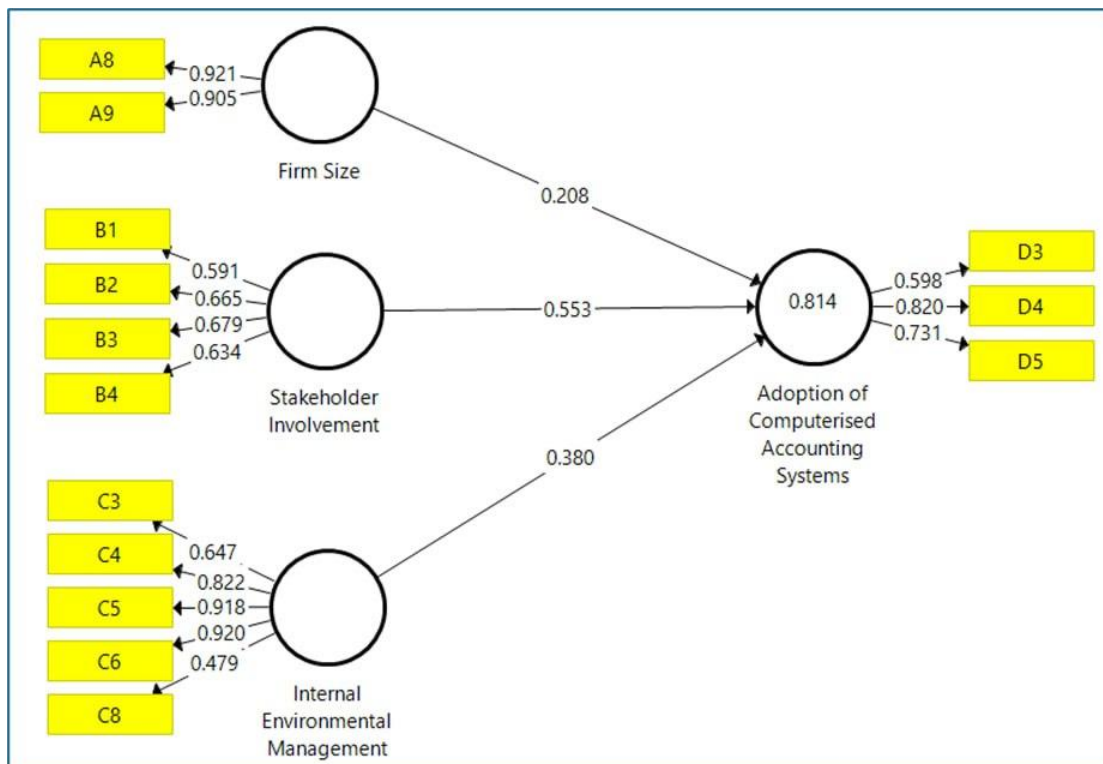


Figure 4.1: Measurement model of the study

4.7.1 Individual Item Reliability

The reliability of each item was evaluated using the outer loading of each measured variable (Ringle et al., 2005). Outer loadings show how strongly each indicator variable corresponds with its latent component. High outer loadings suggest that the indicator is an accurate estimate of the build. Normally, an outside loading value of 0.70 or greater is deemed appropriate. This suggests that the concept accounts for more than half of the indicator's variation. Loadings between 0.40 and 0.70 are considered acceptable depending on the context but may warrant further investigation or deletion if they do not significantly improve the overall model. Loadings below 0.40 are generally considered weak and should usually be removed unless there is a strong theoretical justification for retaining them.

Table 4.6 displays the outer loading findings from a SmartPLS measurement model study. Using the rule of thumb, the total number of items was decreased from 23 to 14, with 9 items discarded since their values were less than 0.40. As seen in the table, components A8 and A9 have extremely significant loadings of 0.921 and 0.905, respectively, showing that they are highly reflective of the firm size. With regard to stakeholder involvement, items B1 to B4 have moderate loadings of between 0.591 and 0.679. These values indicate an appropriate, but not extremely strong,

representation of the construct of stakeholder involvement. In connection with the construct of internal environmental management, items C3, C4, C5, and C6 have loadings in the range of 0.479 to 0.920. Particularly, items C5 (0.918) and C6 (0.920) have very strong loadings, while item C8 has a relatively low loading of 0.479, which indicates that it is an inadequate indicator for the construct. Finally, items D3, D4, and D5 have loadings between 0.598 and 0.820, indicating that these items moderately to strongly represent the adoption of computerised accounting systems.

Table 4.6: Outer Loading Results

Items	Firm Size	Stakeholder Involvement	Internal Environmental Management	Adoption of Computerised Accounting Systems
A8	0.921			
A9	0.905			
B1		0.591		
B2		0.665		
B3		0.679		
B4		0.634		
C3			0.647	
C4			0.822	
C5			0.918	
C6			0.920	
C8			0.479	
D3				0.598
D4				0.820
D5				0.731

4.7.2 Convergent Validity

In structural equation modelling, convergent validity refers to the degree of connection between numerous items or indicators used to assess the same concept. It ensures that the indications of a certain latent construct are consistent and appropriately represent the construct. Hair et al. (2014) assesses convergent validity by calculating composite reliability and AVE for each variable. As per Chin (1998), the composite reliability should be at least 0.700, and the AVE of each variable should be at least 0.500 to obtain sufficient convergent validity. The construct is consistently measured by the indicators when the composite reliability value is high, and the construct encompasses at least 50% of the variance in the indicators when the AVE value is 0.50.

As shown in Table 4.7, the AVE value of all variables exceeds the 0.50 criterion (except for stakeholder involvement, which has an AVE value of 0.414), indicating that the construct captures more than half of the indicator variation. The composite dependability value for all

variables is likewise greater than the criterion of 0.70. The stakeholder involvement variable was retained in the model even though its AVE value is low (less than 0.5), as the variable has a composite reliability value of over 0.70 (i.e. 0.738). It indicates that the variable still measures the construct consistently. A high composite reliability value indicates that the indicators have an internal consistency that can compensate for a lower AVE. Overall, all variables exhibit adequate convergent validity, as both AVE and composite reliability generally are above their respective threshold values, which means the indicators measure the underlying variables consistently and accurately.

Table 4.7: Convergent Validity

Variables	Composite Reliability	AVE
Adoption of Computerised Accounting Systems	0.763	0.522
Firm Size	0.909	0.834
Internal Environmental Management	0.878	0.602
Stakeholder Involvement	0.738	0.414

4.7.3 Discriminant Validity

Table 4.8 shows the findings for discriminant validity. Table 4.8 demonstrates that discriminant validity is confirmed in this study when the square root of the AVE for each construct (adoption of computerised accounting systems: 0.722, firm size: 0.913, internal environmental management: 0.776, and stakeholder involvement: 0.643) is higher than the highest correlation with other constructs.

Table 4.8: Discriminant Validity

	Adoption of Computerised Accounting Systems	Firm Size	Internal Environmental Management	Stakeholder Involvement
Adoption of Computerised Accounting Systems	0.722			
Firm Size	0.500	0.913		
Internal Environmental Management	0.699	0.272	0.776	
Stakeholder Involvement	0.604	0.342	0.475	0.643

4.7.4 Summary of Measurement Model Analysis

Table 4.9 illustrates the reduction of items from 27 in the pilot study to 14 in the final structural model analysis after a comprehensive refinement and validation process. This study used a multi-stage approach, starting with a pilot study, then moving on to EFA and final refinement through

SmartPLS. The main objective was to ensure the reliability and validity of the constructs of the structural model.

Table 4.9: Overall Items Reduction in the Study

Code	Variables	No of items used in pilot study	No of items deleted after EFA (in SPSS)	No of items used in final study	No. of items removed after measurement model analysis (in SmartPLS)	No of items for Structural Model Analysis (in SmartPLS)
D	Adoption of Computerised Accounting Systems	6	(1)	5	(2)	3
A	Firm Size	2	-	2	-	2
B	Stakeholder Involvement	11	(3)	8	(4)	4
C	Internal Environmental Management	8	-	8	(3)	5
	Total Items	27	(4)	23	(9)	14

The process started with 27 items for the four variables: adoption of computerised accounting systems, firm size, stakeholder involvement, and internal environmental management. The EFA conducted in SPSS was used to identify and eliminate poor-performing items, resulting in a reduction of the total number of items to 23, with 4 items removed. A measurement model analysis was then conducted in SmartPLS to further refine the constructs and ensure that they met the required reliability and validity criteria. In this step, a further 9 items were removed, reducing the total number of items for the final structural model analysis to 14.

The entire item reduction process was rigorous and focused on retaining only the most robust and reliable items. This methodological approach not only streamlined the constructs but also strengthened their reliability and validity, providing a solid foundation for the final structural modelling.

4.8 STRUCTURAL MODEL

This study proceeds with the examination of the structural model (figure 4.2) after assessing the validity and reliability of the measurement model. The structural model is used to determine the degree to which it explains the links between the latent constructs. This shift is crucial because it requires validating the hypothesised connections between the latent components. The structural

model includes (i) testing the hypotheses, (ii) evaluating the explained variance in the dependent variable(s), (iii) evaluating the effect magnitude, and (iv) evaluating Q-squared.

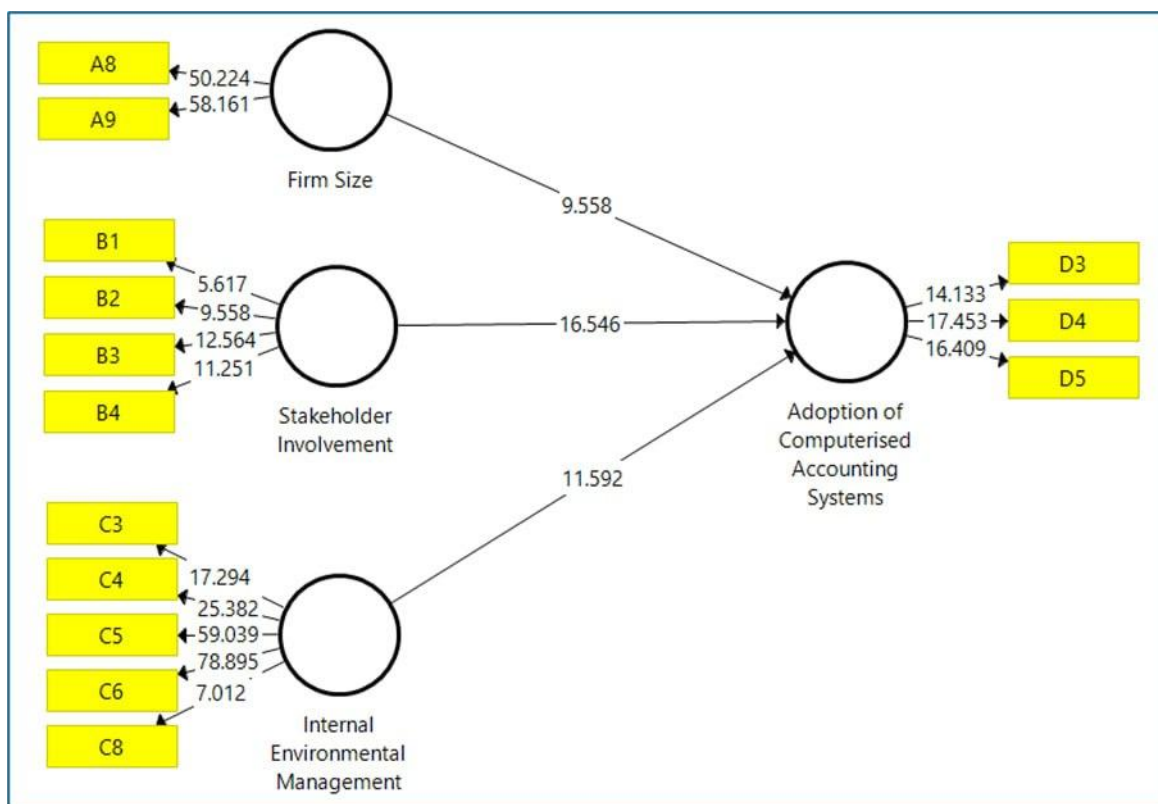


Figure 4.2: Structural Model of this study

In this study, the bootstrapping process, using 5000 bootstrap samples, assessed the significance of the route coefficients for the association between the variables (Hair et al., 2014). The model's predictive power was assessed using the coefficient of determination, and the magnitude was established by calculating the effect size.

4.8.1 Hypothesis Testing

The three hypotheses of this study are as follows:

- H1: Firm size has a significant influence on the decision of SMAs in KwaZulu-Natal, South Africa to adopt the computerised accounting systems.

- H2: Stakeholder involvement has a significant influence on the decision of SMAs in KwaZulu-Natal, South Africa to adopt the computerised accounting systems.
- H3: Internal environmental management has a significant influence on the decision of SMAs in KwaZulu-Natal, South Africa, to adopt the computerised accounting systems.

Table 4.10: Hypothesis Testing

H	Relationship	Beta	(STDEV)	T Value	P Values	Decision
H1	Firm Size -> Adoption of Computerised Accounting Systems	0.208	0.022	9.558	0.000	Supported
H2	Stakeholder Involvement -> Adoption of Computerised Accounting Systems	0.553	0.033	16.546	0.000	Supported
H3	Internal Environmental Management -> Adoption of Computerised Accounting Systems	0.380	0.033	11.592	0.000	Supported

As shown in Table 4.10 and Figure 4.2, the structural model analysis shows that firm size significantly positively influences SMA's decision to adopt computerized accounting systems in KwaZulu-Natal, South Africa (Beta = 0.208, $t = 9.558$, $p = 0.000$). This supports Hypothesis H1. When examining the impact of stakeholder involvement, the result showed that stakeholder involvement had a significant positive influence on the decision of SMA in KwaZulu-Natal, South Africa, to adopt computerised accounting systems (beta = 0.553, $t = 16.546$, $p = 0.000$). As a result, hypothesis H2 is supported. Finally, the study found that internal environmental management had a substantial favourable effect on the choice of SMA in KwaZulu-Natal, South Africa, to adopt computerised accounting systems (Beta = 0.380, $t = 11.592$, $p = 0.000$). Therefore, hypothesis H3 is also supported.

4.8.2 Assessment of Variance Explained in the Dependent Variables

Table 4.11 displays the R-squared values of the dependent variable. The study model accounts for 81.4% of the overall variation in the adoption of computerised accounting systems. The independent factors, including firm size, stakeholder participation, and internal environmental management, together account for 81.4% of the variation in SMA's adoption of computerised accounting systems in KwaZulu-Natal, South Africa.

Table 4.11: Coefficient of Determination (R Square) of the Model

	R Square	R Square Adjusted
Adoption of Computerised Accounting Systems	0.814	0.812

4.8.3 Assessment of Effect Size (f-squared)

The effect sizes of the independent variables in the structural model of this investigation are illustrated in Table 4.12. The effect sizes of stakeholder involvement, internal environmental management, and firm size were 0.202, 0.193, and 0.593, respectively, as illustrated in Table 4.12. The effect size of the three independent variables on the adoption of computerised accounting systems can be classified as medium, medium, and large following Cohen's (1988) guidelines. The dependent variable is significantly influenced by internal environmental management, as evidenced by the substantial effect size. It makes a substantial contribution to the explanatory power of the adoption of computerised accounting systems. This affirms the significance of the relationship, rendering it a critical area for strategic choices, policy decisions, or interventions. A medium effect size (firm size and stakeholder involvement) suggests that both independent variables make a substantial but not dominant contribution to the explanatory power of the adoption of computerised accounting systems. They are a significant factor in predicting the outcome, but they are not the sole or most powerful predictor. Therefore, both variables are acceptable and should generally be retained in the model.

Table 4.12: Effect Size of the Independent Variables (f-squared)

Independent Variables	f-squared	Effect Size
Firm Size	0.202	Medium
Stakeholder Involvement	0.193	Medium
Internal Environmental Management	0.593	Large

4.8.4 Assessment of Predictive Relevance (Q-squared)

Table 4.13 presents the results of the construct cross-validated redundancy (Q-Squared). The assessment of Q-squared is a step in evaluating the predictive power of the structural model. Q-squared is used to determine how well the model can predict the data points of the dependent variable. Hair et al. (2013) recommended that a Q-squared of 0.35 is considered large predictive, 0.15 is considered moderately predictive, and 0.02 is considered weakly predictive of each construct.

Table 4.13: Construct Cross-validated Redundancy (Q-squared)

Dependent Variable	SSO	SSE	Q-squared
Adoption of Computerised Accounting Systems	600.000	347.259	0.421

Based on the data in the table, the construct cross-validated redundancy measure Q-squared for the dependent variable (adoption of computerised accounting systems) is 0.421, which is greater than 0.35. This indicates that the model has a significant predictive relevance for the dependent variable. This implies that this model can be used to make accurate predictions in similar contexts or datasets, thereby establishing it as a robust tool for decision-making and forecasting. In the context of this study, the model has a strong ability to predict the decision of SMA in KwaZulu-Natal, South Africa, to adopt computerised accounting systems.

4.9 DISCUSSION

4.9.1 Summary of Research Process

Table 4.12 summarises the processes from preparatory activities to the end of the research. It summarises how data collection, processing, and findings are handled at each stage. Each step builds on the preceding one, allowing the researcher to discover and solve errors, fine-tune the research instrument, and guarantee that the data obtained in the final study can be examined successfully to answer the research questions. Below is an explanation of each phase:

1. Preliminary Phase

- The researcher begins with a literature review to identify gaps in existing research.
- The researcher identifies the research problem, sets objectives, and develops research questions and hypotheses.
- Based on the literature and expert opinions, the researcher creates a research instrument (e.g. a questionnaire) for data collection.
- The researcher developed a series of questions with 4 variables and 27 items were developed to form the initial survey instrument.

2. Pre-test phase

- To ensure the quality, validity, and reliability of the instrument before the pilot test, the opinions of three experts on the research instrument, e.g. a questionnaire, are obtained.

- The draft questionnaire is validated by checking content validity (relevance and completeness), face validity (clarity of language), and criterion validity (how well the questionnaire measures what it intends to).
- Based on the feedback, the questionnaire items are revised and refined to improve clarity and accuracy.
- The questionnaire is then updated but retains 4 variables and 27 items even after refinement based on expert feedback.

3. Pilot testing phase

- The questionnaire's efficacy is evaluated by collecting data from a small sample of 10 participants.
- The data that was obtained was analysed to determine the appropriateness of the sample size and the data's suitability for factor analysis (KMO and Bartlett's test).
- Employed EFA to validate the questionnaire's structure and identify the fundamental factors.
- Determined the internal reliability of the questionnaire items by examining Cronbach's alpha value.
- After the removal of four items with suboptimal factor loadings, the questionnaire has been further refined to include 23 items and 4 variables.

Table 4.14: Summary of Research Process

	PHASES			
	PRELIMINARY	PRE-TEST	PILOT TEST	FINAL STUDY
Data Collection	Literature search	Obtained 3 expert opinions	Data gathered from 10 samples	Data gathered from 200 samples
Data Analysis	<ul style="list-style-type: none"> Identify research problems Identify research objectives Develop research questions Develop hypothesis Develop research instrument 	<ul style="list-style-type: none"> Content validity (content) Face validity (language) Criterion validity (measurement) Rewrite and refine the items statements based on the comments 	Run analysis with SPSS <ul style="list-style-type: none"> KMO and Bartlett's Test to assess suitability test for EFA. EFA to assess the items validity and reliability Cronbach's Alpha is used to assess the internal reliability. 	Run analysis with SPSS <ul style="list-style-type: none"> Descriptive statistics Normality test Pearson correlation Run analysis with SmartPLS <ul style="list-style-type: none"> Measurement model for data reliability and validity before structural model Structural model for hypothesis testing
Results & Output	A set of questionnaire surveys with 4 variables and 27 items	A set of revised questionnaires with 4 variables and 27 items	<ul style="list-style-type: none"> A set of revised questionnaires with 4 variables and 23 items Removed 4 items with poor loading 	After Measurement Model (Data Validation) <ul style="list-style-type: none"> Removed 9 items Retained 14 items for Structural Model After Structural Model (Hypotheses Testing) <ul style="list-style-type: none"> Variance explained (R-squared) Effect size (f-squared) Predictive relevance (Q-squared)

4. Final study phase

- The final questionnaire is sent to the entire sample (200 participants).
- Descriptive statistics and Pearson correlation performed in SPSS:
 - To understand the distribution of the data (descriptive statistics)
 - To assess the relationships between the variables (Pearson correlation).
- Performed a measurement model analysis in SmartPLS:
 - Tests the reliability and validity of the data prior building the structural model.
 - Nine items are removed based on the results of the measurement model, resulting in a final set of 14 items for hypothesis testing.
- Performed a structural model analysis in SmartPLS:
 - The final set of variables and items is determined for the structural model analysis and hypothesis testing.
- Final results and output:
 - Variance explained (R-squared) is a measure of the degree to which the independent variables account for the variance in the dependent variables.
 - The effect size (f-squared) is a variable that quantifies the impact of each independent variable on the dependent variables.
 - The predictive relevance (Q-squared) metric assesses the model's predictive potential by assessing its ability to predict the outcomes based on the provided data.

4.9.2 Discussions on Hypothesis Testing

According to the data collected in this study, the majority of the participating SMAs are privately owned companies. These SMAs have a natural separation of ownership and control between shareholders and management. Such results are consistent with the findings of Mashenene and Kumburu (2023). Financial statements are very valuable tools for SMAs that want to grow their business.

The first objective of this study is to examine whether firm size significantly influences on the decision of SMAs in KwaZulu-Natal, South Africa, to adopt computerised accounting systems. The associated hypothesis is H1 and states that firm size has a significant influence on the decision of SMA in KwaZulu-Natal, South Africa to adopt computerised accounting systems. The beta coefficient of 0.208 indicates a positive relationship, which means that as the firm size increases,

the likelihood of adopting computerised accounting systems also increases. The T-value of 9.558 is well above the typical threshold value of 1.96, which means that the relationship is statistically significant. The P-value of 0.000 confirms that this result is highly significant, which leads to the conclusion that H1 is supported. This result is consistent with the expectation that larger organisations & have more resources and are more likely to adopt computerized accounting systems for several reasons, primarily related to their need for efficiency, accuracy, and increased productivity. The computerised accounting systems offer increased computing power and automation, which can enhance the efficiency and effectiveness of management accounting techniques (Gnatiuk et. al., 2023 & Sanchez-Rodrigues & Spraakman, 20212).

The results of this investigation suggested that firm size may have a significant influence on the adoption of computerised accounting systems by small and medium-sized accounting firms in a country like South Africa. Computerised accounting systems require substantial initial investment in software, hardware, and training. Understandably, larger companies have more financial resources to allocate towards these systems, whereas smaller organisations struggle to bear the associated expenses. Furthermore, larger companies are better equipped to handle the ongoing costs of maintenance, upgrades, and IT support. Smaller companies such as the SMAs may find these ongoing expenses to be onerous, possibly causing a delay in their decision to implement them.

Typically, larger companies handle a greater number of transactions, clients, and data. Computerised systems enhance the effective management of this vast volume, making them more appealing to bigger corporations. Big companies often encounter the need to oversee intricate financial activities, which include handling diverse clients with varying requirements. Computerised accounting systems can automate and optimise these operations, making them indispensable for larger organisations. In contrast, smaller companies such as SMAs may not have the same level of urgency to adopt such technologies unless they are undergoing significant expansion.

The second objective of this study is to investigate the extent to which stakeholder involvement significantly influences the decision of SMAs in KwaZulu-Natal, South Africa, to adopt computerised accounting systems. H2 is the associated hypothesis, which posits that the decision of SMAs in KwaZulu-Natal, South Africa, to adopt computerised accounting systems is significantly influenced by stakeholder involvement. The beta value of 0.553 indicates a

substantial positive link between more stakeholder involvement and a greater chance of using these solutions. The T-value of 16.546, which is much higher than the normal threshold, and the P-value of 0.000 shows that this association is statistically significant. As a result, this study supports the premise that stakeholder involvement has a significant and positive influence on SMAs' choice to use computerised accounting systems in KwaZulu-Natal, South Africa. This study suggests that there is a considerable link between stakeholder involvement and SMAs' choice to adopt computerised accounting systems. Their input helps identify critical requirements and potential challenges, leading to a system that addresses diverse user needs. Early engagement fosters collaboration, minimizing resistance to change and improving adoption. Stakeholders provide valuable insights for customizing features and processes, enhancing efficiency and accuracy. Additionally, their participation supports smoother transitions and ensures the system integrates seamlessly into existing workflows. This also implies that there is a significant link between the effectiveness of internal environmental management and SMAs' choice to adopt computerised accounting systems.

The involvement of stakeholders in the adoption and evaluation of computerised accounting systems indicates a responsive approach to adoption, possibly influenced by external validation rather than internal efforts. The frequent recognition of the computerised accounting system as a means of improving credibility and trust suggests that SMAs may view it as an asset in their interactions with stakeholders. The significance level (0.01, two-tailed test) indicates that the probability that these relationships are a result of chance is less than 1%. Therefore, it is likely that these correlations are significant and warrant further investigation. These findings could have multiple and far-reaching consequences. Before building and implementing computerised accounting systems, SMAs should carefully consider stakeholder requirements and interests because there is a significant relationship between stakeholder influence and SMAs' decision to implement computerised accounting systems.

The third objective of this study is to examine whether internal environmental management significantly influences the decision of SMAs in KwaZulu-Natal, South Africa, to adopt computerised accounting systems. The related hypothesis H3 states that internal environmental management has a significant influence on the decision of SMA in KwaZulu-Natal, South Africa, to adopt computerised accounting systems. The beta coefficient of 0.380 indicates a positive relationship, suggesting that better internal environmental management practices are associated with a higher adoption rate. The T-value of 11.592, together with a P-value of 0.000, confirms

the statistical significance of this relationship. The support for H3 highlights the critical role that internal management practices play in the adoption of new accounting technologies, likely through better organisation, resource allocation, and overall readiness for change.

Effective internal environmental management measures necessitate that SMAs ensure the accuracy and integrity of their financial reporting. Computerised accounting systems must be capable of precisely documenting activities to appropriately depict the nature of operations in financial statements. The analysis yields a p-value of 0.000. Internal environmental management influences the deployment of computerised accounting systems at SMAs in KwaZulu-Natal, South Africa. This study found a considerable positive association between internal environmental management and SMAs' choice to use computerised accounting systems. As a result, this study confirms hypothesis 3, which states that internal environmental management has a large and beneficial effect on the choice of SMAs in KwaZulu-Natal, South Africa, to implement computerised accounting systems.

In sum, all three hypotheses (H1, H2, and H3) are supported by the data, indicating that firm size, stakeholder involvement, and internal environmental management have significant positive effects on the adoption of computerised accounting systems. Stakeholder involvement has the strongest influence, followed by internal environmental management and firm size. These findings provide valuable insights for organisations looking to adopt computerised accounting systems and highlight the importance of firm size, stakeholder engagement, and internal environmental management. Accounting professionals in KwaZulu-Natal generally agree that the use of computerised accounting systems is a key factor in improving the competitiveness and long-term sustainability of their organisation. Although they are an exception, smaller SMAs often opt for computerised accounting systems.

4.10 CHAPTER SUMMARY

This chapter detailed the study's findings and subsequent discussions. The study began with a description of the demographic profile, followed by an examination of the components. Before evaluating the research hypotheses, this study performed reliability and validity tests to confirm that the data had a normal distribution. The Pearson correlation coefficient was then used to determine if there is a relationship between the independent and dependent variables. This study discovered a strong and statistically significant link between the independent and dependent variables. This study also used multiple linear regression to discover which predictor had a

significant influence on the result variable. The results show that the decision of SMAs to adopt computerised accounting systems is strongly linked to their size, the involvement of stakeholders, and the management of their internal environment.

CHAPTER FIVE

CONCLUSION

5.1 INTRODUCTION

The study's conclusion is presented in Chapter Five. The summarised findings of this study are presented in Section 5.2, and the implications of the study are discussed in Section 5.3. The subsequent section, Section 5.4, delineates the constraints of this study, and Section 5.5 offers suggestions for future research directions. The final section, Section 5.6, concludes this chapter and dissertation.

5.2 SUMMARY OF MAIN FINDINGS

This study aims to examine the factors influencing the adoption of computerised accounting systems among the SMAs in KwaZulu-Natal, South Africa. This study selected three specific factors: firm size, stakeholder involvement, and internal environmental management. This study used agency theory to corroborate the notion that independent factors influence the SMAs' decision to adopt computerised accounting systems. This study successfully sent 230 sets of questionnaires to SMAs situated in KwaZulu-Natal, South Africa. This study received 200 completed and returned questionnaires, indicating a response rate of 86%. Additionally, a consistent variance is observed. In this study, a higher R-squared value indicates a more effective regression model. Therefore, the selected parameters are pertinent for conducting this study.

This study first investigates whether firm size influences the SMA's adoption of computerised accounting systems in KwaZulu-Natal, South Africa. The beta coefficient of 0.208 indicates a positive relationship, which means that as the firm size increases, the likelihood of adopting computerised accounting systems also increases. The T-value of 9.558 is well above the typical threshold value of 1.96, which means that the relationship is statistically significant. The P-value of 0.000 confirms that this result is highly significant, which leads to the conclusion that research objective one was achieved. This result is consistent with the expectation that larger organisations and have more resources and are more likely to adopt computerized accounting systems for several reasons, primarily related to their need for efficiency, accuracy, and increased productivity.

The inquiry revealed that the majority of SMAs have private ownership, which means the financial statements are a valuable tool for SMAs seeking to expand. The accountants believe that computerised accounting systems can increase competitiveness and sustainability. Though rare, smaller SMAs use computerised accounting systems. This analysis shows a high inclination, regardless of size. The use of computerised accounting systems by SMAs in Kwazulu-Natal, South Africa, exhibits a negative correlation with firm size.

Second, this study investigates whether stakeholder involvement influences Kwazulu-Natal SMAs' to adopt computerised accounting systems. The beta value of 0.553 indicates a substantial positive link between more stakeholder involvement and a greater chance of using these solutions. The T-value of 16.546, which is much higher than the normal threshold, and the P-value of 0.000 shows that this association is statistically significant. As a result, this study supports the premise that stakeholder involvement has a significant and positive influence on SMAs' choice to use computerised accounting systems in KwaZulu-Natal, South Africa which leads to the conclusion that research objective two was achieved. Computerised accounting system may be sensitive to external validation rather than internal efforts if stakeholders are involved in its commencement and review.

External validation in this context refers to the recognition, approval, or endorsement of the computerized accounting system by parties outside the organization, such as auditors, regulatory bodies, investors, or clients. When stakeholders are involved in the system's commencement and review, their perspectives and feedback can shape the system to meet external standards or expectations. This external focus helps build credibility and trust in the system's outputs, as these stakeholders often rely on such systems to verify compliance, transparency, and reliability. Consequently, Small and Medium-sized Enterprises (SMAs) may leverage computerized accounting systems as a tool to strengthen relationships and demonstrate accountability to external stakeholders. The frequent use of computerised accounting systems to build credibility and confidence suggests that SMAs may use them to connect with stakeholders. Since stakeholder impact strongly influences SMAs' adoption of computerised accounting systems, SMAs should carefully assess stakeholder needs and interests before creating and implementing them.

Third, this study examines whether internal environmental management has an impact on the SMAs' adoption of computerised accounting systems in KwaZulu-Natal, South Africa. The beta coefficient of 0.380 indicates a positive relationship, suggesting that better internal environmental

management practices are associated with a higher adoption rate. The T-value of 11.592, together with a P-value of 0.000, confirms the statistical significance of this relationship. The support for research objective three highlights the critical role that internal management practices play in the adoption of new accounting technologies, likely through better organisation, resource allocation, and overall readiness for change which leads to the conclusion that research objective three was achieved. This study provides valuable insights to SMAs on the factors influencing their decision to adopt computerized accounting systems, emphasizing how these systems facilitate transparency, ensure accurate financial reporting, and enhance accountability. It also demonstrates that external environmental management significantly impacts SMAs' decisions to adopt such systems. Such findings are consistent with Aliamutu and Mkhize (2024e) study, which demonstrates that efficient internal environmental management can enhance financial reporting accuracy and positively influence SMAs' decision to adopt computerised accounting systems. Such findings suggest that companies have been compelled to guarantee the integrity and accuracy of their financial reporting because of the implementation of internal environmental management. To accurately represent the nature of the business conducted in the financial accounts, the systems must be capable of accurately documenting activities.

5.3 IMPLICATIONS OF STUDY

5.3.1 Practical Implication

This study offers valuable insights and has several practical implications, particularly for SMAs. This study offers valuable insights for SMAs to determine whether they should opt for computerised accounting. SMAs can make optimal decisions for their firms and seize every opportunity that might help propel their organisation's development and growth.

Furthermore, this study has shown that SMAs view computerised accounting systems as a valuable service, as it signifies a high standard of professional process execution and the significance of fair assessments from a reliable individual. This, in turn, contributes to the increased demand for computerised accounting systems among SMAs (Alhassan & Nwagbara, 2023). Hence, this study provides valuable insights to SMAs on the factors influencing their

decision to adopt computerized accounting systems, highlighting how these systems facilitate transparency, ensure accurate financial reporting, and enhance accountability.

5.3.2 Academic Implication

The findings of this study contribute significantly to the academic community by addressing a critical gap in understanding the factors influencing SMAs' decisions to adopt computerized accounting systems. The results and discussions on each element offer a detailed exploration of the topic, making this study a valuable resource for scholars interested in this domain. By providing a comprehensive analysis, it equips other researchers with a robust framework to build upon, integrating the study's findings into their existing knowledge base for advancing future research.

Moreover, the study is particularly beneficial for academics conducting content analysis research, as its methodological approach and findings offer practical applications for similar investigations. By demonstrating how firm size, stakeholder involvement, and internal environmental management influence adoption decisions, the study provides a nuanced perspective that enriches the existing literature. This fills a research void, as past publications often emphasize perceptions of computerized accounting systems, leaving significant areas unexplored.

For academics, the study offers actionable insights to refine teaching methodologies and ensure that students receive updated, evidence-based information about the adoption of computerized accounting systems. Given the complexity and novelty of this concept, the study is crucial for demystifying the topic for SMAs, accountants, and students in related disciplines. The clearly defined predictor variables and their alignment with the study's objectives also set a solid precedent for future academic inquiries, reinforcing the study's relevance and utility in both research and educational contexts.

5.4 LIMITATIONS OF STUDY

This study is not without limitations. First, the sample collected in this study may not be a true representation of the whole population of SMAs in KwaZulu-Natal, South Africa. This study

restricted the respondents' reach to a few specific locations. Due to time limitations, this study only includes samples collected and chosen from KwaZulu-Natal, South Africa. Therefore, the findings of this study may not make broad generalisations about the whole South African SMA population.

In addition, the relatively low number of circulated questionnaires implies a restricted number of respondents for this study, resulting in a scarcity of information gathered from the major data sources in the South African SMA directory. This study limits the sample size to 120 participants. The SMA directory might not fully represent the entire South African SMA population, as it might not encompass all unregistered or non-maintained SMAs. The current data on the firms is unavailable due to the prevalence of incorrect, unnoticed, or defunct email addresses associated with most of them.

Furthermore, the questionnaire survey was distributed during the COVID-19 pandemic, specifically during the curfew implementation. This period saw restrictions on working from the office, which may have caused challenges for participants in responding to the questions. Few respondents might have mistaken the email they received for spam, while others might have refrained from responding because they were preoccupied or worried about their privacy.

5.5 FUTURE RESEARCH AVENUES

Although this study has limitations, it opens avenues for future research by recommending a larger and more diverse grouping of samples, as suggested by Olsen (2014). Expanding the sample size to include a broader range of South African SMAs would help capture the heterogeneity of the population, encompassing businesses from various industries, regions, and socio-economic backgrounds. For instance, regional disparities, such as urban versus rural settings or differences in economic activity across provinces, may significantly influence SMAs' adoption of computerized accounting systems. Exploring such demographic and regional characteristics can yield insights into localized challenges and opportunities, leading to more targeted and applicable findings.

In addition to widening the demographic scope, future research should consider the perspectives of other stakeholders, such as accountants, regulatory authorities, and government entities. These groups may provide unique insights into the external and institutional factors affecting SMAs'

decisions. For example, accountants might emphasize practical implementation challenges, while government agencies could focus on compliance and policy-driven incentives. Regularly updating the SMA directory to reflect changes in the business landscape and adopting digital platforms to facilitate data collection and information sharing could further enhance the accuracy and relevance of research findings.

Expanding the scope of research beyond the three factors examined in this study—firm size, stakeholder involvement, and internal environmental management—could also reveal additional predictors influencing computerized accounting system adoption. Variables such as ownership structure, corporate governance practices, and technological readiness may offer a more comprehensive understanding of adoption drivers. Using alternative proxies for variables, such as total assets for firm size, can improve measurement reliability and lead to more robust conclusions.

Finally, incorporating a mixed-methods approach in future research would address the limitations of purely quantitative studies. Combining survey questionnaires with interviews allows researchers to capture quantitative trends while delving into qualitative insights that enrich understanding. Interviews, in particular, enable participants to articulate their experiences, challenges, and perspectives, providing nuanced and context-specific data. By adopting these strategies, future research can produce more reliable, detailed, and actionable findings, contributing to the broader understanding of computerized accounting systems' adoption among SMAs.

5.6 CONCLUSION

In conclusion, this chapter has provided a comprehensive overview of the summary findings, and the implications derived from data analyses. This chapter has also provided the study limitations and future research avenues. Finally, this chapter concludes both this study and this dissertation.

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