

The Impact of Information Technology on the Management of Small and Medium Scale Enterprise in Nigeria

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ABSTRACT

The objective of this study is to examine the impact of Information Technology to the Management of Small and Medium Scale Enterprises in Nigeria with reference to Ramadan Press Limited, Bauchi, Bauchi State. The research design took both an inferential and a descriptive approach. A sample size of one hundred and thirteen (113) was drawn from the population. A 5 - point Likert scale was developed and validated to collect information from the respondents. The data collected was analyzed with basic descriptive statistics such as frequency and simple percentages. Chi-square analysis was also made. The core findings from the results obtained show that that Information Technology play significant role in the activities and operations of Small and Medium Scale Enterprises (SMEs), that Information Technology has impacted positively on the managerial practice of SMEs and that Information Technology has improved the performance of SMEs. Conclusion was drawn from the summary of the result. Various remarks and recommendations were proffered to the organization of study.

Key Words: Information Communication Technology (ICT), Small and Medium Enterprises (SMEs)

1.0 INTRODUCTION

The dynamic role of Small and Medium Enterprises (SMEs) in developing countries can never be overemphasized as they contribute significantly towards socio-economic objectives by providing innovative and creative jobs, entrepreneurship and industrial development (Chege, Wang, and Suntu. 2019, Adanlawo, Vezi-Magigaba & Owolabi, 2021), and are key in actualizing self-reliance and sustenance as well as enhancement of the overall development of an economy be it developed or developing nation. (Napitupulu, Syfrullah, Rahim and Setiawan., 2018; Zafar and Mustafa, 2017, Olowookere, Hassan, Adewole, & Aderemi 2021). Chege, Wang and Suntu (2019) state that SMEs contribute immensely in reducing poverty via income generation and providing enabling environment for job opportunities in developing nations by empowering youth and women. Small and medium enterprises (SMEs) are growth-supporting

sectors in economies and are major contributors to national development, especially socio-economic development of countries (Omiunu, Omotayo, and Longe 2021, Adanlawo et al, 2021). Recently, ICT has become a major source of concern to the ambitious business leaders who want to progress and improve the customer acceptance of their products/services, dominate new markets, and increase their rate of return of investment (Joensuu-Salo, Sorama, Viljamaa, Varamäki. 2018) The extant literature uncovers the dynamic and complex nature of relevance of ICT application in the operations of SMEs, considering the existence of various internal and external forces that interact to influence a SMEs' ability to apply ICT in their activities (ILO, 2018). The adoption and implementation of information and communication technology (ICT) in the operations of the SMEs is fundamental in their growth as well as the socio-economic development of the economies (Rahayu and Day, 2017) The greater SMEs utilize labor intensive technologies the higher the likelihood immediate impact on employment generation (Olorunshola, 2016; Udechukwu, 2016; Ogujiuba et. al., 2017), they can usually be developed rapidly and yield a huge return on investment (Adanlawo et al, 2021).

The significant roles small and medium-scale enterprises (SMEs) play in growth and development is acknowledged universally (Adanlawo et al, 2021). They are known to be major contributors to national development, especially the socio-economic development of countries. As a sector, they create jobs and introduce innovative ideas or products, thereby contributing to nations' gross development product (Omiunu et al., 2021). SMEs play a vital and significant role in innovation and growth in both developed and developing nations around the globe. They are major source of job creation and employment opportunities (Napitupulu et al., 2018; Niebel, 2018). In Nigeria, about 90% of the businesses are SMEs, unfortunately, the contributions of these businesses contribute less than 10% of the Nigeria's gross domestic product GDP (Okundaye., Fan, & Dwyer, 2019, Adanlawo et al, 2021), this could be as a result of the inadequate or complete absence of ICT in the operations of the MSEs domiciled in Nigeria (Okundaye et al 2019). According to Yunis El-Kassar and Tarhini, (2017) and Rahayu and Day, (2017) the ICT acceptance and implementation rates among SMEs in developing countries such as Nigeria has remained significantly low. ICT revolution has contributed to the enhancement of organizational outcome and the attainment of competitive advantage for organizations within developed and developing countries (Niebel, 2018). Global turbulent business environment as well as competitiveness and the quest to promote business growth are triggering motives for SMEs executives to use ICT (Niebel, 2018; Rahayu and Day, 2017; Yunis et al., 2017, Adanlawo et al, 2021).

More generally, the development of SMEs is seen as accelerating the achievement of wider economic and socio-economic objectives, including poverty alleviation (Napitupulu et al., 2018). Notwithstanding the recognition of the important roles SMEs play in these countries, their development is largely constrained by a number of factors, such as lack of access to appropriate technology; limited access to international markets, the existence of laws, regulations and rules that impede the development of the sector; weak institutional capacity, lack of management skills and training, and most importantly finance (Adanlawo et al, 2021). While some of these factors such as financing have received adequate attention in the literature, some of them, such as technology, have not (Chege & Wang, 2019). Investment in technology and keeping up with information technology (IT) is increasingly important to all firms (Farag et al, 2019). Technology plays a crucial role in the development of new SMEs. Technology not only helps in

evolving a multi-pronged strategy but also in maximizing business opportunities. IT is perceived as essential to achieve sales. Chege and Wang, (2019) noted that information has the highest likelihood of making a difference if it is integrated into structured business processes and used by people with the knowledge and training needed to interpret it and apply it correctly. Niebel, (2018) and Adanlawo et al, (2021) assert that the influence of technology goes beyond isolated behavioral changes for the optimization of organizational productivity; it also, affects the culture prevalent in the organization. However, the use of technology involves cost. Computer hardware and software need to be bought and installed. SMEs without access to capital may find it difficult to purchase necessary technology (Adanlawo et al, 2021, Olowookere et al, 2021). The rising cost of production inputs in Nigeria especially the cost of electricity and other operating costs can constrain growth. It is therefore pertinent to examine the relevance of information technology to the operations of Small and Medium Scale Enterprises in Nigeria in the face of the challenging business environment (Olowookere et al, 2021).

2.0 LITERATURE REVIEW

2.1 Information technology

Today's most technologically advanced economies are truly knowledge based (Syed, 2018, He, Zhang, & Li 2021). Countries in the world are moving from an industrial economy to a knowledge economy in which economic growth is dependent on a country's ability to create, accumulate and disseminate knowledge (Tob-Ogu, Kumar, & Cullen 2018). Information systems and technology can play a significant role in improving organizations (Bardhan, Chen, & Karahanna 2020, He, et al, 2021) Computers and the internet catalyzed the growth of the knowledge economy by enabling people to put knowledge into a digital form easily transmitted to anywhere around the world (Johannesson, & Jorgensen, 2017). IT has sped up the pace of globalization and increase the complexity of business practices because firms not only need to be familiar with their local context but also with global developments (Hameed, Naveed, 2019). Thus, to compete in the knowledge economy, countries need a strong IT literate skills base that can innovate and adapt quickly to change (He, et al, 2021). Many countries such as India, the Republic of Korea, Taiwan and China have created enabling environments to ensure that SMEs are well positioned to capture these emerging business opportunities (Ayandibu, & Houghton, 2017). India, for example offered relief from import duties for IT hardware, tax deductions for income earned from software exports, and tax holidays, and developed infrastructure in software technology parks. India's thriving IT sector has boosted the country's economic growth (Johannesson, & Jorgensen, 2017, He, et al, 2021). SMEs outside the IT sector have also benefited by adopting ICT in their own operations, enabling them to communicate quickly, increase productivity, develop new business opportunities, and connect to global networks (Ayandibu, & Houghton, 2017).

The Information Technology concept is a new development that has changed ways and manner of doing things, in commerce, trade, agriculture, and manufacturing and government services, it is to be adopted by business as a matter of responding to world dynamics (Hameed & Naveed 2019). Highlighting the impact of IT in recent years, Diehr, and Wilhelm, (2017) and He, et al, (2021) observed that the 1990s witness the proliferation and hyper growth of internet and internet technologies, which together are creating a global and cost-effective platform for business to communicate and conduct commerce (Syed, 2018, Kurbonov & Istamova 2021).

Despite the enormous investment in IT during recent years, demonstrating the effect on such on organizational performance has proven extremely difficult (Olawumi, et al, 2018). Nigeria is largely a cash-based economy with over 90 percent of funds residing outside the banking sector as against the developed world where the money in circulation is 4 percent in US and 9 percent in U.K as submitted by Ayandibu, and Houghton, (2017) and Syed, (2018). Whereas the cash-based economy is characterized by the psychology to physically hold and touch cash a culture informed by ignorance, illiteracy, and lack of security consciousness and appreciation of the merit of digital payment (Kurbanov & Istamova 2021, Olaleye et al, 2019).

2.2 Information and Communication Technology (ICT)

Information and Communication Technology (ICT) play a very important role in helping SMEs to have hedge over competitors in terms of accessibility to global markets (Ayandibu, & Houghton, 2017). (Oyelere, Atsa'am, Ayuba, Olawumi, Suhonen, & Joy, (2018) and Kurbonov & Istamova (2021) ascertain that the use of ICT in many organizations has assisted in reducing transactional cost, overcome the constraints of distance and have cut across geographic boundaries thereby assisting to improve coordination of activities within organizational boundaries (Azarloo, Eshghiaraghi, Salehi, Habibpoor, & Jahangiri, 2017, Kurbonov & Istamova 2021). In fact, ICT has the potential to improve the core business of SMEs in every step of the business process (Gu, Yang & Huo 2021). Through the use of information technology, SMEs can gain from developing capabilities for managing information, intensive resources, enjoy reduced transaction costs, develop capacity for information gathering and dissemination of international scale and gain access to rapid flow of information (Hameed, & Naveed, 2019, Gu et al, 2021). According to a study by Azarloo (2017) ICT implementation in the organization which includes SMEs has the potential to reduce costs and increase productivity level. They further stress that small firms might find cost-effectiveness as a motivating factor to use Internet commerce for improving communication with trading partners and consumers. Johannesson, and Jorgensen, (2017) also argue that ICTs are being used for strategic management, communication and collaboration, customers' access, managerial decision making, data management and knowledge management since it helps to provide an effective means of organizational productivity and service delivery. Furthermore, Ayandibu, and Houghton, (2017) also agree with the assertion that information and communication technologies (ICT) have positive effect on firm performance in terms of productivity, profitability, market value and market share.

Gu et al, (2021) and Syed, (2018) affirm that buyers and sellers are able to share information and transfer goods across national borders with the use of ICT, which helps to increase access to global supply chains. According to Rossmiller, Lawrence, Clouse, and Looney, (2017) ICT enhances the production process in organizations as monitoring technologies could be used to reduce the number of supervisors required in the process. In the same view Michailova, Mačiulis, and Tvaronavičienė, (2017) confirm that there is a substantial long-term productivity gain with the use of ICT in organizations. Hameed and Naveed (2019) also noted that the application of ICT in businesses causes fundamental changes that can provide powerful strategic and tactical tools for organizations if properly applied and used. This could have great impact in promoting and strengthening SMEs competitiveness. Sabherwal, Sabherwal, Havakhor, and Steelman (2019) also stressed that the extensive use of ICT can allow micro-enterprises with ideas and technologies to remain small and profitable or generate substantial global sales by

exploiting their intellectual property over the Internet. Hence, Rossmiller, Lawrence, Clouse, and Looney, (2017) and Gu et al, (2021) affirm that ICT enables organizations to decrease costs, increase organizational capabilities and also, assist to shape inter-organizational coordination. Therefore, the use of ICT can help to lower coordination cost and increase outsourcing in organizations (Gu et al, 2021).

According to OECD (2018) ICT is able to improve information and knowledge management inside the firm and increase the speed and reliability of transactions for both business-to-business (B2B) and business-to-consumer (B2C) transactions. Ayandibu, and Houghton (2017).have given their experts opinion that ICT impacts include cheaper and faster communications, better customer and supplier relations, more effective and efficient marketing, product and service development and better access to information and training. Previous studies identify factors affecting adoption of ICT in SMEs, for instance, Tob-Ogu, Kumar, & Cullen, (2018), discover that cost, funds, infrastructure, skills and training, management support and government support attitude are the main factors that affects ICT adoption in Nigeria by SMEs. The study of Syed, (2018) also confirm that infrastructural, cost of acquisition, lack of finance, skills, management and government support are the main challenges of ICT adoption by SMEs in Nigeria. Hameed, and Naveed (2019). In their study, they categorized internal and external barriers that impede adoption of ICT by SMEs in developing countries. The internal barriers include; owner manager characteristics, cost and return on investment, and external barriers include; infrastructure, social, cultural, political, legal and regulatory. Factors such as owner/manager characteristics, the role of top management, firm characteristics, costs and return on investment, lack of adequate telecommunication infrastructures such as poor internet connectivity, lack of fixed telephone lines for end-users, dial-up access and the underdeveloped state of the Internet Service Providers (ISPs) have been identified by Tob-Ogu, et al, (2018) as problems that hinder SMEs' adoption of ICT in a developing country. While Rossmiller, et al, (2017) argues that the owner's lack of knowledge of ICT technology and perceived benefits is a major barrier to the adoption of ICT.

2.3 Information Technology Challenges in Developing Countries

Vidmar, Marolt, & Pucihar (2021) and Tob-Ogu, et al (2018) found that in most African countries, small and medium enterprise (SMEs) account for a significant share of production and employment and is therefore directly connected to poverty alleviation, especially in developing countries SMEs are challenged by the globalization of production and the shift in the importance of various determinants of competitiveness (Adanlawo et al, 2021, Olowookere et al, 2021). ICTs can improve efficiency and increase productivity by different ways including, improving efficiency in resource allocation, reducing transaction costs, and technical improvement, leading to the outward shifting of the production function (Sabherwal, et al 2019, Vidmar et al, 2021). South Africa is much more developed and its ICT infrastructure is far more advanced (Johannesson, & Jorgensen, 2017), they also found that SMEs in South Africa faces similar problems as in other African countries with respect to poor management practices, limited access to technology, and limited access to credit facilities education, unemployment, ICT infrastructure and role of the SME sector leading to slow pace of internet services. The challenges is to move SMEs to go beyond these first few basic steps, and to eventually move towards integrating ICTs in more sophisticated business applications (Vidmar et al, 2021, Tob-Ogu, et al, 2018; Syed, 2018; Johannesson, & Jorgensen, 2017; Azarloo, et al 2017). This is a major step for SMEs,

especially in developing countries, because these would require management and technical skills and investments (as well as organizational changes) that they may not be able to afford or for which they may not have ready access (Hameed & Naveed 2019, Vidmar et al, 2021).

2.4 Small and Medium Scale Enterprises

SMEs differ from nation to nation and are mostly based on number of staff, assets, financial strength or a blend of these (OECD. 2018). There are divergent definitions of SMEs across nations depending on their stages of economic performance and growth (Yeboah, 2017). The accepted principles in defining SMEs include staff numbers, investment, and sales volume (Yunis, Tarhini, & Kassar. 2018, Pramono, Sondakh, Bernarto, Juliana, and Purwanto 2021) However, the definitions are relatively similar and frequently based on the World Bank's definition (OECD. 2018). Small and medium scale enterprises (SMEs) have been long recognized as an instrument of economic growth and development (Diehr, & Wilhelm, 2017, Pramono et al., 2021). This growing recognition has led to the commitment of World Bank group on SMEs sector as core element in its strategy to foster economic growth, employment and poverty alleviation (Bianchi, Glavas, & Mathews, 2017). The importance of small and medium scale enterprises can never be overemphasized unfortunately classifying businesses into large and medium scale is subjective and premised on different value judgment (Pramono et al., 2021). Such classification has followed different criteria such as employment, sales or investment for defining small and medium scale enterprises (Broccardo, Giacosa, Culasso, & Ferraris, 2017).

According to extant literature the definition varies in different economics but the underlying concept is the same. Diehr, and Wilhelm, (2017) contends that the "definition of small and medium scale enterprises varies according to context, author and countries". Small and medium scale enterprises are certainly not transnational company, multinational cooperation, publicly owned enterprises or large facility of any kind (Pramono et al., 2021). However, they can depend on business and ownership structure to become a large business unit (Diehr, & Wilhelm, 2017) while it can be argued that 80% of the financing of SMEs come from owners, friends and families, business form can take different form including private ownership, limited partnership, contract and subcontracts, cooperatives or association (Yeboah, 2017). Small and medium scale enterprises have a narrow context within which its operation is carried out (Yunis, Tarhini, & Kassar. 2018). However, where it is effectively operated it has capacity to sprout the economic growth and national development. In every economics small and medium scale enterprises has been seen has a pivotal instrument of economic growth and development either in developed for developing economics (Pramono et al., 2021).

2.5 Information Technology (IT) Diffusion in SMEs in Developing Countries

Information and Communication Technology (ICT) ensures rapid growth and development among SMEs in developing nations (Pramono et al., 2021). The companies that apply ICT in their activities have recorded a sound business outcome and other advantages by applying ICT in their operations more than those businesses are not using ICT (Hagsten & Kotnik 2017). More so, the role and relevance of ICT in the internationalization of SMEs) is positive as it assists them in identifying opportunities and implementing business internationalization strategies. Likewise, ICT offers support as information source and enable effective communication for the internationalization process of SMEs (Leppäniemi, Jayawardhena, Karjaluoto, & Harness 2019)..

Furthermore, , ICT assists SMEs in competition analysis, market intelligence, distribution, and marketing activities (Hagsten & Kotnik 2017, Khan, Salamzadeh. Shah, and Hussain, 2021). There are very few studies about IT adoption in developing countries, (Olaleye, Sanusi, & Salo, 2019) investigating adoption of IT in Nigerian SMEs found that, one of the major factors inhibiting IT diffusion and intensive utilization is poor physical infrastructure. In developing countries some of the IT adoption challenges include legal and regulatory issues, weak IT strategies, lack of R& D, excessive reliance on foreign technology and ongoing weaknesses in IT implementation (Olawumi, Haataja & Toivanen, 2018). There are a number of studies that discuss adoption of Internet and e-business in SMEs in developed countries (Olaleye, Sanusi, & Oyelere 2017; Olaleye et al., 2019). Governments around the globe recognize the importance of adoption of IT by SMEs and they have created special groups to study various aspects of IT adoption in SMEs. Despite the importance of IT and emphasis by various governments to encourage SMEs to adopt IT, it has been reported that SMEs have been slow in adopting IT for various reasons. (Olaleye et al, 2019, Pramono et al., 2021).

2.6 Factors affecting small and medium scale enterprise growth

Economic development is contingent on the performance of SMEs in developing nations, particularly Nigeria. However, SMEs are incapacitated by several factors militating against their growth, among which is the way intellectual capital is managed by them (Omionu et al., 2021), lack of easy access to loan; low level of technological awareness and enhancement; poor infrastructural facilities; shortage of skills and competences; low level of entrepreneurial skills and entrepreneurial mindset; lack of formidable and qualified employees that results in poor performance, efficiency, and growth (Tob-Ogu, Kumar and Cullen, 2018, Khan et al, 2021). Other factors that affect SMEs includes business running costs, poor effective communication strategies, poor management skills, organizational leadership problems, corruption, organizational culture (Harness, Ranaweera, Karjaluoto, & Jayawardhena, 2018). Despite the potential role of Small and Medium Scale Enterprises (SMEs) to accelerated growth and job creation in developing countries, their development is hampered by a number of factors, one of these factors among others is access to Information Technology (IT) (Broccardo, et al. 2017; Harness, et al, 2018). SMEs often have difficulties in gaining access to appropriate technologies and information on available techniques ((Oanh, Trung, Chi, Hang, Thi, Lien, and Hang 2021).

Despite the numerous institutions providing training and advisory services, there is still technology-gap in the SME sector as a whole (Khan et al, 2021, Bianchi, et al, 2017). This is because most small and medium scale entrepreneurs cannot afford the high cost of computer hardware and software (Tob-Ogu, et al, 2018). The inaccessibility to appropriate Information Technology places significant constraints on SME development. Even though SMEs tend to attract motivated managers, they can hardly compete with larger firms. In most cases, SMEs utilize foreign technology with a scarce technical support ((Oanh et al, 2021, Olaleye et al, 2019). The lack of support services or their relatively higher cost can hamper SMEs' efforts to improve their management, because consulting firms are often not equipped with appropriate cost-effective management solutions for SMEs. They usually acquire foreign licenses, because local patents are difficult to obtain (Khan et al, 2021, Olawumi, et al, 2018)

2.7 Barriers to Information Technology (IT) Adoption by SMEs

Large organizations have enough resources to adopt IT while on the other hand SMEs have limited financial and human resources to adopt IT. Olaleye, et al, (2019) & Oanh et al, (2021) identified lack of IT skills and knowledge in SMEs as one of the major challenges faced by all European countries, particularly in the UK, Poland and Portugal, in their study. (Olawumi, et al, (2018) and Olaleye, et al, (2019) have reported a slow response of SMEs relating to adoption of IT. (Olaleye, et al, 2017) found that characteristics of the firm and industry sector are contributory factors to the adoption and exploitation of ITs by SMEs. (Tahir, 2020) have categorized internal and external barriers that impede adoption of IT by SMEs in a developing country. The internal barriers include owner manager characteristics, firm characteristics, cost and return on investment, and external barriers include: infrastructure, social, cultural, political, legal and regulatory (Olaleye, et al 2019; Tahir, 2020, Khan et al, 2021, Oanh et al, 2021).

2.8 Information Technology (IT) Effect on Performance

Researchers using field studies examining the link between business organization, information technology and changes in organization structure agreed on the potentials of IT but have come to diverse and contradictory conclusions on its measurement, (Oanh et al, 2021, Zahra, Hameed, Fiaz, & Basheer, 2019) for a review. Some recent studies of relationship between investment in IT and organizational performance and productivity Tahir, (2020) have reported positive and significant effects of such investments. Some researchers question these results on the grounds that the studies involved examination of primarily cross sectional data. This criticism, according to Olawumi, et al, 2018), stems at least in part from the premise that the benefits of IT investment can be realized only over longer periods of time. However, it is possible and indeed likely, that in many instances IT has the potential to provide important benefits within the same year the investment is made. In any event, research reflecting relationship between IT investment and organizational performance and productivity might be more convincing if it were based on IT investments in both current and earlier periods. It has also been emphasized that causality cannot be established by using conventional statistical techniques. Hence use of canonical correlation analysis as well as non-parametric analysis like data envelopment analysis methods have been suggested Zahra, et al, (2019) & Oanh et al, (2021).

This opposed more general commonly used methods such as correlation and regression analysis to enable researchers infer causality if present between IT investment and organizational performance and productivity (Tahir, 2020, Khan et al, 2021).). Perhaps a more valid method of determining whether IT is living up to expectations is through analysis involving both cross-sectional and longitudinal data bases involving hundreds or even thousands of data points from various industries (Zahra, et al, 2019).. This is because large data bases would serve to average out extremes and provide a clearer picture of the underlying relationship between IT investment and organizational performance as put by (Olawumi, et al, 2018) It has also been argued that the traditional IT investment performance analyses have not been very successful in the past because of their over reliance on financial data. Some researchers (Khan et al, 2021, Olaleye, et al, 2019) have called for additional research to identify “hidden cost and benefits” that a typically net included in the traditional analysis of IT investment relationship with organizational performance and productivity (Zahra, et al, 2019). However, the divide between the different groups of researchers is rather common knowledge. One group emphasizing the need for use of qualitative

analysis believes that quantitative measures have received preferential consideration in the research performed to date. The quantitative group is somewhat vocal about what it considers the superiority derived from the rigors of its approach. They argued that qualitative measures can only be used if they first concur with the quantitative measure of IT pay-offs. Ideally the works of both groups should complement the other (Olawumi, et al, 2018, Oanh et al, 2021).

3.0 METHODOLOGY

The study used descriptive research method which consists of collecting and analyzing quantitative data from randomly selected staff of Ramadan Press Ltd. Within this SME, 50 staff with experience in the subject area (ICT) and who had partaken in ICT decisions within their respective departments were given the study instrument. The choice of survey research design was considered appropriate because of advantages of its identifying attributes of a large population from a group of individuals. The data was collected from two main sources namely primary source and they are obtained through a survey questionnaire. The researcher used Taro Yamani formula to arrive at the sample population of the study. For a comprehensive analysis of data collected, emphasis was laid on the use of absolute numbers frequencies of responses and percentages. Answers to the research questions were provided through the comparison of the percentage of worker's response to each statement in the questionnaire related to any specified question being considered. Frequency in this study refers to the arrangement of responses in order of magnitude or occurrence while percentage refers to the arrangements of the responses in order of their proportion. The simple percentage method is believed to be straight forward easy to interpret and understand method. The researcher therefore chooses the simple percentage as the method to use.

4.0 RESULTS

4.1 Data Analysis

The data collected from the respondents were analyzed in tabular form with simple percentage for easy understanding. A total of 133 questionnaires were distributed and out of which 121 out of the distributed questionnaires were returned. It also shows answers to questions relating to the research questions for this research study. The study employed simple percentage in the analysis.

4.2 Demographic Analysis

Gender distribution of the respondents shows that 57.9% of the respondents were male while 42.1% of the respondents were female. On the positions held by respondents, the result shows that 33 respondents which represents 27.8% of the respondents are managers. 47 respondents which represents 37.6 % are junior staff, 20 respondents which represents 17.3% of the respondents are senior staff, while 21 respondents which represent 17.3% of the ICT personnel.

5.0 TEST OF HYPOTHESES

That Information Technology does not play any significant role in the activities and operations of Small and Medium Scale Enterprises (SMEs).

H0₁: That Information Technology does not play any significant role in the activities and operations of Small and Medium Scale Enterprises (SMEs).

Table 3

Response	Observed N	Expected N	Residual
Agreed	37	33.3	6.8
strongly agreed	47	33.3	16.8
Disagreed	23	33.3	-7.3
strongly disagreed	14	33.3	-16.3
Total	121		

Test Statistics

	That Information Technology does not play any significant role in the activities and operations of Small and Medium Scale Enterprises (SMEs).
Chi-Square	19.331 ^a
Df	3
Asymp. Sig.	.000

a. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 33.3.

Decision rule:

There researcher therefore reject the null hypothesis that state that That Information Technology does not play any significant role in the activities and operations of Small and Medium Scale Enterprises (SMEs) as the calculated value of 19.331 is greater than the critical value of 7.82. Therefore, the alternate hypothesis is accepted that state that That Information Technology plays significant role in the activities and operations of Small and Medium Scale Enterprises (SMEs). That Information Technology has not impacted positively on the managerial practice of SMEs.

Table V

H0₂: That Information Technology has not impacted positively on the managerial practice of SMEs.

Response	Observed N	Expected N	Residual
Yes	69	44.3	28.7
No	29	44.3	-11.3
Undecided	23	44.3	-17.3
Total	121		

Test Statistics

	That Information Technology has not impacted positively on the managerial practice of SMEs.
Chi-Square	28.211 ^a

Df	2
Asymp. Sig.	.000

a. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 44.3.

Decision rule:

There researcher therefore reject the null hypothesis that state that That Information Technology has not impacted positively on the managerial practice of SMEs as the calculated value of 28.211 is greater than the critical value of 5.99. Therefore, the alternate hypothesis is accepted that state that Information Technology has impacted positively on the managerial practice of SMEs

6.0 DISCUSSION, CONCLUSION AND RECOMMENDATION

6.1 Discussion

It is important to ascertain that the objective of this study was to ascertain information technology and the productivity of SMEs in Nigeria. The relevant data collected for this study were presented, critically analyzed and appropriate interpretation given. In this chapter, certain recommendations made which in the opinion of the researcher will be of benefits in addressing the challenges of information technology and the productivity of micro-business. This study was on information technology and the productivity of micro-business in Nigeria. Four objectives were raised which included: To ascertain if micro-business increase their productivity and efficiency through the use of IT, to ascertain ways IT enhancing efficiency in the Nigerian micro-business, to ascertain the relationship between information technology and the productivity of micro-business, to ascertain the different areas of micro-business where the use of IT can improve micro-business productivity. In line with these objectives, two research hypotheses were formulated and two null hypotheses were posited. The total population for the study is 200 staff of selected SME in Bauchi State. The researcher used questionnaires as the instrument for the data collection. Descriptive Survey research design was adopted for this study. A total of 133 respondents made up managers, content developers, administrators and graphic designers were used for the study. The data collected were presented in tables and analyzed using simple percentages and frequencies.

6.2 Conclusion

Findings from the study show clearly that IT plays an important role in the increase of productivity and economic activities. Generally, firms enter into business to make profit and IT does not only help in increasing productivity but also quality and make the way business operate less complicated, time saving, and disclose the new trends of business and how business are supposed to address such change. The study concludes that Information Technology positively impact on the performance of SMEs operation in Nigeria, also the result of hypothesis tested showed that information technology has a significant Impact on performance of SMEs operation and influence the level of economic activities in Nigeria as a whole.

6.3 Recommendation

In view of the above conclusion the following recommendations were made:

1. Micro-business need to sense more strategically in relation to the use of Information Technology (IT). In this respect, micro-business is falling behind best practices adopted by their larger counterparts in the global economy.
2. Micro-business should improve access to information about networking opportunities, this will require co-operation among all stakeholders including micro-business associations, public agencies and intermediary organizations to correct deficiencies in existing sources of information and strengthen international linkages between national and regional hubs of relevant information flows.
3. There should be ease of use to free professional advice and consulting on IT at reasonable cost to micro-business

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