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THE ROLE OF INFORMATION TECHNOLOGY INNOVATIONS ON ORGANISATIONAL PERFORMANCE: A CASE STUDY OF SELECTED SMES

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Abstract

Information technologies have been widely recognised for their capability to add certain value to organisations in terms of strategy and operation. Studies regarding SMEs and IT in different contexts across the nations of the world have shown that SMEs are confronted with technological issues leading to a low adoption rate of IT. This research propounds that IT innovation is an indispensable tool for gaining a competitive edge over business rivals.

This research presents empirical evidence to validate the existence of a positive influence of adopting IT innovations to improve organisational performance. This will be achieved by measuring variables, such as organisational performance and information technology using the balanced scorecard.

Both qualitative and quantitative research methods were used with multiple case study designs to attain the study objectives. Convenience sampling was used to select the participating SMEs, while purpose sampling was used to select the 47 participants that were interviewed. An interview guide was designed to have a semi-structured questionnaire. Data was transcribed, coded, analysed and interpreted using content analysis to provide transparency to the findings.

The findings of the study showed that SMEs rely on some IT innovations to manage and market their products and/or services. IT innovations bring about speed delivery and efficient communication, propagated by digital technologies

The role of IT innovations on organisational performance should not be discarded because non-usage of IT is tantamount to poor organisational growth.

Keywords: Information Technologies; SMEs, Dynamic Capabilities, Innovations, Environment, Organisational performance; Theory, Competitive advantage

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1. Introduction

Many SMEs in South Africa cannot afford to set up functional IT departments to support the daily technological needs of the organisation [1]. In this current Fourth Industrial Revolution (4IR), Information Technology (IT) has been widely acknowledged as a catalyst for the growth and development of SMEs. Many businesses make investments in Information Technology (IT) due to its influence on organisational performance. There are concerns about the effectiveness of IT investments, even as managers are mainly focused on measuring the benefits of IT [2]. SMEs serve as the key driver for the economic development of nations being enhanced by digital transition [3].

A relevant factor assisting SMEs to penetrate new markets innovatively by helping the business to grow rapidly is IT [4]. In 2019, SMEs in South Africa made up 91 % of businesses, provided over 60 % of the labour force, and accounted for 34 % of GDP [5].

Social value

This research contributes to the expanding literature on IT and SME performance because researchers, policymakers and managers will gain extensive and additional insights into the importance of adopting IT to influence innovation practices at an SME establishment.

Scientific value

This research aims to add scientific value by reaffirming and understanding previous research, done in relation to the current topic. Despite the wide assertion of the significance of Information Technology (IT) to a developing economy, previous studies have been deficient in specifying the relationship between IT and organisational performance in different sectors of South African SMEs. It is essential for SMEs in South Africa to adopt and use IT applications that are relevant to their business to improve their modus operandi with a view to enhancing service delivery and also retaining a large number of customers [6]. Seeing that IT innovations have been evolving in recent times, it is crucial to look beyond financial gains when analysing the influence of IT on SMEs. According to [7] organisational performance cannot be solely measured by productivity, but other factors contribute as well. The balanced scorecard is a holistic approach, which measures performance by providing a strategic view of how a business can be managed in line with an organisation's mission, vision, and strategy [8]. The four perspectives of the balanced scorecard were utilised to generate a holistic approach to measuring performance in relation to the adoption and use of IT applications by SMEs. The four perspectives of the balanced scorecard are customer; internal processes; innovation and learning; and financial perspective [8]. For this research, performance was measured using financial and non-financial stances in determining the relationship between the adoption and use of IT innovations by SMEs. The financial perspective had these dimensions: Increased cash flows; high return on investment; reduced operating costs [9]. The customer perspective was measured by employee and customer satisfaction [10, 11]. Internal business processes were measured by operational efficiency and effectiveness, and collaboration. Learning and growth were measured using skills and capabilities, which the employees had acquired via IT applications at their workplace.

Theoretical underpinnings

Theories, such as Diffusion of Innovations (DOI), Technology Acceptance Model (TAM) and Dynamic Capabilities, were adopted because they widen the perception of the role of IT innovations on organisational performance. The Diffusion of Innovations Theory (DOT) will explain the digital divide in SMEs in South Africa with respect to differences in the rate of adoption of basic, modern, and advanced IT innovation. The researcher adopted this theory to help understand the various trends and road maps in adopting IT innovations to enhance the performance of organisations.

The technology acceptance model explained and predicted the factors that are influential to technology adoption by individuals and organisations, amongst them are perceived usefulness; perceived ease of use; economic factors; outside influences from customers; suppliers and competitors; personal control factors on behaviour [12]. In this research, the TAM perceived benefits refer to the financial and non-financial gain, derived from enhanced SME performance whereas ease of use can be likened to the application of minimal efforts in using IT innovations by SME employees. This theory was adopted by the researcher because it can be used to successfully predict the adoption and use of IT innovations.

The Theory of Dynamic Capabilities (DCs) will be regarded as procedures and methods that capitalise on current resources and intellectual properties for collaborating and networking between customers, suppliers and partners of organisations. In this context, dynamic capabilities are a derivative of the abilities of SME employees to use various IT innovations in adapting to existing procedures and make an instant impact on those existing procedures in response to the ever-evolving business environment thereby leading to competitive advantage.

Aim and objectives

This research aims to evaluate the influence of IT innovations on organisational performance in the Western Cape. More specifically, the current research sought to assess the correlation between adopting IT innovations and SME performance in the Western Cape province of South Africa. The research question is as follows. What is the influence of the use of IT innovations on organisational performance?

1. 1. Literature review

This section is designed to discuss the social and scientific values of information technology in SMEs; information technology innovations and SME performance factors influencing the adoption of information technology by further revealing the contextual gap.

Information Technology Innovations and SMEs Performance

As reported by [13], IT involves software, hardware and networks that are used to collect, store, process, transmit and present information in the form of data, voice, images and texts. Relatively, IT has been referred to as any device that facilitates communication by capturing, processing and transmitting electronic information [14]. SMEs are recognised as an essential medium of economic growth due to their effect on consolidating the private sector's economic development and partnership [15]. Diversification of economic activities, such as the balance of payments; employment creation; and innovation of dynamic economies are powered by SMEs because they can adjust quickly to meet market demands [3].

IT empower SMEs to compete maximally in broader and more vibrant markets by making invaluable contributions to organisational performance [16]. IT has become an indispensable feature for SMEs and business environments in developing and developed countries in a way that information can be disseminated instantly, while ensuring that effective management of businesses is achieved [12, 17]. Though some researchers opined that IT innovations contribute immensely to organisational performance, some researchers still argue that it is not always the case [10]. This study explored the contextual gap in the IT productivity paradox to show the link between productivity and investment in IT. Different types of digital technologies are being utilised by SMEs for gaining a competitive edge in the global environment, some of these technologies are basic, modern, and advanced. The types and benefits of IT innovations, closely aligned with organisational performance [10], are as follows:

Inventory Management System: According to [18], the inventory management system is a software-based business solution that is utilised to concurrently track sales activity by keeping records of inflow and outflow of goods. Some merits of an inventory management system in an SME are: customer support services; the improved relationship between vendors and suppliers; highly organised warehouses; and high inventory turnover leading to greater profit margin [19]. A study, conducted by [20], found that most SMEs in the Western Cape province of South Africa are aware of the functions of the inventory management system, though there are challenges in making use of it extensively. In the researcher's opinion, the inventory management system is closely aligned with the diffusion of innovations theory because some SMEs in South Africa equip their departments with computers and internet access at the infusing stage. Therefore, the inventory management system was included in the interview question to find out the extent of its usage and its effect on SME performance.

Search Engine Optimisation (SEO): The main function of search engines is to connect users and websites [21]. Search engine optimisation enables organisations to pay for advertisements as they are listed on the advertised web page section with a high rank of clicks [22]. The benefits of a high-rank search engine optimisation to SMEs include: providing a long-term marketing approach; massive return on investment; providing real-time promotions on the website; and a high target of an entire marketing channel by reaching out to the organisation's targeted audience [23]. E-commerce businesses need to be ranked highly with search engine optimisation [24]. Research, conducted by [25], found that the practice of search engine optimisation can be used to increase the visibility of library contents to search engines. Another study, conducted by [26], found a positive correlation between search query data, position and business performance. This related literature on SEO could be used to predict organisational performance being measured by financial and non-financial gains.

Customer Relationship Management (CRM): The usage of technology to assemble the needed intelligence to provide enhanced support and services to one's customer is referred to as customer relationship management [27]. This connotes that customer relationship management (CRM) centres on how a business interacts with customers because gone are the days whereby people only saw CRM as a way of capturing information about customers [28]. CRM is worth the investment for SMEs in South Africa [29] because they are able to track their key performance indicators; provide real-time data access; ensure a single view of the customer and nurture leads with an optimised customer journey. There is some practical connection between customer journey and

consumer engagement [30]. Therefore, considering the importance of SMEs to the South African economy, this study aims to clearly examine the extent of social media usage and its influence on organisational performance.

Mobile Money System: Mobile money has been found capable of delivering banking services, such as deposits, storage, and other transactions via mobile applications, configured to serve alternative purposes [31]. Mobile money is a system that paves way for efficient payment, receipt and money storage through the use of a mobile phone, which has been perceived to be quick, convenient, versatile, low-cost and secure [32]. E-commerce has significantly contributed to the usage of this type of IT innovation in the sense that it can be used in many countries due to its benefits to business establishments. The global registered mobile money users were over 1 billion in 2019, and of which Sub-Saharan Africa has a total of 469 million registered users, which transacted about 23.8 billion times to the value of $456.3 billion, making it 66 % global total and hub of mobile money system [32, 33]. The researcher is poised to examine the extent of mobile money system usage amongst SMEs and the effect on organisational performance.

Human Resource Management (HRM): An organisation must have good ideas and a happy functioning team to execute the mission and strategy of the company, otherwise their chances of achieving success become very slim. Gone are the days whereby HR was seen as merely administrative duties. With the evolution of information technology, HRM has become strategic and analytical because leaders of business ventures or SMEs are tasked to be more proactive in creating and communicating their roadmap, they also need to invest in training and development, collect regular feedback, craft a good onboarding experience, and embrace technology [34]. A study, conducted in South Africa by [35], which investigated SME owners' perception of the importance of HRM, found that the majority of owners had HR practices in place, but were encountering challenges on how to increase the adoption of HRM practices for organisational performance. The benefits of using human resource information systems are an efficient and effective collection of data reports, and data storage thereby reducing labour costs and delivering timely and distinct information to the management of an organisation for the purpose of making outstanding strategic decisions that are related to human capital [36]. After going through the benefits, derived from this type of IT innovation, the researcher viewed HRM as dynamic capabilities (DCs) in the sense that they can be shaped through the human capital of an organisation with the aid of information technology. Therefore, the researcher has added HRM as an IT innovative tool to the research instrument for the purpose of finding out its extent of being utilised by SMEs and if there is a positive correlation it has with organisational performance.

Web Conferencing Systems: In SMEs, web conferencing enhances communication between supplier and customer. Web conference technologies allow real-time audio or video collaboration between multiple devices with the usage of mobile phones, PCs (personal computers) or laptops to join a single digital location [37]. There is an easy recording of sessions, which makes it highly inclusive for people across the globe to participate, irrespective of their origin, physical condition, and geographical location [38]. Web conferencing programs can be easily enriched with added tools like pre-recorded audios, videos and surveys [38]. Business application leaders who are liable for digital workplace applications deploy web conferencing systems to enhance face-to-face meeting activities with content collaboration to reduce geographical barriers for organisational communication; increase employee engagement for remote workers and team cohesiveness by making use of video to save time and money in other to curtail business travel and train remote participants in multiple locations thereby delivering departmental or corporate communication events [39], all of which can be useful for SMEs to function efficiently with low-costs. Theoretical context, such as diffusion of innovations theory, was adopted by the researcher as he included the web conferencing system on the list of IT innovations because the research objective is geared towards establishing the extent of use of web conference technologies by SMEs, and ascertaining the influence of its use on organisational performance.

Collaboration Tools and Task Management Systems: This kind of IT innovation allows an organisation to identify, plan, monitor, visualise, and analyse the workflow in a team, which ranges

from addressing the project tasks to the set-up of deadlines [40]. For projects or tasks to be more user-friendly and relevant for SMEs, they need to find solutions that are the right size for the right task thereby ensuring that such solutions are modest, immediate, significant and practical [41, 42]. Managing projects, tasks or a team can sometimes become delicate despite the size of the team or project. This type of IT innovation can be utilised by SMEs in South Africa for the purpose of addressing any kind of project issue as posited by [43]. Collaboration and task management system was considered vital to the research because they are dynamic capabilities, which can make an organisation have a competitive edge over their rivals.

Factors influencing the adoption of IT in South African SMEs

There are several factors that influence the adoption of information technology. This will be better understood through the lenses of some theories e.g. the Technology Acceptance Model and the Diffusions of Innovations theory. The most important factors are perceived usefulness and ease of use [12]. The information technology industry is ever-changing with new software and hardware applications hence it should advance with an evolving workforce and work environment [44]. Some challenges of information technology adoption and utilisation were found to be cost, managers' lack of familiarity with ITs, lack of IT skills amongst staff, and the inability of imported software packages to suit local needs [12]. Business organisations in developing countries, including parts of South Africa, lack technological capabilities and find it difficult to compete in the information economy [45]. In a separate study, [16] found that lack of confidence in IT security and privacy; perception of IT cost-benefit; lack of education and skills in IT have a negative impact on the adoption of these technologies. Some of the challenges, faced by SMEs and other businesses in the adoption of new technologies, are data breaches and data overload [44]. Many organisations are processing high volumes of data each day and as a result, they experience network downtime [44].

2. Materials and Methods

This study adopted both qualitative and quantitative research methods because it was explanatory with the main objective of investigating the real effect of adopting IT innovations on organisational performance. The research philosophy adopted was pragmatism because the nature of knowledge was determined by the research question. The multiple case strategy was chosen with a deductive approach because the research question was answered qualitatively and quantitatively to provide empirical evidence on SMEs' performance as a result of using IT innovations by testing the balanced scorecard theory.

Study Population and Sample

The study period was from 2019 to 2021 (2years period).

The study population comprised SME owner-managers, departmental managers, top-level executives and junior-level employees from each of the following industries: manufacturing; health and fitness; financial services provider; hospitality; audio-visual communication; business consultancy services; retail services; automotive sales; agriculture; education; auto-technical services; and pharmaceutical services. A total number of sixty participants were used as a sample, of which twenty-four men and twenty-three women were chosen to provide a balanced view of the gender figures in management.

Data Collection Instruments

The study utilised interviews and semi-structured questionnaires from a section of the interview guide for data collection. The researcher used reliable and previously validated instruments, which permitted validation of conclusions about the role of IT innovations on SME performance. A pilot study was conducted and the relevant corrections were made. Ethical approval was granted by the Faculty of Business and Management Sciences Research Ethics Committee at the Cape Peninsula University of Technology, number 2020FOBREC797, dated 10 September 2020. The principal researcher carried out interviews and handed out questionnaires to the participants. Informed consents were obtained from all study participants, they were briefed about the study, and informed about their rights to withdraw from the study if they felt any harm or threat. The interview ques-

tions and questionnaires did not pose any realistic risk of distress or discomfort, either physically or psychologically to the study participants.

The research instruments had five sections, sections A, B, C, D, and E. The structure of the sections is given below.

Section A: This contained personal information, including participants' knowledge and ease in using IT innovations relating to the Technology Acceptance Model (TAM).

Section B: This section assessed the extent of the use of IT innovations by SMEs. The items in this section were informed by the Technology Acceptance Model and the Diffusion of Innovations Theory (DIT).

Section C: This section contained questions, meant to identify challenges being encountered by SMEs in the adoption and use of IT innovations.

Section D: This section contained questions, designed to establish the effect of the adoption and use of IT innovations on organisational performance as informed by the Theory of Dynamic Capabilities (DCs).

Section E: Solicited recommendations for the improvement of the adoption of IT innovations by SMEs.

The interview guide was designed to have validity, reliability, and consistency. Research instruments were designed to measure what was intended to be measured. Therefore, this research measured the extent of adoption and use of IT innovations by SMEs, and the perceived influence of IT innovations on organisational performance.

Data Collection

The researcher scheduled interviews with SME employees and owner-managers to collect both qualitative and quantitative data at twelve selected SMEs in the Western Cape province of South Africa. In this study, a semi-structured interview guide was used. There were several options available to the researcher to conduct the interview depending on the preference of the interviewees due to the Covid-19 pandemic. The options included visiting the respondents' offices, telephonic calls, video calls on Zoom and/or Skype. The researcher conducted a total of forty-seven interviews. Data collection was carried out in a manner that ensured the information provided met the research objectives.

Data Coding and Analysis

Mixed methods were used to analyse data. Quantitatively, fixed responses were pre-coded prior to data collection, which made it easy to enter the responses onto an SPSS template for analysis. Frequency tables were generated using SPSS for interpretation to answer the research question. Pie charts and bar graphs were drawn to give a visual picture of the frequency distributions. Qualitatively, open-ended questions were analysed as the researcher engaged in sentence-by-sentence, reading, and assigning key concepts numerical codes for grouping. Microsoft Excel was used for the analysis of qualitative data because the number of respondents was limited.

3. Result and Discussion

This research looked at several measures of performance and produced an informed conclusion on the exact role of IT innovations on organisational performance. The results from table 1 below show that there was a fair representation of all gender groups in the study even as 51.1 % of the respondents were male and 48.9 % of the respondents were female. It further indicates that there is a high number of women in management. The results also show that age groups from 18 years and above were represented in the study. It is noticeable, that about 50 % of the respondents were between 18 and 40 years old, which makes the group to be considered technophiles. The information, derived from the respondents, is balanced and can be trusted. All the respondents have attained secondary education, whilst 89.4 % have acquired tertiary qualifications. It can be seen, that the majority of the respondents, which is 87.2 %, have been employed at the SME for more than one year, signifying that they have deep knowledge about their SMEs. It can also be seen, that the majority of the respondents representing 80.9 % had IT knowledge at the expert level, 17 % at a basic level, whilst 2.1 % had no knowledge of IT (**Table 1**).

Table 1
Respondents' Demographics

Characteristic	Attribute	Percentage
Gender	Male	51.1
	Female	48.9
Age	18–30	19.1
	31–40	29.8
	41–50	36.2
	51–60	14.9
Highest Educational Level	Secondary	10.6
	Tertiary	89.4
Service Years	Below 1 year	12.8
	1–5 years	34.0
	6–10 years	36.2
	Above 10 years	17.0
IT Knowledge	None	2.1
	Basic	17.0
	Expert	80.9

The researcher investigated to establish the extent of adoption and use of IT innovations by the SMEs understudy. The respondents were asked if their organisation had a well-established IT department and if the employees receive IT training. In a bid to gather more information and gain clarity on the study objective, the respondents were asked to indicate whether they make use of the various types of IT innovations, mentioned in the literature, such as: inventory management systems; search engine optimisation; customer relationship management; mobile money system; human resource management; web conferencing systems; collaboration tools and task management systems. Furthermore, the respondents were asked to indicate and explain if they make use of any other type of IT innovation, not mentioned in the interview guide.

Six of the twelve SMEs have a well-established IT department, while the other six SME do not have a well-established IT department. Thirty-eight respondents have expert knowledge in the use of IT innovations, whilst eight respondents have basic knowledge in the use of IT and one respondent does not possess any knowledge, demonstrating that the majority of respondents have knowledge of IT. The results show that all the SMEs in the study make use of basic IT innovations like email, word processing, WhatsApp, Spreadsheets, and social media networking platforms. Most SMEs do not use the recent IT innovations namely: inventory management systems, HRM and CRM systems, collaboration tools and task management systems, web conferencing systems and search engine optimisation. However, only a few respondents in SMEs 1, 3, 4, 6, 8 and 10 make use of the recent innovations, such as Inventory management systems, CRM and HRM systems, search engine optimisation, mobile money systems, and web conferencing systems, task management systems and collaboration tools. The results in this category are similar to the findings by [46] who found that there is low utilisation of recent IT innovations by SMEs. All participating SMEs in this study have adopted some form of IT innovations, but most SMEs are only adopting information technologies that were deemed appropriate for their business operations [47]. SMEs in South Africa had a high adoption rate of basic IT innovations, including websites and emails for the purpose of reducing costs and for convenience. A study by [48] established that regarding IT adoption, variables like a relative advantage, density and compatibility are connected. This means that the technology perspective is a notable determinant of the objective to adopt IT. Compatibility and relative advantage are the most important contributors [49]. Therefore, most SMEs understudy in the Western Cape has adopted basic IT innovations, such as Word Processing emailing, WhatsApp, and Spreadsheets. There is a different level in the adoption of recent IT innovations with only a few SMEs having adopted innovations, namely task management systems and collaboration tools, search engine optimisation, CRM and HRM systems, and inventory management systems. It can be seen, that the adoption and use of IT innovations by SMEs in the Western Cape is high especially for basic IT innovations and low for modern IT innovations.

Probing further on the research objective, the researcher asked the respondents to explain how and to what extent IT innovations are influencing their organisation in each of the following areas: Financial performance (profitability, reduced costs, increased cash flows, return on investment); Internal business processes (efficiency, operational effectiveness, productivity); Internal customers (employees' satisfaction); External Customers satisfaction; Learning and growth (Employee skills and knowledge); and explain other areas IT innovations are influencing their organisation.

The results revealed that customer and employee morale were enhanced by the usage of inventory management systems and CRM. This was supported by [50] arguing that IT adoption for SMEs can enable SMEs to steer their way to success by sustaining the trend of technological evolutions. The SMEs who adopted IT innovations in this study deployed them fully by benefiting through customer satisfaction, operational effectiveness, and efficiency in contrast to those [51, 52] who found that modern IT innovations adopted were not fully deployed by SMEs, even as the tools adopted were used as basics for business operations and they are not considered as an essential part of the business.

IT innovations are vibrant tools for the growth, development, and stability of SMEs. IT innovations also enabled these SMEs to synchronise their services by improving operational efficiency and effectiveness. IT innovations improved communication between management and staff, and between staff and customers as discovered by the respondents. The use of some social media networking platforms brought increases in terms of customer loyalty and retention, which improved employee morale through attaining set targets. Other benefits, derived from IT at the SMEs, were time-saving and cost reduction. It was also noted, that IT innovations increased efficiency in administrative and decision-making processes. Consequently, the adoption of IT innovations by SMEs enhanced organisational performance at the SMEs understudy, whilst the information, retrieved from all respondents, did not signify that the services they render do not have any form of correlation with IT innovations.

Limitations and Future Research. The study targeted only 60 participants at 12 SMEs in the Western Cape of South Africa because of time and cost constraints, but only 47 respondents were interviewed. 13 respondents could not be interviewed due to their unavailability, so the researcher had to interview 24 men and 23 women. The SMEs understudy emanated from the following sectors: manufacturing; health and fitness; financial services provider, hospitality, audio-visual communication, business consultancy, retail services, automotive sales, agriculture, education, auto-technical services, and pharmaceutical services. The study is both qualitative and quantitative, so the generalisation is limited to the immediate environment of study but can be useful in conducting further research when given time. The availability of the owner-managers and SME employees for interviews was a great challenge considering the fact that a larger sample of respondents would have been more ideal compared to the 47 respondents whose results are limited by size. The researcher recommends that IT innovation should be made a priority in the workplace, given its influence on organisational performance. SMEs should adopt and use IT innovations applicable to their business operation with a huge emphasis on skills training. Organisations should design and implement an IT strategic plan due to the dynamic environment, in which IT operates. Governmental agencies, policymakers, and stakeholders should ensure that adequate support, price regulation and funding are granted to SMEs to improve the adoption and use of IT. Family-run SMEs should ensure that they practice good governance by recruiting IT professionals in management positions. SME owner-managers must understand that the absence of IT innovation equals the absence of organisational growth.

Prospects for further research. The researcher further recommends that more research should be conducted based on the data collected, analysis, interpretation, and findings of this study. The study was only conducted at 12 SMEs in the Western Cape province of South Africa to examine and evaluate the influence of IT innovations on the performance of organisations. Conclusions were based on the findings from 47 respondents representing the 12 SMEs. A comparative study in different sectors, different provinces and different countries is recommended to establish the technological state of SMEs. Further areas of research should be done to quantify financial losses within an organisation, as well as how an organisation can be at a disadvantage to its rivals when IT innovation is not in use.

This study will contribute theoretically and practically to the body of knowledge on the evidence-based relationship between IT innovations and SME performance in a competitive market environment. This study will be beneficial to researchers and/or scholars by laying a foundation for SMEs in the South African context on how IT influences organisational performance. Finally, the researcher is expected to gain in-depth insights from the literature review to develop a solid foundation of research methods useful for further studies.

4. Conclusions

The research findings indicated that the study objective was met, and the research question was answered. The following can be concluded from this study: SME owner-managers and employees are aware of basic IT innovations; the adoption rate for basic IT innovations is high and low for current IT innovations. Internal, organisational, and personal factors have had a negative influence on the adoption and use of IT innovations because of deficient skills training and the dynamic environment, in which IT operates. The role of IT on organisational performance cannot be underrated, SMEs have had huge success, especially in financial growth where employees and customers gained satisfaction, and the internal business processes have been synchronised; these were attributed to the adoption and usage of IT innovations.

Conflict of interest

The authors declare that there is no conflict of interest in relation to this paper, as well as the published research results, including the financial aspect of conducting the research, obtaining and using its result, as well as any non-financial personal relationships.

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References

[1] Kondo, N., Oosterwyk, G., Van Belle, J.-P. (2022). Factors Influencing the Adoption of Infrastructure as a Service by South African Small and Medium-Sized Enterprises. Information Systems and Technologies Aargau, Cham: Springer, 253–262. doi: https://doi.org/10.1007/978-3-031-04829-6_22

[2] Mazidi, A. R. K., Amini, A., Latifi, M. (2014). The impact of Information Technology Capability on Firm Performance: a Focus on Employee Customer Profit Chain. Iranian Journal of Management Studies, 7 (1), 95–120.

[3] Enhancing the Contributions of SMEs in a Global and Digitalised Economy Meeting of the OECD Council at Ministerial Level Paris (2017). Paris: OECD, 21.

[4] Mgunda, M. I. (2019). The Impacts Information Technology On Business. Journal of International Conference Proceedings, 2 (3), 149–156. doi: https://doi.org/10.32535/jicp.v2i3.656

[5] The Banking Association South Africa (2019). The Banking Association South Africa. Available at: https://www.banking.org.za/what-we-do/sme/#:~:text=Small%20and%20Medium%20Enterprises%20(SMEs,Africa%20and%20around%20the%20world.&text=SMEs%20are%20considered%20an%20important,sector%20continues%20to%20shed%20jobs Last accessed: 05.10.2021

[6] Asare, E. N., Prempeh, K. B. (2017). An Empirical Assessment of Factors that Influence the Implementation of E-Procurement in Technical Universities in Ghana. Journal of Logistics Management, 6 (2), 52–60.

[7] Macdonald, S., Anderson, P., Kimbel, D. (2000). Measurement or Management?: Revisiting the Productivity Paradox of Information Technology. Vierteljahrshefte Zur Wirtschaftsforschung, 69 (4), 601–617. doi: https://doi.org/10.3790/vjh.69.4.601

[8] Benková, E., Gallo, P., Balogová, B., Nemec, J. (2020). Factors Affecting the Use of Balanced Scorecard in Measuring Company Performance. Sustainability, 12 (3). doi: https://doi.org/10.3390/su12031178

[9] Ardekani, S. S., Sharifabadi, A. M., Jalaly, M., Zarch, M. E. (2013). Comprehensive Performance Evaluation Using FAHP-FVIKOR Approach Based on Balanced Scorecard (BSC): A Case of Yazd's Ceramic and Tile Industry. Iranian Journal of Management Studies, 6 (2), 81–104.

[10] Ogwu, K. (2021). The Influence of Information Technology Innovations on the Performance of Organisations: a Case Study of Selected SMEs in the Western Cape. Cape Town: Cape Peninsula University of Technology.

[11] Panicker, S., Vinita, S. (2013). Devising a Balanced Scorecard to determine Standard Chartered Bank's Performance: A Case Study. International Journal of Business Research and Development, 2 (2), 35–42. doi: https://doi.org/10.24102/ijbrd.v2i2.286

[12] Nkosana, T., Skinner, J., Goodier, C. (2016). Challenges of ICT adoption and utilisation in small rural restaurants: a case study of the KwaZulu-Natal Midlands. African Journal of Hospitality, Tourism and Leisure, 5 (4), 1–11.

[13] Savani, F. (2022). What is Digital Information Technology in 2023? Tech Arbiters. Available at: https://techarbiters.com/digital-information-technology/#:~:text=August%203%2C%202021%20by%20Fenil%20Savani%20Digital%20Information,the%20form%20of%20images%2C%20texts%2C%20sounds%2C%20and%20videos Last accessed: 07.07.2022

[14] Okechi, O., Kepeghom, O. M. (2013). Empirical Evaluation of Customers' Use of Electronic Banking Systems in Nigeria. African Journal of Computing & ICT, 6 (1), 7–20.

[15] The importance of SMEs role in achieving sustainable development (2019). Sustainability Knowledge Group. Available at: https://sustainabilityknowledgegroup.com/the-importance-of-smes-role-in-sustainability/ Last accessed: 07.07.2022

[16] Osorio-Gallego, C., Londoño-Metaute, J., López-Zapata, E. (2016). Analysis of factors that influence the ICT adoption by SMEs in Colombia. Intangible Capital, 12 (2). doi: https://doi.org/10.3926/ic.726

[17] Nwakanma, I., Ubani, E., Asiegbu, B., Nwokonkwo, O. (2014). Factors Affecting the Adoption of ICT in the Hospitality Industry in Imo State. IJCSI International Journal of Computer Science Issues, 11 (4), 170–181.

[18] What is a sales and inventory management system? (2020). Digital School of Marketing. Available at: https://digitalschoolofmarketing.co.za/blog/what-is-a-sales-and-inventory-management-system/ Last accessed: 11.10.2021

[19] Jenkins, A. (2020). Benefits of Inventory Management and Inventory Management Systems. Oracle Netsuite. Available at: https://www.netsuite.com/portal/resource/articles/inventory-management/inventory-management-benefits.shtml Last accessed: 27.07.2021

[20] Ngubane, N., Mayekiso, S., Sikota, S., Fitshane, S., Matsoso, M., Juan-Pierré, B. (2015). Inventory Management Systems used by Manufacturing Small Medium and Micro Enterprises in Cape Town. Mediterranean Journal of Social Sciences, 6 (1), 382–390. doi: https://doi.org/10.5901/mjss.2015.v6n1p382

[21] Baye, M. R., De los Santos, B., Wildenbeest, M. R. (2015). Search Engine Optimization: What Drives Organic Traffic to Retail Sites? Journal of Economics & Management Strategy, 25 (1), 6–31. doi: https://doi.org/10.1111/jems.12141

[22] Charlesworth, A. (2014). An Introduction to Social Media Marketing. Oxfordshire: Routledge. doi: https://doi.org/10.4324/9780203727836

[23] Wahrman, J. (2020). The Top 10 Benefits of SEO for Your Business RivalMind. Available at: https://www.rivalmind.com/what-are-the-benefits-of-seo Last accessed: 04.01.2021

[24] Kent, P. (2012). Search Engine Optimisation for Dummies. Hoboken: Wiley and Sons.

[25] Onaifo, D., Rasmussen, P. D. (2013). Increasing Libraries' Content Findability on the Web with Search Engine Optimisation. Library Hi Tech, 31 (1), 87–108. doi: https://doi.org/10.1108/07378831311303958

[26] Vaughan, L. (2014). Discovering business information from search engine query data. Online Information Review, 38 (4), 562–574. doi: https://doi.org/10.1108/oir-08-2013-0190

[27] Pohludka, M., Štverková, H. (2019). The Best Practice of CRM Implementation for Small- and Medium-Sized Enterprises. Administrative Sciences, 9 (1), 22. doi: https://doi.org/10.3390/admsci9010022

[28] Alderton, M. (2021). Tips and Tricks to Using CRM for Customer Service Business News Daily. Available at: https://www.businessnewsdaily.com/10058-crm-customer-service.html Last accessed: 14.10.2021

[29] Lulalend (2021). Why your SMME should consider a Customer Relationship Management (CRM) system. South African Business. Available at: https://www.southafricanbusiness.co.za/06/2021/south-africa/why-your-smme-should-consider-a-customer-relationship-management-crm-system/ Last accessed: 14.10.2021

[30] Demmers, J., Weltevreden, J. W. J., van Dolen, W. M. (2020). Consumer Engagement with Brand Posts on Social Media in Consecutive Stages of the Customer Journey. International Journal of Electronic Commerce, 24 (1), 53–77. doi: https://doi.org/10.1080/10864415.2019.1683701

[31] Saunders, J. (2021). Mobile money has huge potential to change the lives of South Africans. IOL. Available at: https://www.iol.co.za/the-star/opinion-analysis/mobile-money-has-huge-potential-to-change-the-lives-of-south-africans-4d584c49-806b-40ac-88d4-e85e6210bd9a Last accessed: 18.10.2021

[32] Jooste, R. (2020). Mobile money making profits for mobile operators. Daily Maverick. Available at: https://www.dailymaverick.co.za/article/2020-09-03-mobile-money-making-profits-for-mobile-operators/ Last accessed: 18.10.2021

[33] State of the Industry Report on Mobile Money 2019 (2020). GSMA. Available at: https://www.gsma.com/mobilefordevelopment/resources/state-of-the-industry-report-on-mobile-money-2019/#:~:text=2019%20marked%20a%20major%20milestone,just%20over%20a%20decade%20old Last accessed: 18.10.2021

[34] Weeks, K. (2021). How To Approach Human Resource Management In SMEs. People Managing People. Available at: https://peoplemanagingpeople.com/topics/role-human-resource-management-small-medium-enterprises/ Last accessed: 18.10.2021

[35] Hung, Y.-T., C. Cant, M., A. Wiid, J. (2016). The importance of human resources management for small businesses in South Africa. Problems and Perspectives in Management, 14 (3), 232–238. doi: https://doi.org/10.21511/ppm.14(3-1).2016.09

[36] Dusmanescu, D., Bradic-Martinovic, A. (2011). The Role of Information Systems in Human Resource Management. IDEAS, 1–20.

[37] Vinikas, I. (2021). The Complete Guide to Web Conferencing Technology. Kaltura. Available at: https://corp.kaltura.com/blog/web-conferencing-guide/ Last accessed: 18.10.2021

[38] Diethart, M., Zimmermann, A. B., Mulà, I. (2019). Guidelines for Virtual Conferencing- inspired by the Copernicus Alliance Online Conference 2019. Bern, Copernicus Alliance – European Network on Higher Education for Sustainable Development.

[39] Mike, F., Eagle, T., Preset, A. (2019). Gartner: Magic Quadrant for Meeting Solutions. Available at: https://b2bsalescafe.files.wordpress.com/2019/09/gartner-magic-quadrant-for-meeting-solutions-september-2019.pdf Last accessed: 24.04.2020

[40] Osborne, K. (2021). 28 Best Task Management Software & Tools [2023] Nifty. Available at: https://niftypm.com/blog/12-best-task-management-software-for-small-businesses/# Last accessed: 18.10.2021

[41] Bersier, F. (2021). The Project Management Guide All SMEs Need Gmelius. Available at: https://gmelius.com/blog/project-management-guide-sme Last accessed: 18.10.2021

[42] Meister, W. (2006). Successful Project Management for Small to Medium Enterprises (SMEs). Bangkok: Project Management Institute.

[43] Freefind, 2019. Best project management software in South Africa. Freefind Business. Available at: https://www.freefind.co.za/best-project-management-software-in-south-africa/ Last accessed: 30.07.2021

[44] Basic Concepts in Information Technology (2017). Network Depot. Information Technology Concepts. Available at: https://www.networkdepot.com/information-technology-concepts/ Last accessed: 25.11.2018

[45] Chinyanyu Mpofu, K., Watkins-Mathys, L. (2011). Understanding ICT adoption in the small firm sector in Southern Africa. Journal of Systems and Information Technology, 13 (2), 179–199. doi: https://doi.org/10.1108/13287261111136007

[46] Pillay, P. (2016). Barriers to Information and Communication Technology (ICT) Adoption and Use Amongst SMEs: A Study of the South African Manufacturing Sector. Johannesburg: University of the Witwatersand.

[47] Cant, M. C., Wiid, J. A. (2013). Establishing The Challenges Affecting South African SMEs. International Business & Economics Research Journal (IBER), 12 (6), 707–716. doi: https://doi.org/10.19030/iber.v12i6.7869

[48] Jere, J. N., Ngidi, N. (2020). A Technology, Organisation and Environment Framework Analysis of Information and Communication Technology Adoption by Small and Medium Enterprises in Pietermaritzburg. SA Journal of Information Management, 22 (1). doi: https://doi.org/10.4102/sajim.v22i1.1166

[49] Gareeb, P. P., Naicker, V. (2015). Determinants for South African SMEs to Adopt Broadband Internet Technologies. The Electronic Journal of Information Systems in Developing Countries, 68 (1), 1–24. doi: https://doi.org/10.1002/j.1681-4835.2015.tb00491.x

[50] Enagi, M. A., Van Belle, J.-P. (2019). Information Searching and Satisficing Process for IT Decision Making Process of SMEs. The African Journal of Information Systems, 11 (2), 99–116. doi: https://doi.org/10.1145/3176653.3176689

[51] Marnewick, C. (2014). Information and communications technology adoption amongst township micro and small business: The case of Soweto. SA Journal of Information Management, 16 (1). doi: https://doi.org/10.4102/sajim.v16i1.618

[52] B Bvuma, S., Marnewick, C. (2020). Sustainable Livelihoods of Township Small, Medium and Micro Enterprises towards Growth and Development. Sustainability, 12 (8), 3149. doi: https://doi.org/10.3390/su12083149

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