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**INFORMATION TECHNOLOGY CAPABILITIES AND SME PERFORMANCE IN KENYA: A REVIEW OF LITERATURE**

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## INFORMATION TECHNOLOGY CAPABILITIES AND SME PERFORMANCE IN KENYA: A REVIEW OF LITERATURE

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### ABSTRACT

*In all emerging nations, the emergence of SMEs is crucial because they foster economic growth and enhance income distribution, productivity, efficiency, and economic structure in tough times. SMEs' capacity for innovation allows them to adapt to changes in the pace of information technology and the preferences of new clients. The development outcomes from SMEs' adoption of IT must be integrated with the companies' operations. Redesigning a website needs to be integrated with how SMEs operate. The ability of SMEs to tap into technological capabilities remains crucial to their survival by creating an edge of their rivals and also leveraging on the benefits that follow such investments. Most SMEs are yet to consider the use of ICT to enhance the performance of their business, crippling and eventually eliminating them because of their inability to compete against major establishments. This study therefore sought to explore information technology capabilities on the performance of SMEs. The general objective of this study was to investigate the influence of information technology on the performance of SMEs. The specific objectives of this study were: to determine the influence of information technology capability on performance of SMEs in Kenya, to establish the influence of absorptive capacity on performance of SMEs, to explore the influence of firm size on performance of SMEs. This study targeted research articles related to ICT capabilities and performance of SMEs. Convenience sampling was considered and research materials were analyzed as they became available to the researcher. The studies indicated a low uptake of ICT by SMEs especially in least developed countries. This therefore implied that there is need for these firms to leverage on existing technologies, especially the ones who cost is negligible so as to improve their competitiveness. The results of this study guided SMEs to leverage on innovative technologies with the aim of not only improving their workflows, but also with the aim of improving their position in the market.*

**Key words:** ICT Capabilities, SME performance, Absorptive capacity

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## INTRODUCTION

The use of IT by business organizations has dominated all sectors, whether big or small enterprises. The performance and crucial success elements of SMEs are the subject of a lot of research due to their significance in the new economy. (Wu, 2009). Small and medium-sized businesses (SMEs), who are less advantaged in terms of operational resources than giant corporations and are more susceptible to external environmental influences, can benefit particularly from the strategic use of IT. IT can assist small businesses in being more productive, efficient, and innovative so they may overcome their restrictions and successfully compete with their larger competitors. (Kim & Jee, 2007)

In all emerging nations, the emergence of SMEs is crucial because they foster economic growth and enhance income distribution, productivity, efficiency, and economic structure in tough times. (Khairudin & Mohammad, 2020)

SMEs' capacity for innovation allows them to adapt to changes in the pace of information technology and the preferences of new clients. The openness part of innovation begins with the exchange of knowledge and information between SMEs. When innovation talents are seen as a key competitive resource, it can lead to higher performance. (Effendi et al., 2021)

Most SMEs operate in a climate of intense competition, thus it's critical to optimize company procedures. It is thought that performance measurement (PM) technologies can aid in spotting flaws, outlining goals and initiatives, and enhancing management procedures. (Wu, 2009)

The development outcomes from SMEs' adoption of IT must be integrated with the companies' operations. Redesigning a website needs to be integrated with how SMEs operate. It seems that SMEs and the people within them have a very distinct viewpoint on how to use IT development, how to promote IT, and what results to expect. (Khairudin & Mohammad, 2020)

According to existing data, small and medium-sized businesses are a vital and dynamic component of the economy in the majority of nations. Additionally, SMEs account for more than half of all businesses and more than half of all employment in developed countries. (Tarutė & Gatautis, 2014)

The behavioral traits of SMEs are what makes them strong, not their physical resources. They are distinguished first and foremost by the drive of their management, specialized and creative efforts, and the blending of personal and professional concerns. Despite having little market influence, they are close to their customers and offer customization capabilities, reduced bureaucracy, and quick, informal communication channels. Their internal organizational structure is typically flatter than that of big businesses, encouraging flexibility and originality; additionally, their human resources' tacit knowledge is challenging to replicate. Their organizational structure is particularly informal, as are the management systems. (Verbano & Crema, 2015)

The proliferation of the foregoing processes was significantly impacted by the quick development of information and communication technology (later referred to as ICT), which transforms the current company structures and communication channels. It is well known that for businesses, organizations, and even entire nations that are able to utilize them, the adoption and use of ICT represent cornerstones of competitiveness and economic progress. (Tarutė & Gatautis, 2014)

Automation of repetitive activities is now possible in areas including production, distribution, sales, after-sales support, and inventory control. Automation adoption and utilization assist SMEs in lowering transaction costs, enhancing product quality and efficiency, enhancing customer service, reaching out to new clients and suppliers in current markets, and expanding into new ones. Technology plays a significant role in the cross-border and domestic product mobility of SMEs. Previous research has shown that SMEs' use of technology improves business performance in terms of cost

savings, increased productivity, as well as better revenue and profitability. (Emmanuel, 2017)

As a result, the scant amount of research on ICT adoption and its consequences on SMEs has been a sign that these companies have just lately begun to employ ICTs. (Taruté & Gatautis, 2014)

### **Statement of the Problem**

It is widely known that micro, small, and medium-sized businesses significantly contribute to economic growth, job creation, productivity, and innovation. Despite the recent attention that MSMEs have received, many of them do not survive to mark their first birthday, while others experience growth that is stagnant. Numerous factors, including a lack of funds caused by a lack of collateral and a high-interest rate, may be to blame for this. (Karitu et al., 2023)

The readiness of SMEs to implement information technology depends on a variety of factors: customer pressure has emerged as one of the key elements. In addition to client demand, factors affecting willingness to adopt information technology include the overall convenience of use, need, and the cost of investment. (Nugroho et al., 2017)

According to a research by Chege and Wang (2020), technology advancements have a favorable impact on the creation of jobs in small enterprises and serve as a catalyst for economic growth. Small businesses' competitiveness and ability to access global markets are significantly impacted by their successful use of information technology. Therefore, it is advised that the government create technology-driven innovative strategies for small businesses in order to actualize their firm performance and improve job creation.

A study conducted by (Gitau, 2022) concluded that the IT staff and managers of businesses should actively engage with business units to foster efficient information technology utilization through the exchange of business-related knowledge. Managers of businesses should spend money planning, organizing, coordinating, and controlling

how they use IT. Increased firm performance and competitiveness will result from such interventions.

In a study conducted by (Eze et al., 2018), they found out that before looking for and acquiring new ICT, it's crucial to consult with employees, clients, and other internal actors. Making judgments on ICT is challenging, and business owners finding it tough to adapt to the new technology due to doubts. Employees, market consumers, technology standards, competition, regulatory responses, IT-driven changes in operational and transactional performance, as well as future market situations, are among the unknowns connected with IT decision-making. SME owners must therefore acquire information to reduce these risks (such as staff expenses, large-scale infrastructure development required for technology investment decisions, customer acceptance requirements, and personnel and training costs).

ICT adoption was examined by traditional theorists from static, linear, and utilitarian viewpoints (Ajzen and Fishbein, 1980; Davis, 1989; Rogers, 1995). Although these viewpoints sparked scholarly interest, they have come under fire for ignoring the intricate activities of SMEs and, more importantly, the large number of stakeholders involved in the process. (Sunday & Vera, 2018)

The ability of SMEs to tap into technological capabilities remains crucial to their survival by creating an edge of their rivals and also leveraging on the benefits that follow such investments. Most SMEs are yet to consider the use of ICT to enhance the performance of their business, crippling and eventually eliminating them because of their inability to compete against major establishments. This study therefore sought to explore information technology capabilities on the performance of SMEs.

### **Objective of the study**

The general objective of this study was to investigate the influence of information technology on the performance of SMEs. The specific objectives of this study were: to determine the influence of

information technology capability on performance of SMEs in Kenya, to establish the influence of absorptive capacity on performance of SMEs and to explore the influence of firm size on performance of SMEs.

## **METHODOLOGY**

This article reviewed published journal articles in journal databases; Taylor and Francis Online, Emerald Insight and Springer link. Studies considered were up to the year 2023. Studies included were linked to ICT Capability and performance of SMEs. Quantitative study designs as well as studies that had reviewed literature were included. Studies that involved either of the variables with unrelated information were excluded from the review. This study targeted research articles related to ICT capabilities and performance of SMEs. The scope was not limited to the local context, but studies from other locations around the globe were considered. This is because most researchers who have taken interest in this subject are from developed nations, where the use of technology and new innovation is more rampant compared to developing nations.

A lot has been done in this area, though there is a limitation in accessing some articles that are not available on open access, but require a subscription. For this reason, convenience sampling was considered and research materials were analyzed as they became available to the researcher. This is also an area that authors have considered quite extensively. A total of eight articles were picked to inform the findings of the study.

## **FINDINGS AND DISCUSSION**

Kumar et al (2020) carried out a research on exploring the relationship between ICT, SCM practices and organizational performance in agri-food supply chain. The findings of their study show a significant link between ICT and SCM practices (supplier relationships and logistical integration). Additionally, SCM techniques (information exchange, supplier relationships, and logistical integration) significantly and favorably affect an

organization's performance. As dimensions of agri-food SCM, the study solely included information quality, information exchange, logistical integration, and supplier relationships. To determine whether these SCM principles are universally relevant to other industries, more research is required.

Tarutė and Gatautis (2014) studied ICT Impact on SMEs Performance. The results of their study show that it is crucial to match ICT investments with internal capabilities and organizational procedures for the best results. As a result, metrics for strategic (operational) success include measures of both improvements and satisfaction, as well as changes in the company's economic activities. The study also supports the notion that ICT has a significant influence on SMEs' ability to innovate and that ICT has an impact on the enhancement of internal and external communication. The actual advances in technology are not as significant as the resulting social and economic developments. In addition to examining features of ICT adoption and its consequences for SMEs, future studies should examine the potential implications of ICT adoption and implementation for clusters of businesses. Some authors provided information about potential ICT effects on joint ventures that had not before been theorized about or actually examined. ICT impact on cluster performance is thought to be a very interesting trend for upcoming studies. This study only reviewed literature, there is therefore need for future studies in this area to involve collection and analysis of data.

Gërguri-Rashiti et al (2017) studied ICT, Innovation and Firm Performance: The Transition Economies Context. Their study revealed that ICT represents how businesses interact and carry out operations in the global marketplace in transition economies. Utilizing the potential of innovation activities for firm success is crucial for researchers and managers of ICT businesses. Managers must support an environment that fosters innovation as more businesses place an emphasis on the connection between their inventive skills and ICT plans. The study relied on secondary data, future studies

should consider the use of primary data to confirm if the results would be consistent with the finding of this study.

Khalil and Belitski (2020) carried out a study on Dynamic capabilities for firm performance under the information technology governance framework. Their findings concluded that managers should first concentrate on creating digital dynamic capabilities with a stronger emphasis on digital skills in the management and strategic spheres of IT governance. IT governance procedures are crucial due to the significant impact that digital capabilities have on the production of product value. Second, they found out that increasing the effectiveness of the company's information systems, prioritizing IT spending, promoting information literacy, and empowering managers to make informed decisions are all components of efficient IT governance. This study used cross-sectional data. More realistic modeling and improved understanding of how changes to IT governance frameworks affect corporate performance would be provided by employing panel data.

Chege et al (2019) carried out a study on impact of information technology innovation on firm performance in Kenya. The results of their shows that technological innovation has a favorable impact on business performance. According to the survey, entrepreneurs should create cutting-edge plans to improve business performance.

Government policy should focus on enhancing the ICT infrastructure, supporting the technical externalities of SMEs within the industry, and building ICT resource hubs to promote the performance of SMEs. The sampling method used in the study to choose respondents has drawbacks for the generalizability of the findings. Other methods of gathering primary data for the research should be considered.

Kijkasiwat and Phuensane (2020) conducted a study on innovation and firm performance: the moderating and mediating roles of firm size and small and medium enterprise finance. The results

demonstrate that SMEs' access to financing has a beneficial effect on their performance. When the economy is doing better, access to financial resources is even more important for business success.

The researchers only considered the moderating and mediating roles of firm size and small and medium enterprise finance. A consideration of other factors with a mediating or moderator role should be considered.

Kang'ethe et al (2021) carried out a research on Influence of ICT Support Practices and Logistical Management on the Performance of Oil Companies in Kenya. The findings showed that the use of ICT iterated supply chains significantly decreased waste in a number of sectors. Additionally, oil corporations were able to save on warehousing space as a result of improved route management. Overall, oil businesses in Kenya were getting an edge over the competitors and the entire business benefited from an integrated supply chain. Oil firms in Kenya may accomplish this considerably more swiftly and easily with an integrated supply chain than they could with a conventional logistics approach. This study was only limited to the oil sector, a comparative study with companies in other industries would have provided a good basis for the conclusion on whether it is only oil companies that were lacking in this area.

In their study on Small business awareness and adoption of state-of-the-art technologies in emerging and developing markets, and lessons from the COVID-19 pandemic, Akpan et al (2022) reported that recognized technologies and technical advancements that seem innovative in advanced economies have existed for a long time. Most cutting-edge technologies, such as cloud computing, "big data," and predictive analytics, which can enhance operations and strategic decisions, have not yet made significant inroads inside most emerging markets and developing economies (EMDEs). Also unexplored are the disruptive computer technologies, data analytics, and Internet of Things (IoT) needed to create new

business models, lower costs, improve competitive advantages, and modernize SME business operations. This study involved a review of literature. Future research should consider a study involving the collection of primary data. So as to allow quantitative methods of analysis. Comparative analysis between developed and undeveloped economies would be of benefit considering that the two are not at par where technology adoption is concerned

Gitau, (2022) carried out a study on Information Technology Capability and Performance of Manufacturing Firms in Nairobi City County, Kenya. Her study concluded that IT capabilities specifically, IT infrastructure, IT staff, IT management, and IT reconfiguration have a favorable impact on corporate performance. The study also concluded that the effect of IT competence on firm performance is partially and largely mediated by competitive advantage. Furthermore, rather than serving as a moderating factor, company size is now an explanatory factor. Firm size was ineffective in regulating this association. This study was only limited to Nairobi county, more counties should be included to check for their consistency with her findings and for the generalizability of the study.

## CONCLUSIONS AND RECOMMENDATIONS

The aim of this study was to determine the influence of information technology on the performance of SMEs in Kenya. The studies indicate a low uptake of ICT by SMEs especially in least developed countries.

There are different ICT tools that are available to boost the sustainability of SMEs in a highly

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competitive environment and to ensure that they have an edge of their rivals. However, as indicated by the studies that have been reviewed, the uptake of these technologies differs between developed and underdeveloped nations, in spite of what can be realized when they are properly utilized and the resulting performance of SMEs. Reviewed literature indicates that very little has been done especially within the local setup in investigating the influence of IT on performance of SMES. This therefore implies that this is an area that warrants investigation and where future researchers would bring to the fore new information.

Most of the studies done have considered other industries, especially the developed ones with very little focus of SMEs. Therefore there is need to expend resources to this area so as to ensure that these firms also benefit. This is where a majority of the jobs are and any improvements would contribute significantly to the growth of these firms. This therefore implies that there is need for these firms to leverage on existing technologies, especially the ones whose cost is negligible so as to improve on their competitiveness.

The results of this study will guide SMEs to leverage on innovative technologies with the aim of not only improving their workflows, but also with the aim of improving their position in the market.

The role of government should be to put in place measures that will make it possible for firms to put up such infrastructure. Subsidies should be offered to ensure that firms benefit from new innovations.

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