# ASSESSMENT OF THE USE OF ICT IN PROMOTING SMALL AND MEDIUM SCALE BUSINESS IN ILORIN METROPOLIS, NIGERIA

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## Abstract
*The increasing importance of digital technologies in business operations has raised concerns about the extent to which Small and Medium Scale Enterprises (SMEs) in Ilorin metropolis are leveraging Information and Communication Technology (ICT) for growth and sustainability. This study investigated the use of ICT in promoting SMEs in Ilorin metropolis, Nigeria. The objectives were to examine commonly used ICT tools, assess the influence of ICT adoption on SME performance, identify challenges to ICT utilization, and determine effective strategies for improving ICT use. A descriptive survey research design was employed. The population consisted of 8,450 registered SMEs, from which 400 SME owners and managers were sampled using purposive and snowball sampling techniques. A structured questionnaire served as the research instrument, and data collected were analyzed using descriptive statistics. The results showed that SMEs predominantly used POS machines, mobile banking, social media platforms, and internet services for business operations. ICT adoption significantly enhanced sales growth, market reach, customer satisfaction, and business efficiency. However, challenges such as cyber fraud concerns, lack of ICT competence, high cost of technology, and erratic electricity supply constrained effective usage. The study concluded that ICT adoption positively influences SME performance in Ilorin metropolis. It was recommended that policy-makers introduce ICT incentives, improve power infrastructure, and organize capacity-building programmes to strengthen digital competence among SME operators.*

**Keywords:** Assessment, Use, ICT, Promote, SME Business, Ilorin, Nigeria

## Introduction
Small and Medium Enterprises (SMEs) play a dynamic and indispensable role in the socio-economic development of developing countries. They contribute significantly to economic growth through the creation of innovative and creative employment opportunities, the promotion of entrepreneurship, and the stimulation of industrial development. SMEs are commonly defined using both quantitative and qualitative criteria. According to Omiunu et al. (2021), SMEs are business organizations that operate on a small to medium scale and are characterized by indicators such as number of employees, annual turnover, and asset value, as well as ownership structure and managerial independence. Similarly, Aremu and Adeyemi (2022) defined small and medium enterprises in Nigeria according to asset base and a number of staff employed. The criteria are an asset base that is between ₦5 million to ₦500 million and a staff strength that is between 11 and 100 employees.

Globally, SMEs are widely recognized as engines of innovation and creativity. They serve as breeding grounds for new ideas, technologies, and business models that

enhance productivity and competitiveness within national economies. Omiunu et al. (2021) emphasize that SMEs introduce innovative products and services that respond to local needs while also contributing to gross domestic product (GDP). Through their innovation-driven activities, SMEs strengthen value chains, support large enterprises, and improve overall economic efficiency. In both developed and developing countries, SMEs play a critical role in diffusing innovation and driving inclusive growth, particularly because they often operate in sectors neglected by large corporations. In addition, SMEs are major sources of employment worldwide. Empirical studies by Napitupulu et al. (2018) and Niebel (2018) indicate that SMEs absorb a substantial proportion of the labour force, including youths and low-skilled workers, thereby reducing unemployment and social exclusion. Their labour-intensive nature makes them especially important in developing economies where job creation remains a pressing challenge.

In the Nigeria, small and medium-scale enterprises constitute the backbone of the private sector. SMEs account for approximately 90% of all registered businesses in the country and provide livelihoods for a large proportion of the population (Okundaye, Fan, & Dwyer, 2019; Adanlawo et al., 2021). They operate across diverse sectors such as manufacturing, agriculture, trade, services, and information and communication technology (ICT), and they serve as major sources of employment for youths and women in both urban and rural areas. SMEs also promote the decentralization of economic activities by encouraging local entrepreneurship and reducing over-dependence on large corporations.

The limited contribution of SMEs to national output in Nigeria has been attributed to several structural and operational challenges. Prominent among these is limited access to finance, as many SMEs are unable to secure affordable credit due to stringent collateral requirements, high interest rates, and weak financial support systems (Aremu & Adeyemi, 2022). Inadequate infrastructure, including unreliable electricity supply, poor transportation networks, and limited internet penetration, further increases operational costs and reduces business efficiency (Olowookere et al., 2021). In addition, poor managerial capacity, manifested in weak business planning, inadequate financial management skills, and limited marketing expertise, restricts SMEs' ability to scale operations and innovate effectively. The regulatory and policy environment also poses significant challenges, as frequent policy changes, bureaucratic bottlenecks, and weak enforcement of business laws create uncertainty and instability for small businesses. Collectively, these constraints significantly limit the growth potential of SMEs in Nigeria despite their widespread presence (Abdu & Galoji, 2022; Olowookere et al., 2021). In spite of the enormousity of these challenges, the effective adoption of Information and Communication Technology (ICT) has been identified as a critical tool for addressing many of these challenges and promoting SME development.

Information and Communication Technology (ICT) refers to the integration and use of digital technologies for the collection, processing, storage, retrieval, transmission, and dissemination of information (UNESCO, 2018). ICT encompasses a wide range of tools and resources, including computers, mobile devices, internet services, software applications, telecommunications networks, and digital media. Beyond standalone computing, ICT emphasizes communication and connectivity, enabling

individuals and organizations to interact, share information, and collaborate efficiently across geographical boundaries (Kozma, 2019; UNESCO, 2018). In this context, ICT in SMEs refers to the everyday digital tools and systems used by business owners to manage operations more effectively. These include computers, smartphones, internet services, accounting and inventory software, cloud-based platforms, and digital communication tools. Through ICT, SMEs can record transactions, manage information, communicate with customers and suppliers, and coordinate business activities more efficiently. Scholars argue that effective ICT utilization enhances information handling and supports improved managerial control in small enterprises (Apulu & Latham, 2020; OECD, 2020).

For many SMEs, ICT provides practical solutions to common challenges such as limited manpower, high operating costs, and slow decision-making processes. By automating routine tasks and improving internal communication, ICT enables SMEs to save time, reduce errors, and enhance overall efficiency. Empirical evidence suggests that SMEs that adopt ICT are better positioned to improve productivity and remain competitive, even in challenging economic environments (Afolayan et al., 2020; Bharati & Chaudhury, 2019). Furthermore, ICT plays a crucial role in marketing and customer relationship management. Through digital platforms such as social media, websites, and online marketplaces, SMEs can promote their products, engage directly with customers, and expand beyond their immediate geographical locations. These technologies allow businesses to better understand customer needs and respond more rapidly to market changes, thereby supporting innovation and long-term sustainability (OECD, 2020; World Bank, 2021).

In the contemporary knowledge economy, ICT has significantly enhanced the performance and global relevance of SMEs in countries such as India, the Republic of Korea, Taiwan, and China by transforming how small businesses operate, innovate, and access markets. SMEs in these economies utilise digital technologies—including cloud computing, e-commerce platforms, enterprise information systems, and data analytics—to improve operational efficiency, reduce production and transaction costs, and respond quickly to changing customer demands, thereby increasing productivity and competitiveness (Ayandibu & Houghton, 2017; He et al., 2021). In India, ICT-enabled service delivery and outsourcing have allowed SMEs to participate in international markets without heavy capital investment, while in Korea and Taiwan, digital manufacturing and design technologies have supported SME integration into high-tech global value chains. Similarly, Chinese SMEs leverage expansive e-commerce ecosystems and mobile payment technologies to scale rapidly, reach wider customer bases, and drive innovation in retail and manufacturing sectors. These experiences demonstrate that ICT adoption directly empowers SMEs to expand market reach, enhance innovation capacity, and contribute more substantially to national economic growth (Johannesson & Jorgensen, 2017; He et al., 2021).

In developing countries such as Nigeria, ICT has become increasingly important for the survival, growth, and resilience of SMEs. It supports business formalization, improves access to financial services, and facilitates integration into wider economic networks. Although challenges such as inadequate infrastructure, limited digital skills, and high technology costs continue to constrain ICT adoption, available evidence indicates that SMEs that effectively utilize ICT contribute more meaningfully to

economic development. Consequently, ICT is widely regarded as a key driver of SME growth and national economic development (Apulu & Latham, 2020; World Bank, 2021). Based on this premise, the study assessed the use of ICT to promote small and medium scale business in Ilorin metropolis, Nigeria.

**Statement of the Problem**

Small and Medium Scale Enterprises (SMEs) are vital to Nigeria's economy, providing jobs, fostering entrepreneurship, and driving local development. In today's digital age, Information and Communication Technology (ICT) has the potential to transform how businesses operate by improving efficiency, expanding market reach, and enhancing competitiveness. For SMEs in Ilorin metropolis, leveraging ICT may enhance business operations through improved record-keeping, easier communication with customers, and access to wider market opportunities. Studies have shown that the adoption of digital tools can improve efficiency, innovation, and competitiveness among small businesses, particularly in developing economies where SMEs constitute a major driver of economic growth (World Bank, 2019; OECD, 2020).

However, despite these potential benefits, many SMEs in Ilorin may still rely largely on traditional methods of business management. The continued use of paper-based records, face-to-face marketing, and manual financial tracking has been noted in several Nigerian SME contexts as factors that can limit scalability and operational efficiency (Eze, Chinedu-Eze, & Bello, 2019). In addition, challenges such as limited digital skills, high costs associated with acquiring ICT tools, poor internet connectivity, and unreliable electricity supply might hinder effective ICT adoption among SMEs.

Although there is growing interest in the role of ICT for SMEs in Nigeria (Abdu & Galoji, 2022; Omiunu et al., 2021; Okundaye et al., 2019), there is little research that focuses specifically on Ilorin metropolis. This makes it difficult to understand how local SMEs are using technology, what challenges they are facing, and how ICT could realistically support their growth. Therefore, this study sought to assess of the use of ICT in promoting small and medium scale business in Ilorin metropolis, Nigeria.

**Objectives of the Study**

The main objective of the study was to assess the use of Information and Communication Technology (ICT) in promoting Small and Medium Scale Enterprises (SMEs) in Ilorin metropolis, Nigeria. Specifically, the study:

1. identified the types of ICT tools commonly used by SMEs in Ilorin.
2. examined the influence of ICT adoption on the performance and growth of SMEs.
3. investigated the challenges faced by SMEs in adopting and utilizing ICT.
4. identified strategies for enhancing ICT adoption among SMEs to improve business sustainability and competitiveness.

**Research Questions**

Based on the objectives of the study, the following research questions were raised and answered in this study:

1. What types of ICT tools are commonly used by SMEs in Ilorin metropolis?
2. How does the adoption of ICT influence the performance and growth of SMEs in Ilorin?

3. What are the challenges facing SMEs in adopting and utilizing ICT for business operations in Ilorin metropolis?
4. What strategies can enhance the effective use of ICT among SMEs in Ilorin?

**Methodology**

This study adopted a descriptive survey design because it allows for gathering detailed information directly from the people running SMEs in Ilorin. The population of this study comprised all registered Small and Medium Enterprises (SMEs) operating within Ilorin metropolis, Kwara State, Nigeria. According to the Kwara State Ministry of Commerce and Industry and the Small and Medium Enterprises Development Agency of Nigeria (SMEDAN), there are approximately 8,450 registered SMEs in Ilorin. These businesses operate across diverse sectors, including retail, services, manufacturing, and agriculture. Given the large population, it was not practical to collect data from all SMEs. Therefore, a total of 400 SME owners and managers were selected to participate in the study. These individuals were chosen because they are directly involved in the day-to-day operations of their businesses and have experience using ICT tools.

The selection of 400 respondents from a population of 8,450 SMEs was not arbitrary; it was guided by established statistical procedures for determining representative sample sizes in survey research.

A commonly used formula for finite populations is Yamane's (1967) sample size determination formula:

$$n = \frac{N}{1 + N(e)^2}$$

where: n = required sample size; N = population size; and e = level of precision (sampling error),

Substituting the values:

$$n = \frac{8450}{1 + 8450\ (0.05)^2}$$

$$n = \frac{8450}{1+8450\ (0.0025)}$$

$$n = \frac{8450}{1+21.125}$$

$$n = \frac{8450}{22.125}$$

$$n = 382$$

This calculation shows that a minimum of 382 respondents would adequately represent the population at a 95% confidence level with a 5% margin of error. The researchers increased the sample size to 400 in order to cater for attrition. To ensure that the 400 selected SME owners and managers were effectively reached, a multi-stage sampling procedure which include the combination of official records, field visits, stratified, snowball and purposive sampling were employed. At stage one, Ilorin metropolis was divided into major geographical strata based on the three Local Government Areas (LGAs) that constitute the city which are Ilorin West, Ilorin East, and Ilorin South. At stage two, the official registers of SMEs maintained by the Kwara State Ministry of Commerce and Industry and the Small and Medium Enterprises Development Agency of Nigeria (SMEDAN) were consulted. These registers provided basic information about registered businesses and their owners, serving as a

reliable starting point for the study. Next, business associations and trade groups within Ilorin, such as retailers' unions and sector-specific organizations, were contacted. These groups assisted in identifying active business owners and managers willing to participate. At third stage, field visits were conducted to major commercial areas and business hubs, including markets, industrial clusters, and shopping districts, allowing the researcher to meet SME owners in person. Also, A snowballing approach was used whereby initial respondents referred other business owners or managers in their networks who met the study criteria. At last stage purposive sampling was used to selected managers and SME owners at various SMEs location within Ilorin metropolis.

**Instrumentation**

Data for the study were collected using a researcher-designed questionnaire to capture relevant information from SME owners and managers. The questionnaire items were developed from an extensive review of related literature on ICT adoption and business performance. The questionnaire was divided into four sections. The first section collected demographic information, including age, gender, type of business, and years of operation (section A). Section B focused on ICT tools usage, asking participants about the types of digital tools and platforms they employ in their business operations. Section C examined the impact of ICT on business performance. Section D addressed challenges of ICT adoption, and Section E examined the strategies for enhancing effective ICT use.

All items in the questionnaire were measured using a four-point Likert scale, ranging from 1 = Strongly Disagree, 2 = Disagree, 3 = Agree, to 4 = Strongly Agree. This scale was selected to eliminate neutral responses and encourage participants to make clear judgments. The initial questionnaire consisted of 25 items. To ensure content validity, the instrument was reviewed by five experts in business management and ICT, who assessed the items for clarity, relevance, and alignment with the study objectives. Based on their feedback, minor adjustments were made, resulting in a final validated instrument of 20 items, which was considered clear, appropriate, and suitable for data collection.

For reliability, a pilot test was conducted with 30 SME owners outside the selected sample area. Responses from the pilot study were analyzed using Cronbach's alpha, and a reliability coefficient of 0.82 was obtained which indicate that the instrument was internally consistent and suitable for the main study.

Questionnaires were administered in person at the business locations of the respondents. Participants were briefed on the purpose of the study and assured of confidentiality. Follow-up visits were conducted where necessary to clarify questions and ensure a high response rate and completeness of data.

Ethical considerations were observed throughout the study. Participants provided informed consent and were assured of confidentiality, anonymity, and their right to withdraw at any time. Data were securely handled to protect participants' privacy, and all procedures were designed to minimize potential harm.

Data collected were analyzed using descriptive statistics of percentage to described demographic data of the respondents while mean rating and standard deviations was used to answer research questions. The mean score of 2.50 was used as benchmark.

Any item with the mean score of 2.50 and above was considered as ICT tool commonly used; challenges faced by SMEs; and strategy for enhancing ICT and vice versa. An average mean score of 2.50 was used to determine the influence of ICT adoption on the performance and growth of SMEs. An average mean score of 2.50 indicated positive influence while below 2.50 indicated negative influence.

**Results**

Out of 400 questionnaire forms administered, only 393 questionnaire forms were accounted for and used for this study.

**Table 1:** Percentage Distribution of Respondents' Demographic Data

| Variable | Category | Frequency (N) | Percentage (%) |
|---|---|---|---|
| **Gender** | Female | 225 | 57.3 |
| | Male | 168 | 42.7 |
| **Age** | Below 25 years | 67 | 17.0 |
| | 25–34 years | 70 | 17.8 |
| | 35–44 years | 84 | 21.4 |
| | 45–54 years | 83 | 21.1 |
| | 55 years and above | 89 | 22.6 |
| **Type of Business** | Trading | 152 | 38.7 |
| | Agriculture | 91 | 23.2 |
| | Services | 77 | 19.6 |
| | Manufacturing | 73 | 18.6 |
| **Years of Business Operation** | Less than 5 years | 63 | 16.0 |
| | 5–8 years | 59 | 15.0 |
| | 10–14 years | 163 | 41.5 |
| | 15 years and above | 108 | 27.5 |

Table 1 showed that majority of the respondents were female with 57.3% (N=225) followed by male with 42.7% (N = 168). This suggests a higher level of female participation in SME activities within the study area. Respondents aged 55 years and above constituted the largest proportion at 22.6% (N = 89), followed by those aged 35–44 years with 21.4% (N = 84) and 45–54 years with 21.1% (N = 83). Those aged 25–34 years accounted for 17.8% (N = 70), while respondents below 25 years represented the smallest group at 17.0% (N = 67). This distribution indicates that SME operators in the study area are predominantly adults with considerable life and business experience. With respect to the type of business operated by respondents,

trading was the most common, representing 38.7% (N = 152) of the respondents. This was followed by agriculture at 23.2% (N = 91), services at 19.6% (N = 77), and manufacturing at 18.6% (N = 73). The dominance of trading businesses suggests that commercial activities remain the backbone of SME operations in the area. Regarding years of business operation, a proportion of respondents had been in business for 10–14 years, accounting for 41.5% (N = 163). This was followed by those who had operated for 15 years and above with 27.5% (N = 108). Respondents with less than 5 years of business experience constituted 16.0% (N = 63), while those with 5–8 years accounted for 15.0% (N = 59). This suggests that most of the SMEs surveyed were relatively well-established, with many years of operational experience.

**Research Question One:** What types of ICT tools are commonly used by SMEs in Ilorin metropolis?

**Table 1:**
*Mean, Standard Deviation and Rank Order showing the Types of ICT Tools Commonly Used by the Respondents*

| Item No | Item | Mean | S.D. | Rank |
|---|---|---|---|---|
| 5 | Electronic payment tools such as POS or mobile banking are used in my business | 3.09 | .928 | 1st |
| 4 | Social media platforms are used to advertise my products or services | 3.01 | .961 | 2nd |
| 3 | Internet services are regularly used for sourcing information relevant to my business | 2.70 | 1.04 | 3rd |
| 1 | My business relies on mobile phones for daily communication with customers and suppliers | 2.50 | .855 | 4th |
| 2 | Computers or laptops are used to keep business records in my enterprise | 1.79 | 1.14 | 5th |

***Benchmark: 2.50***

Table 1 presents the mean scores, standard deviations, and rank order of the types of ICT tools commonly used by the respondents. The table shows that item 5 ranked 1st, item 4 ranked 2nd, and item 3 ranked 3rd. This implies that the most commonly used ICT tools among SMEs in Ilorin metropolis are electronic payment tools such as POS and mobile banking, social media platforms for advertising products and services, and internet services for sourcing business-related information.

**Research Question Two:** How does the adoption of ICT influence the performance and growth of SMEs in Ilorin?

**Table 2:**
*Mean, Standard Deviation and Rank Order showing the Influence of ICT Adoption on the Performance and Growth of SMEs*

| Item No | Item | Mean | S.D. | Rank |
|---|---|---|---|---|
| 2 | ICT adoption has contributed to increased sales in my business | 3.15 | .776 | 1st |
| 5 | ICT usage has enhanced the growth and competitiveness of my enterprise | 3.05 | .986 | 2nd |
| 4 | Customer satisfaction has improved due to ICT usage | 3.03 | .978 | 3rd |
| 3 | ICT has helped my business attract more customers within and outside Ilorin | 3.02 | 1.02 | 4th |
| 1 | The use of ICT has improved the efficiency of my business operations | 2.92 | .919 | 5th |
| | Average Mean | 3.03 | | |

***Benchmark: 2.50 and above = positive influence; below 2.50 = negative influence***

Table 2 shows the mean scores, standard deviations, and rank order of respondents' views on the influence of ICT adoption on SME performance and growth. The Table indicated the average mean score of 3.03, which is above the benchmark of 2.50. This implies that ICT adoption has a positive influence on the performance and growth of SMEs in Ilorin as it enhances sales, competitiveness, customer satisfaction, and overall business efficiency.

**Research Question Three:** What are the challenges facing SMEs in adopting and utilizing ICT for business operations in Ilorin metropolis?

**Table 3:**
*Mean, Standard Deviation and Rank Order showing the Challenges facing the SMEs in Adopting and Utilizing ICT for Business Operation*

| Item No | Item | Mean | S.D. | Rank |
|---|---|---|---|---|
| 5 | Fear of cyber fraud discourages full ICT adoption | 3.14 | .982 | 1st |
| 3 | Lack of adequate ICT skills is a major challenge in my business | 3.10 | .992 | 2nd |
| 4 | Unstable electricity supply hinders effective use of ICT tools | 3.05 | 1.02 | 3rd |
| 1 | High cost of ICT equipment limits adoption in my business | 3.02 | 1.05 | 4th |
| 2 | High cost of data affects effective ICT usage | 2.93 | .991 | 5th |

***Benchmark: 2.50***

Table 3 presents the mean scores, standard deviations, and rank order of the challenges faced by SMEs in adopting and using ICT. The table shows that item 5 ranked 1st, item 3 ranked 2nd, and item 4 ranked 3rd. This implies that the major challenges confronting SMEs in Ilorin metropolis are fear of cyber fraud, lack of adequate ICT skills, and unstable electricity supply, which hinder the effective adoption and utilization of ICT tools in their business operations. Other challenges reported were the high cost of ICT equipment and high cost of data, were ranked 4th and 5th, indicating they are also significant but slightly less critical.

**Research Question Four:** What strategies can enhance the effective use of ICT among SMEs in Ilorin?

**Table 4:**
*Mean, Standard Deviation and Rank Order showing the Strategies that Enhance the Effective Use of ICT among SMEs*

| Item No | Item | Mean | S.D. | Rank |
|---|---|---|---|---|
| 4 | Access to technical support will improve SME performance | 3.11 | .926 | 1st |
| 2 | Government support and incentives will encourage ICT adoption | 3.09 | .986 | 2nd |
| 3 | Affordable and reliable internet services will enhance ICT usage | 3.07 | .930 | 3rd |
| 1 | Regular ICT training programmes will improve ICT usage among SMEs | 3.06 | 1.04 | 4th |
| 5 | Improved electricity supply will enhance ICT utilization in Ilorin | 3.02 | 1.01 | 5th |

***Benchmark: 2.50***

Table 4 presents the mean scores, standard deviations, and rank order of strategies that can enhance the effective use of ICT among SMEs. The table shows that item 4 ranked 1st, item 2 ranked 2nd, and item 3 ranked 3rd. This implies that the most effective strategies for improving ICT usage among SMEs in Ilorin metropolis are access to technical support, government support and incentives, and affordable and reliable internet services.

**Discussion**

The finding of the study revealed that the most commonly used ICT tools among SMEs in Ilorin metropolis are electronic payment tools such as POS and mobile banking; social media platforms for advertising products and services; and internet services for sourcing business-related information. This suggests that SMEs are primarily leveraging digital technologies that directly support transactions, market visibility, and business intelligence. In essence, rather than adopting complex enterprise systems, these businesses focus on ICT tools that enable easier customer payments, a broader market reach, and ready access to information to inform decisions. The reason for this finding could be as a result of the increasing push toward digital financial systems by policymakers in Nigeria (e.g., cashless policy) encourages SMEs to adopt ICT-enabled payments and online platforms to remain competitive and integrated into the broader economy. The finding supports the study of Hitlar et al. (2025) who found that digital financial technologies enhance operational efficiency and revenue generation among small businesses. Similarly, Etim et al. (2023) found that Nigerian SMEs that actively utilize social media experience improved market visibility and customer engagement. Ukoha et al. (2025) noted that internet usage among Nigerian micro and small enterprises significantly improves market awareness and innovation capacity.

Another finding showed that ICT adoption has a positive influence on the performance and growth of SMEs in Ilorin as it enhances sales, competitiveness, customer satisfaction, and overall business efficiency. This finding indicates that the adoption of Information and Communication Technology (ICT) contributes

significantly to the improved performance and growth of Small and Medium Enterprises (SMEs). One major reason for this outcome is that ICT improves market access and visibility. Through digital platforms and online marketing, SMEs can promote their products and services beyond their immediate geographical locations, thereby increasing sales and competitiveness. The finding aligns with the study of Okundaye et al. (2019) who found that ICT adoption significantly enhances SME performance by improving operational efficiency, innovation, and market reach, particularly in developing economies. Similarly, Afolayan et al. (2020) reported that SMEs using digital technologies experienced improved productivity, competitiveness, and customer responsiveness, which translated into business growth. In the Nigerian context, Adanlawo et al (2021) observed that ICT utilization positively influenced SME sales growth and customer satisfaction by enabling better communication and service delivery.

The finding of the study also revealed that the major challenges confronting SMEs in Ilorin metropolis are fear of cyber fraud, lack of adequate ICT skills, and unstable electricity supply, which hinder the effective adoption and utilization of ICT tools in their business operations. The finding implies that although ICT has the potential to improve the efficiency, competitiveness, and growth of SMEs, its effective adoption is significantly constrained by structural, human, and security-related barriers. One major reason for this finding is the increasing incidence of cybercrime in developing economies, including Nigeria, which heightens SME owners' anxiety about online transactions, data breaches, and financial losses. In addition, limited access to formal ICT training and capacity-building programmes means that many SME operators rely on basic digital skills, which are inadequate for advanced business applications such as e-commerce, digital accounting, and online marketing. The finding of the study corroborates with the study of Adebisi and Akinbobola (2019) who reported that fear of cyber fraud significantly reduced SMEs' willingness to adopt e-commerce platforms in Nigeria. Similarly, Ogunleye et al. (2020) found that inadequate ICT skills among SME operators limited the effective use of digital accounting, marketing, and inventory systems. In the same vein, Yakubu and Dasuki (2021) identified erratic electricity supply as a major infrastructural barrier to ICT utilization among SMEs in urban and semi-urban areas of Nigeria.

Another finding of the study showed that the most effective strategies for improving ICT usage among SMEs in Ilorin metropolis are access to technical support, government support and incentives, and affordable and reliable internet services. This finding implies that Small and Medium Enterprises (SMEs) are more likely to adopt and effectively use Information and Communication Technology (ICT) when the necessary enabling conditions are in place. One major reason for this finding is that many SMEs, particularly in developing economies like Nigeria, operate with limited financial, human, and technical resources. Without access to technical support, business owners may lack the skills required to effectively use ICT tools, leading to underutilization or abandonment of such technologies. The finding is in line with the study of Abubakar and Ahmad (2021) who reported that access to technical support significantly improved ICT usage among SMEs by reducing system failures and enhancing user competence. In a related study, Eze et al. (2019) observed that affordable and reliable internet connectivity was a critical determinant of ICT-driven business performance, particularly in customer relations and market expansion.

However, some studies present a contrasting perspective. For example, Adegbite and Machethe (2020) argued that although external support and infrastructure are important, internal factors such as entrepreneurial orientation and digital competence exert a stronger influence on ICT usage.

**Conclusion**

This study concluded that Small and Medium Enterprises (SMEs) in Ilorin metropolis have increasingly integrated ICT into their business operations, with electronic payment systems such as Point of Sale (POS) terminals and mobile banking, social media platforms for marketing, and internet services for accessing business information emerging as the most commonly utilized tools. These technologies have become central to day-to-day business activities, reflecting their practicality and relevance in a rapidly digitizing business environment. The findings further establish that ICT adoption exerts a positive and significant influence on the performance and growth of SMEs in Ilorin metropolis. By improving sales transactions, enhancing competitiveness, strengthening customer satisfaction, and increasing overall operational efficiency, ICT serves as a critical driver of business sustainability and expansion. This underscores the strategic importance of digital technologies for SMEs seeking to remain viable in an increasingly competitive marketplace.

Despite these benefits, the study reveals that SMEs in Ilorin metropolis face notable challenges that constrain effective ICT adoption. Prominent among these are fear of cyber fraud, inadequate ICT skills, and unstable electricity supply. These constraints not only limit the extent to which SMEs can leverage digital tools but also discourage deeper investment in ICT infrastructure and innovation. In response to these challenges, the study concludes that improving ICT usage among SMEs in Ilorin metropolis requires deliberate and coordinated interventions. Access to reliable technical support, sustained government support and incentives, and the provision of affordable and dependable internet services are identified as the most effective strategies for enhancing ICT adoption. Implementing these measures will strengthen SMEs' digital capacity, reduce operational risks, and ultimately contribute to improved productivity, growth, and economic development within the metropolis.

**Recommendations**

Based on the findings of this study, the following recommendations are proposed to enhance the effective adoption and utilization of ICT among SMEs in Ilorin metropolis:

1. Government agencies, business associations, and ICT service providers should establish accessible and affordable technical support services for SMEs. Regular on-site and remote support will help address operational challenges, minimize system downtime, and build confidence in the use of ICT tools.
2. Structured training programmes and workshops should be organized to improve the ICT competence of SME owners and employees. Emphasis should be placed on practical digital skills, cybersecurity awareness, and the effective use of electronic payment systems and social media platforms for business growth.
3. To reduce the fear of cyber fraud, stakeholders should promote awareness of safe digital practices and provide SMEs with access to basic cybersecurity

tools. Financial institutions and regulators should also strengthen consumer protection frameworks to build trust in electronic transactions.

4. Policymakers should prioritize the provision of stable and reliable electricity supply, particularly in commercial clusters where SMEs are concentrated.
5. Government at both state and local levels should introduce targeted incentives, such as tax reliefs, grants, and subsidized ICT equipment, to encourage ICT adoption among SMEs. Supportive policies will reduce the cost burden and stimulate greater investment in digital technologies.
6. Telecommunication companies, in collaboration with government, should expand broadband infrastructure and offer affordable data plans tailored to SMEs. Reliable and low-cost internet services will enable SMEs to fully leverage online platforms for marketing, communication, and information sourcing.
7. Financial institutions, development agencies, and SME support organizations should collaborate to provide funding schemes and advisory services specifically aimed at digital transformation. Such partnerships will facilitate sustainable ICT integration and long-term business growth.

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