

Decision rules and decision analysis in maintaining implementation of communication technology in organisation

Melanie Elizabeth Lourens

Deputy Dean: Faculty of Management Sciences, Durban University of Technology

Abstract

This research aims to create a development perspective for decision theory application for organisational decision making regarding intelligent technology enabling practices. Organisations and individual flexibility are needed to dissolve behaviour issues of employees causing hindrance in strategic decision-making. In this regard, a comparative analysis of nine research articles has been performed within the very specific scope of systematic review based on South Africa and other European countries. South African public and private sector organisations promote digital literacy and Business Intelligence (BI) technology adoption. Hence, education around self-management and sentiment classification are analysed through primary studies on algorithm-based cross-domain classification and classification of modifiers. Similarly, secondary qualitative analysis on the research articles has supported this entire paper through narrative analysis. Finally, thematic analysis justified that ImbTreeEntropy and Z-VIKOR are reliable tools to analyse decisions regarding the execution of a communication technology tool) in an organisation.

Keywords: *Decision rules, Cost-matrix analysis, Decision tree, Risk Management, VIKOR*

1. Introduction

Communication technology implementation gives management opportunities to achieve versatility of effective interaction with employees and information sharing that offers management opportunities of excellent decision making. Application of decision theory is significant in mapping observation on a subject before strategic decision-making. In this research, individual initiative and community efforts to promote communication technologies in an organisation are explained to analyse basic decision rules. Furthermore, methods and strategies for developing a secondary data analysis are discussed. Besides, decision theories and frameworks are applied to illustrate the importance of decision analysis in technological changes.

2. Background

Operation teams of business organisations face decision-making delays as segregation of employment responsibilities mandates combined effort and team communication. Hence, according to Ainet *al.* (2019), deploying technology enablers in business organisations have become essential to carry out important information and resource sharing before strategic decision-making. However, technological changes require cross-functional competence development among employees regarding hard and soft skills update with technology operations. However, Schneider and Sting (2020) opined that deep-seated company culture opposes application and continuous integration of technological supports, and experienced employees restrict technological learning. In South Africa, application of Business intelligence and business analytics (BI&A) no significant legal requirements are executed for digital researching. Thus, communication technology adoption in South Africa is easier. However, according to Gorshunov *et al.* (2020), in the US, financial researching and transparency in estimation are assured by technology-enforced communication recording supported by the *Sarbanes–Oxley Act (SOX)*.

However, market-aware strategic decision of technology implementation requires to follow decision rule of BI acceptance, and digital literacy that results in 75% failure in small and medium enterprises in South Africa is successful executed technological transformation (Bvuma and Marnewick, 2020). However, the South African government initiate small, medium, and micro-enterprises (SMME) Development Strategy to accelerate incubation of networking technology for Machine-to-machine (M2M) communication.

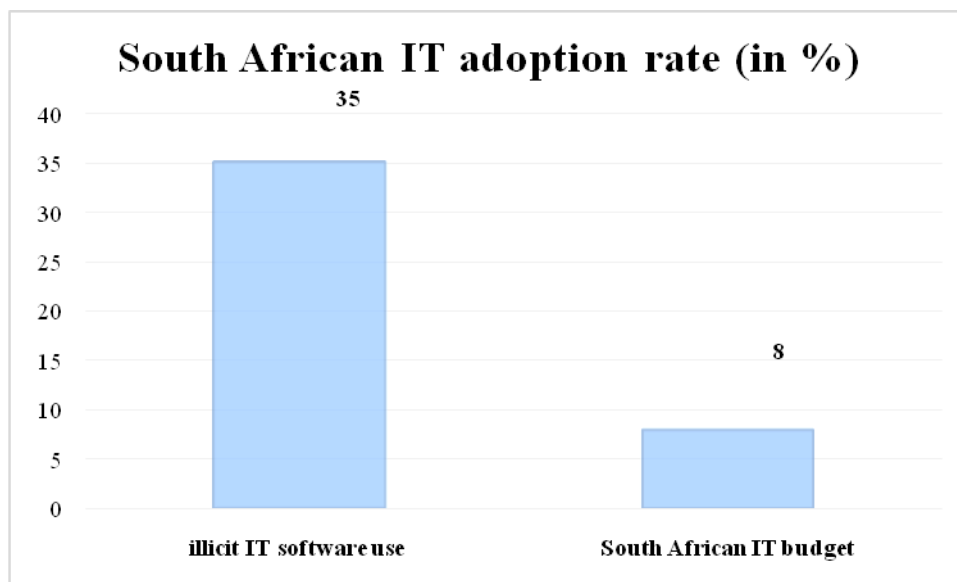


Figure 1: South African technology acceptance statistics

(Source: Bvuma and Marnewick, 2020)

The primary reason behind this technology drift is the application of illicit software in 35% of businesses. Hence, according to Bvuma and Marnewick (2020), about 8% of the South African IT budget is invested in the technological development of SMEs to improve organisational decisions to adopt technological change for business communication. However, as opined by Greenwood *et al.* (2019), motivational influencing factors and self-awareness theories are crucially measured of technological change decision making and execution. For instance, the decision rule for an organisational change is slower made sudden. Hence, investment in technological advances is significantly important for the maximisation of shareholders value.

Business organisations follow decision rules to pave beneficial investment decisions. Contrarily, decision rules aim to create stakeholder values in companies that can generate high trade-off values. Hence, in terms of long-term value creation, different steering decisions requires different decision rules. Similarly, the use of a balanced scorecard is significant to analyse social, environmental and financial performance that can be engaged in determining impact valuation. According to Ferracuti and Stubben (2019), contextually technological adaptation in an organisation must pass multiple decision criteria such as technological literacy, financial and operational feasibility, including financial flow and present integrated value (IPV) analysis. For instance, Alqallaf and Alareeni (2018) stated that mandatory compliance of integrated researching in South African banks and other multinational companies bring transparency in expenditure. Thus, secondary literature from different country contexts and different organisations' decision rules for the adoption of communication technology makes this study a comprehensive yet comparative knowledge pool. Moreover, the decision rule improves the financial sustainability of the company and curbs the cost of capital. Hence, in communication technology integration, business organisations need to perform IPV analysis and risk assessment frameworks such as COSO Enterprise Risk Management (ERM) framework (Prewett and Terry, 2018).

Hence, the aim of this study becomes "To evaluate impact of decision rule and decision analysis regarding change execution of communication technology in an organisation". Furthermore, this study aims to demystify the social dynamics of adapting technological change and integrated researching patterns that will add analysis of costs and risks associated with new communication technology introduction. Hence, the subsidiary objective becomes outlining and evaluating factors that correlate with communication technology implementation decision analysis and decision framework integration. Thus, victimisation of business from sudden technological change can be avoided using different decision rules for IT, financial and operational risk analysis.

3. Methods

The method of a research article is significantly important for assuring the quality and reliability of the study. The research is structured based on secondary research that includes a collection of some journal articles and research papers on decision rule and communication technology implementation decision analysis. However, a systematic review of finally selected research articles gives a wider context in examining the research problem and scope. According to Taherdoost(2016), a systematic review of journal articles and other secondary studies helps research summarising and identifying different factors that control and different decision rules for new communication technology implementation in an organisation, either in South Africa or any other international location. Contrarily, as Mohajan (2018) assessed, comparative analysis of secondary literature lacks real-time insights on the social image, which can put the knowledge on recent perception of the research context. Preferably peer-reviewed articles are considered, and these are concerned about the authenticity of the research and has authentic information in the content.

In this study, Boolean operators are used for data collection using keywords such as "decision rules", "decision analysis", "communication technology", "implementation", and "business organisations", respectively. These keywords are combined with "AND" and "OR" operators to create high efficiency and flexible database. Hence, valid and reliable databases such as Proquestand Emerald have been used as data gathering tools. [Refer to appendix 1]. These databases are the free, flexible and reliable platform of data collection on organisational decision rule analysis.

Furthermore, the choice of descriptive research design has helped the research to continue with an unbiased analysis on the contents of collected research articles that can draw a satisfactory analysis of the research article [Refer to appendix 2]. As commented by Snyder (2019), descriptive research allows the integration of quantitative and quantitative data so that a better narrative on different factors that impact diabetic patients can be obtained. However, a random sampling method is applied while selecting research articles randomly from the initial keyword search. Thus, nine original research articles are selected for the comparative analysis on decision rules applied for organisational communication technology implementation in South Africa and other countries. On the other hand, positivism ideology is followed for analysis of primary and secondary studies regarding critical review generation, a positivist ideological boundary has been maintained. Similarly, Taherdoost(2016) stated that the positivist paradigm helps in the generalisation of facts collected from different sources that are significant to identify social phenomenon and trends.

Thus, developing qualitative analysis will help this study categorise differences in behavioural data for the classification, tabulation, and summary of a research article. Thus, themes on the research and imperative pattern of secondary research analysis can be developed using qualitative analysis.

4. Result

| Author | Year | Design of this study | Number of resources or samples |
|---------------------------|------|--|--|
| ASGHAR <i>et al.</i> | 2017 | Classifying user review using different datasets and sentiment analysis | 350, 273 and 412 |
| WANG <i>et al.</i> | 2015 | Review of journal articles and algorithm | NA |
| CARNEIRO <i>et al.</i> | 2020 | Literature review of journal articles and algorithm | NA |
| ZĄBKOWSKI | 2021 | Qualitative review | NA |
| Mello | 2020 | Qualitative literature study | NA |
| Mayayise | 2021 | Quantitative research approach using IBM SPSS software used for statistical analysis | 106 responses |
| Freeman <i>et al.</i> | 2020 | Quantitative analysis study using SPSS | 37 participants (20 rural and 17 urban participants) |
| AKHAVEIN <i>et al.</i> | 2021 | Using Z-number approach such as Z-DEMATEL and Z-VIKOR for defining sustainable project | 20 projects |
| RIBES and GONZÁLEZ-PACHÓN | 2021 | Literature and algorithm analysis using Extended Goal Programming formulation | NA |

Table 1: Data extraction table

(Source: learner)

| Authors | Study design | Measured outcomes | Result | Quality review |
|-------------------------------|--|---|---|--|
| ASGHAR <i>et al.</i> (2017) | Classification and analysis of user review based on sentiment analysis | Pre-processing data analysis and application of different modifiers for analysis of sentiment score in communication technology tools | Decision rule-based classification followed in communication technology tools is analysed to identify sentiment expressed by users in online discussion. | This paper reviews the different factors of decision rule, including noise, the domain of subjects and sentences to draw an F-measure and precision for data comparison. |
| WANG <i>et al.</i> (2015) | Secondary research and algorithm-based analysis | Different journal article analyses and drawing " Algorithm for Interactive Learning " | ImbTreeEntropy and ImbTreeAUC are two decision rule packages used by experts in business organisations to analyse the interactive development of a decision tree. | This paper significantly outlines the difference in quality measures and decision rule models for cost-matrix and other financial analyses. |
| CARNEIRO <i>et al.</i> (2020) | Literature review of journals and algorithm | Application of " Multiple Criteria Decision Analysis Framework " based on the demand of entities and alternative evaluation of rejecting solutions | This implies that the evaluation matrix developed in the decision analysis framework considers the context of a topic and decision-makers beliefs before accepting an alternative decision solution. | This paper analyses whether decision analysis framework is significant to behaviour, decision-makers perception and entropy creation |
| ZĄBKOWSKI (2021) | Qualitative review | Identification of dominance-based " Decision information system " and " Rough set approach " | Set value decision analysis is significant to decision-based information system | This paper uses an algorithm and more than 31 peer-reviewed journal articles on decision trees and decision analysis systems for mathematically proving the efficiency of decision analysis. |
| Mello (2020) | Qualitative literature research | South African Public Service sector started to capture a wider social context following information and communication technologies (ICTs) aid. | Human resource officials of the South African public sector preferably follow the " PERSAL system " in coordination with ICT for modernised performance documentation and modernised information development system. | This paper evaluates comparative qualitative research to identify whether the South African public sector and public sector of other countries get overhauled by ICT applications. |

| | | | | |
|----------------------------------|--|---|---|---|
| Mayayise (2021) | Quantitative research and statistical analysis based on a valid sample size of 106 responses | Application of ICT and decision analysis requires hypothesis testing of dependent variables. | “behavioural intention of adopting BYOD” depends on decision making factors such as training and awareness, effort and expectancy and organisational requirements. | The article combines multiple data analyses based on primary research that gets real-time insight on the behavioural intention of employees on communication technology applications. |
| Freemanet al. (2020) | Quantitative analysis of collected 37 responses | Success in “Technology use scores” and “Intergenerational Connection using the communication technology” tool for instant message receiving and sending | The safety purpose of information sharing and the benefits of flexible accessibility are impediments to IT adoption. | This paper supports narratives of ICT implementation to match social trends and communication technology adoption. |
| Gabarronet al. (2018) | Cross-sectional study | social media promotes health education | Health promotion is necessary for improved lifestyle | This paper analyses the importance of health promotion in the older generation |
| AKHAVEINet al. (2021) | Z-DEMATEL and Z-VIKOR approach for project sustainability ranking | Z-number, fuzzy and Deterministic projects are determined based on the weight and sustainability criteria of the project | Theoretical application of decision support system is significant to attain deterministic data scenario. | This study supports the sustainable portfolio of decision analysis that can be implemented for communication technology projects. |
| RIBES and GONZÁLEZ-PACHÓN (2021) | Algorithm and literature- based analysis | There is a significant relationship between VIKOR analysis and Extended Goal Programming for social risk aversion | Utility function of a project needs both risk and fuzzy environment analysis | This paper analyses the socio-economic context of decision analysis for different projects. |

Table 2: Data synthesis table

(Source: Learner)

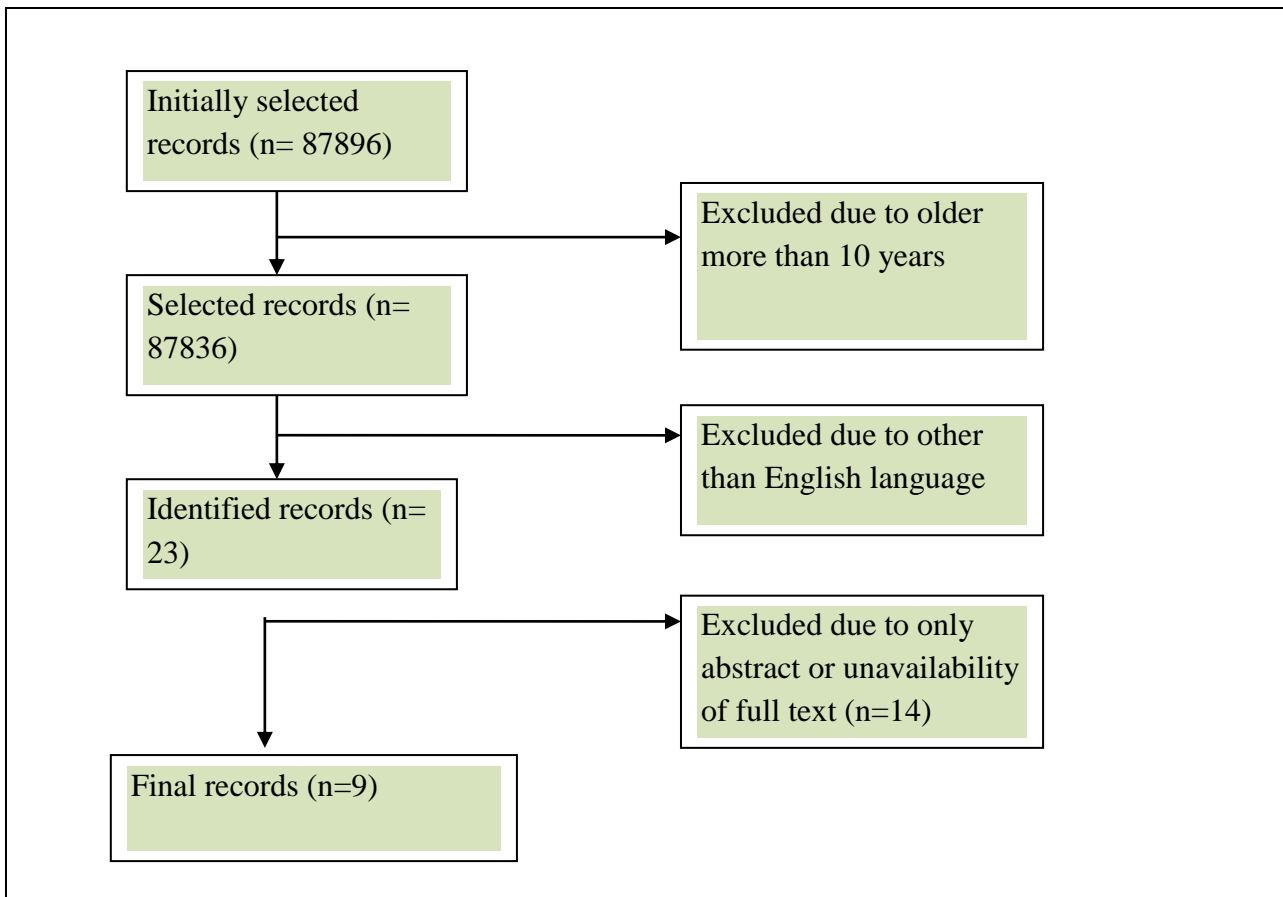


Figure 2: Prisma diagram

(Source: Learner)

| Author | Theme | Sub-theme |
|--|--|---|
| ASGHAR <i>et al.</i> (2017), WANG <i>et al.</i> (2015), CARNEIRO <i>et al.</i> (2020) and ZĄBKOWSKI (2021) | “Different decision rule and decision analysis framework are applied based on suitability of different algorithm based decision analysis.” | <ul style="list-style-type: none"> • “Cost matrix and interactive decision rule packages are applied supported by decision algorithm to implement set-value decision information system.” • “Online communication is significant to decision rule that analyses tone, noise and behaviour and decision makers ‘sentiment.’” |
| Mello (2020), Mayayise (2021) and Freeman <i>et al.</i> (2020) | “Application of modernised system of ICT bring benefits of confidential information sharing and flexibility if employee behavioural intention supports.” | <ul style="list-style-type: none"> • “Mandating organisational policy is significantly important to influence staffs and companies to accept BYOD’s intelligence software.” • “Information technology secures end-to-end information and message transfer which is a factor in organisational requirements.” |
| AKHAVEIN <i>et al.</i> (2021) and RIBES and GONZÁLEZ-PACHÓN (2021) | “Managerial decision analysis combines Z-VIKOR analysis including both financial and technological risk assessment of project scenario.” | <ul style="list-style-type: none"> • “Z -VIKOR analysis prioritise multi-criteria decision analysis minimising complexity of qualitative and quantitative analysis.” • “Risk aversion is associated with general conditions of organisation dimension optimisation.” |

Table 3: axial coding table

5. Analysis

5.1 Different decision rules and decision analysis frameworks are applied based on the suitability of different algorithm-based decision analysis

Business organisations apply the decision rule to interpret a set-value information system that helps in acquiring decision rules and discourse of decision-makers intension. ZĄBKOWSKI (2021) stated that disjunctive function and conjunctive function are two types of ordered information systems (OISs) that apply the classic set-value algorithm for systematic information system development. Thus, a finite set of information decisions set can be analysed to identify dominant relations between objects and inconsistent decision rules. Business organisations apply corresponding decision rules for special analysis of object discernibility functions. Upward decision classes can be applied for framework decision structure based on alternate behaviour criteria, social credibility and behavioural expertise. However, CARNEIRO *et al.* (2020) described that the decision-makers satisfaction depends on the choice of decision rule such as cost matrix that can be useful in putting algorithms of decision quality analysis. It is contextual that recommended decision alternatives can result in inconsistency of people making impulsive perceptions. Consistency matrix is applied to decision-maker's preferences and plausible reasons to think twice about aggregated data on preference.

$$CM_{dm_1} = \begin{bmatrix} 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & -3 & 0 & -4 & -4 & 0 & -4 \end{bmatrix}$$

$$CM_{dm_2} = \begin{bmatrix} -2 & 0 & 0 & 0 & -4 & 0 & 0 & 0 & 0 \\ -4 & -4 & 0 & 0 & -1 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 & -4 & -4 & 0 & 0 \end{bmatrix}$$

$$CM_{dm_3} = \begin{bmatrix} 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & -3 & 0 & -4 & -4 & 0 & -4 \end{bmatrix}$$

Figure 2: Consistency matrix (CM_{dmk}) in decision rule

(Source: CARNEIRO *et al.* 2020)

The consistency matrix in the image above is significant to present data on decision-makers alert and rule-based decision analysis. One of the biggest factors contributing to lifestyle matter behaviour is interactive construction that analyses two decision probabilities for a rule-based decision model. On the contrary, ASGHAR *et al.* (2017) argued that the capacity to learn, obtain, understand and process communication technology-induced information helps individuals participating make informed decisions. Besides, adherence to the treatment protocols and manual scoring while commercial decisions can be useful in participators' sentiment analysis. Opposingly, WANG *et al.* (2015) prioritise two R packages that construct interactive decision trees for visualisation functionalities based on a scratch of multiple decisions. Hence, numerical simulation using ImbTreeEntropy and ImbTreeAUC split ambidextrous situations uses class frequencies and probabilities covering various quality measures. However, decision trees can generate a rule-based decision model that deploys cost-sensitive thresholds while marking decisions. For instance, implementation of communication networks requires financial stabilities, technical literacy and assistance, and change communication with employees that must be included as factors for determining posterior probabilities. The depiction above shows that other decision analysis framework application differences in terms of intellectuality and domain knowledge. Although the accuracy of decision trees are compromised, their readability and understandability are highly appraised. However, change vision and digital technology adoption in an organisation helps people with equipment of skills and confidence, which they should be considering while controlling emotional conjunctions.

5.2 Application of modernised system of ICT bring benefits of confidential information sharing and flexibility if employee behavioural intention supports.

The unified theory of acceptance and use of technology (UTAUT) is a well-acknowledged model of technology acceptance decision analysis mostly used by banks and large multinational companies. According to Mayayise (2021), South African organisations offer preference to communication technology acceptance as it is the fastest and error-free way of effort expectancy (EE) and performance expectancy (PE) management. Furthermore, artificial Intelligence of Bring Your Own Device (BYOD) can meet security requirements of information sharing and corporate governance and meets the social influence of information security strategy following. Thus, 97% of South African companies successfully agreed to adopt BYOD policies, but 36% interpret that non-formalisation of BYOD policies alters employee perception for technological adoption. However, Mello (2020) argued that the South African public sector set examples that using online performance management system organisational milieu and culture can become technology dependent minimising individual professional efficiency rather than technological efficiency. Opposingly, Mayayise (2021) proved that rather than just technological adoption, the South African government mandates

compliance with ISO/IEC 27001 security standard for making BYOD a successful communication technology interface. Hence, functional IPV analysis can draw attention to consequence management and financial agility to support the installation of intelligent software that can act at a faster pace.

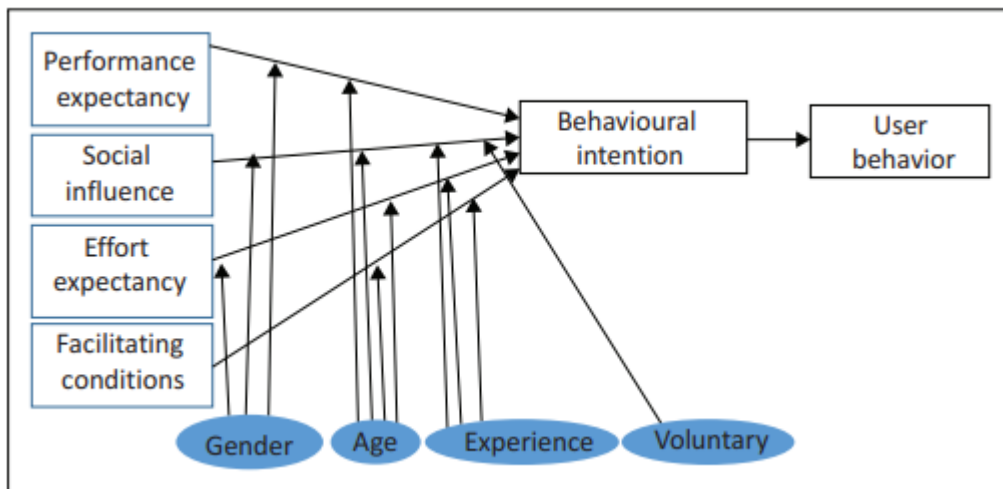


Figure 3: Significant factors of controlling users intention for technological

(Source: Mayayise, 2021)

The above figure depicts that the source of the user behaviour or intention to UTAUT adoption depends on facilitating conditions of the organisation, social influence, effort and performance expectancy (Mayayise, 2021). However, the result also suggests that scheduled face-to-face communication becomes a matter of convenient timing in the digital era and technology affordability becomes easy. Hence, in decision analysis, financial feasibility for technology adoption is a less influential factor than human sentiment analysis that is voluntary and of greater psycho-social influence. However, as per Freeman *et al.* (2020), managerial or leadership decision analysis is significantly important to execute change in hierarchical communication. A similar is witnessed in the UK and Canada, where communication technology and social media adoption rate was faster to mend the intergenerational gap and cross-cultural differences. In urban areas, organisations need to only analyse the cost matrix as a decision rule for technological adoption as technology acceptance and accessibility were higher than in rural regions. Presently, the decision regarding technology-based communication implementation in a business organisation is significantly important for any developing and developed economy. It can promote the growth of business organisations by alleviating poverty and greater the employment creation rate.

5.3 Managerial decision analysis combines both financial and risk assessment of project scenario.

Decision analysis for any project is developed on consequences that lead to a high expectancy-value of utility functions for decision efficiency. According to AKHAVEINet *et al.* (2021), the DEMATEL approach is applied on fuzzy datasets as it improves the reliability and probability of data. Contrarily, as stated by RIBES and GONZÁLEZ-PACHÓN (2021), the results of the same Z-data vary with different scenarios that help meet sustainability criteria. However, the significance weight obtained from Z-DEMATEL and Z-VIKOR showed that Z-VIKOR is more significant to yield reliable results than the DEMATEL approach.

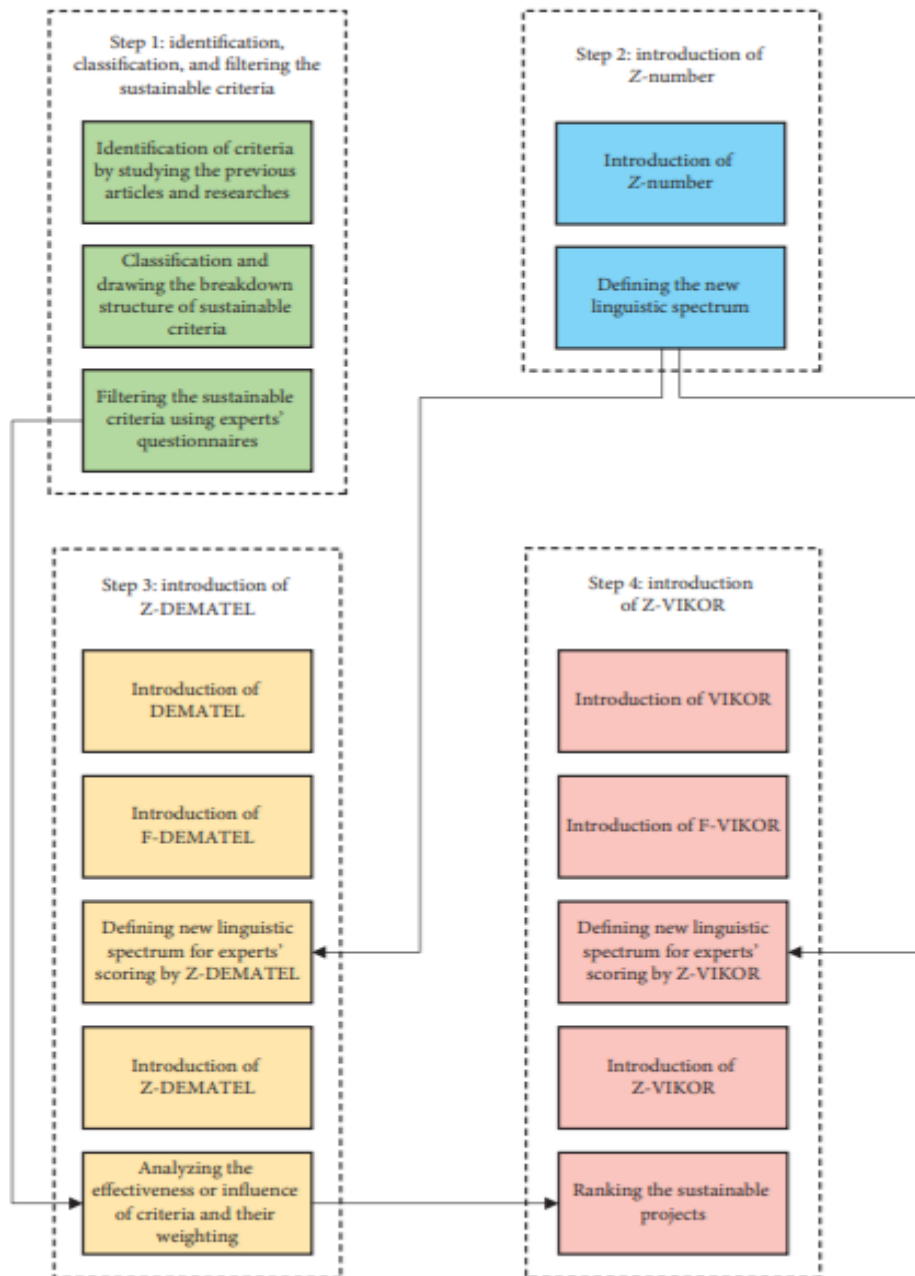


Figure 4: Z-number analysis based on different scenarios

(Source: AKHAVEINet al. 2021)

For instance, the above graph shows that in the case of economic, environmental and social scenarios, the Z-number significance value came 39%, 36% and 26% (AKHAVEINet al. 2021). Emoticon classifiers prioritise the integrated rule-based analysis for generating cross-domain sentiment analysis of individuals engaging in online communication. Hence, organisations need to consider the economic and environmental context to support the installation of a communication technology network such as an artificial or business intelligence network.

6. Discussion

The selected articles on decision and the associated factors have provided some critical insights into the effects of digital literacy and other socio-economic determinants. It is evident from the above analysis that decision trees and other online and offline tool packs develop sentiment and scenario analysis of different factors based on which decision regarding an issue depends. As commented by Hejaziet al. (2017), there is a significant relationship between cost analysis and algorithm-based cross-domain evaluation before technology change to a new communication technology network. Similarly, cognitive dynamics derived through sentiment analysis helps a specific person to control attitude and behaviours moulding towards technology acceptance. Thus, complications around change communication can be dissolved. Tshabalalaet al. (2021) equipping organisations with technology change requires leadership insights on decision analysis based on commercial human resources and technological domain.

7. Conclusion

Henceforth, it is evident from the above comparative analysis that communication technology adoption and respective decision rule of F-factor analysis and decision trees can be effectively managed through the help of providing digital literacy training and social psychological developments. By improving their self-reliance on individual abilities, patients can enhance control management. However, upper-middle-income countries like South African banks and public sectors started to adopt business intelligence and other communication technology abiding by ISO security standards and business dynamics.

8. Research Limitation

This research has been done on the basis of nine research articles within a secondary analysis boundary. However, a combination of decision rules applied to communication technology or any IT or business intelligence shifting research was missing. Moreover, a comparative analysis on different country contexts with different countries such as European and Asia countries should have comprehensively outlined this study.

9. Recommendation

It is recommended that a "*mixed decision-making approach (DEMATEL-VIKOR)*" should be introduced for decision rules so that effective results can be obtained by executing communication technology rather than just expenditure. *DEMATEL* helps management personalities in terms of delivering better decisions against emergencies. Moreover, this framework supports measuring a project in terms of sustainability indices for future risk assessment. Nkhoma *et al.* (2021) mentioned that breakdown analysis using the DEMATEL method pistons its knowledge base around managing technological complications if any accuracy issue arises from decision tree results and any complication witnessed during implementation. This also acts as a toolkit that assists the state health departments in terms of monitoring and tracking the growth rate of DM.

10. Future Scope

Future research should be attributed to technology-based solutions within the boundary of education and social health promotions. It is important that technologies are used for better delivery. Therefore, the use of artificial intelligence within the scope of providing fast and reliable commercial performance and efficiency assessment tools should be explored by future researchers in this same domain using decision frameworks such as UTAUT, cost matrix and IPV framework. Moreover, need analysis on technology-based AI solutions to prioritise cost-benefit conceptualisation of an exemplary aspect of the future study area.

Reference list

1. Ain, N., Vaia, G., DeLone, W.H. and Waheed, M., 2019. Two decades of research on business intelligence system adoption, utilisation and success—A systematic literature review. *Decision Support Systems*, 125, p.113113.
2. AKHAVEIN, A., REZAHOSEINI, A., RAMEZANI, A. and BAGHERPOUR, M., 2021. Ranking Sustainable Projects through an Innovative Hybrid DEMATEL-VIKOR Decision-Making Approach Using Z-Number. *Advances in Civil Engineering*, 2021, pp.1-30.
3. Alqallaf, H. and Alareeni, B., 2018. Evolving of selected integrated researching capitals among listed Bahraini banks. *International Journal of Business Ethics and Governance*, 1(1), pp.15-36.
4. ASGHAR, M.Z., KHAN, A., AHMAD, S., QASIM, M. and IMRAN, A.K., 2017. Lexicon-enhanced sentiment analysis framework using rule-based classification scheme. *PLoS One*, 12(2), e0171649.
5. Bvuma, S. and Marnewick, C., 2020. An information and communication technology adoption framework for small, medium and micro-enterprises operating in townships South Africa. *The Southern African Journal of Entrepreneurship and Small Business Management*, 12(1), pp.1-12.
6. Bvuma, S. and Marnewick, C., 2020. Sustainable livelihoods of township small, medium and micro enterprises towards growth and development. *Sustainability*, 12(8), p.3149.
7. CARNEIRO, J., MARTINHO, D., ALVES, P., CONCEIÇÃO, L., MARREIROS, G. and NOVAIS, P., 2020. A Multiple Criteria Decision Analysis Framework for Dispersed Group Decision-Making Contexts. *Applied Sciences*, 10(13), pp. 4614-4615.
8. Ferracuti, E. and Stubben, S.R., 2019. The role of financial researching in resolving uncertainty about corporate investment opportunities. *Journal of Accounting and Economics*, 68(2-3), p.101248.
9. Freeman, S., Marston, H. R., Olynick, J., Musselwhite, C., Kulczycki, C., Genoe, R., and Xiong, B., 2020. Intergenerational effects on the impacts of technology use in later life: Insights from an international, multi-site study. *International Journal of Environmental Research and Public Health*, 17(16), pp.5711-5712.

10. Gorshunov, M.A., Armenakis, A.A., Feild, H.S. and Vasant, B., 2020. The Sarbanes-Oxley Act of 2002: relationship to magnitude of financial corruption and corrupt organisational cultures. *Journal of Management*, 21(2), p.73.
11. Greenwood, B.N., Agarwal, R., Agarwal, R. and Gopal, A., 2019. The role of individual and organisational expertise in the adoption of new practices. *Organization Science*, 30(1), pp.191-213.
12. Mayayise, T., 2021. Extending unified theory of acceptance and use of technology with ISO/IEC 27001 security standard to investigate factors influencing bring your own device adoption in south africa. *South African Journal of Information Management*, 23(1), pp.1-9.
13. Mello, D. M., 2020. Exploring the use of information and communication technology in the implementation of a performance management and development system in the south african public service. *African Journal of Governance & Development*, 9(2), pp.585-598.
14. Mohajan, H.K., 2018. Qualitative research methodology in social sciences and related subjects. *Journal of Economic Development, Environment and People*, 7(1), pp.23-48.
15. Prewett, K. and Terry, A., 2018. COSO's updated enterprise risk management framework—A quest for depth and clarity. *Journal of Corporate Accounting & Finance*, 29(3), pp.16-23.
16. RIBES, J. and GONZÁLEZ-PACHÓN, J., 2021. Risk Attitude in Multicriteria Decision Analysis: A Compromise Approach. *International Journal of Environmental Research and Public Health*, 18(12), pp. 6536.
17. Schneider, P. and Sting, F.J., 2020. Employees' perspectives on digitalisation-induced change: Exploring frames of industry 4.0. *Academy of Management Discoveries*, 6(3), pp.406-435.
18. Snyder, H., 2019. Literature review as a research methodology: An overview and guidelines. *Journal of business research*, 104, pp.333-339.
19. Taherdoost, H., 2016. Determining sample size; how to calculate survey sample size. *International Journal of Economics and Management Systems*, 2.
20. WANG, H., GUAN, Y., HUANG, J. and SHEN, J., 2015. Decision Rules Acquisition for Inconsistent Disjunctive Set-Valued Ordered Decision Information Systems. *Mathematical Problems in Engineering*, 2015, pp.1-8.
21. ZĄBKOWSKI, T., 2021. Interactive Decision Tree Learning and Decision Rule Extraction Based on the ImbTreeEntropy and ImbTreeAUC Packages. *Processes*, 9(7), pp. 1107-1108.