

TITLE PAGE

**THE EFFECT OF INFORMATION AND COMMUNICATION
TECHNOLOGY ON PRODUCTIVITY OF COCA-COLA PLC**

BY

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**BEING A PROJECT SUBMITTED TO THE DEPARTMENT OF BUSINESS
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AWARD OF HIGHER NATIONAL DIPLOMA IN BUSINESS
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DECLARATION

I hereby declare that this project has been written by me under the guidance and supervision of **A.D Umar** of the Department of Business Administration and Management Studies. I have neither copied someone's work nor has someone else done it for me. All references made to published literature have been duly acknowledged both textually and under the references. Any error contained here is entirely my responsibility.

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APPROVAL

This is to certify that this project report titled “Effect of Information and Communication Technology on Productivity of Coca-Cola Plc.” written by, **John Dashe Damulak KPT/CBMS/19/41360**, has been read and approved as having met the requirements governing the preparation and presentation of research project in Kaduna Polytechnic. It is hereby approved for meeting the requirement for the award of Higher National Diploma in Business Administration and Management Studies, and for its contribution to knowledge and literary presentation.

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DEDICATION

I dedicate this project to my late mother Mrs. Anthony Micheal and my father Mr. Michael Damulak who gave birth to me and raised me to the fear of God Almighty.

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I am grateful to God Almighty who gave me strength, knowledge and opportunity to write this project.

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ABSTRACT

This research project is an attempt to study and analyze "effect of information and communication technology on productivity of Coca-Cola Plc. highlight the impact of ICT on cost reduction, how the adoption of the various ICT products can be applied to increase the level of efficiency, how the adoption of ICT products can enhance flexibility in operation and the contribution of Information and communication technology to the growth of manufacturing. The researcher used the questionnaire and personal observation to assess whether the adoption of the ICT products in the bank has any overall impact on improved customer services most especially in the minimization of queue and customers delay. Evidence obtainable from this research shows a high degree of acceptance but little effort should be made due to future changes in technological advancement. The researcher made several suggestions amongst which the bank should utilize present and prospective ICT products to its full capacity by ensuring uninterruptible local and global access in its contingency plans

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CHAPTER ONE

1.0 Introduction

1.1 Background to the study

Manufacturing sector dominates world businesses and are estimated to be more than 95% of all businesses worldwide, providing over 60% employment in the private sector. In spite of their immense contributions, literature has established that the Nigerian manufacturing sector including the consumer goods sector have tottered over the years such that many of them find it difficult to compete at the local and global market. This situation could be due to limited use of ICT devices.

Measuring firms' competitiveness is crucial to evaluate the level of performance, develop strategies to overcome challenges so as to achieve competitiveness and survive in the market. Various measures have therefore been used by different researchers as parameters for measuring competitive performance of manufacturing companies within the industry. Notta and Vlachvei (2012), Pedraza (2014); Claud (2018) cited financial measures of assessing organisation competitiveness to include sales growth, gross profit, productivity while Kotane and Kuzmina-Merlino (2015); Salah(2014) ; Selcuk (2016) identified quality of goods and services, customers' satisfaction, innovation, market shares, employees' working condition, cost,

quality, flexibility and delivery, on time product delivery as non-financial measure of competitiveness at the micro level.

In addition, Allen and Helms (2016) identified cost leadership and differentiation measures of competitiveness advanced by Porter as the most popular, hence, used for this work. Cost leadership is the capability of an organisation to become the low cost firm in their operation while differentiation is the uniqueness in doing something that is sufficiently valued by customers to allow a price premium (Allen and Helms, 2016). Cost leadership is measured by an organisation's ability to offer price below its competitors, access low cost sources of capital, develop cost effective and innovative products as well as maintain efficient and low cost distribution channels while differentiation is measured by the ability of organisations to develop new products, differentiate products and services through innovative technologies, strong brand image identification as well as broad service products range and extensive strong branch network.

Many firms are struggling to stay afloat by dealing with the increasing challenges of industrial competition which involves operating in tough economic conditions characterized by, high cost of ICTs, limited access to ICT use, lack of supporting infrastructure as well as lack of support from

responsible agencies and inadequate power supply. The culmination of these forces has resulted in an external environment that is dynamic, unpredictable, demanding and often devastating to those organizations which are unprepared or unable to respond (Barret, 2015). Because of these changes, organizations need to reposition itself to satisfy consumers' needs. Nigeria, among other developing countries, is striving to compete with her products and services both at the local and global market. However, unlike in the developed countries of Europe, U.S., Japan and China, evidence from literature has shown that globalization, market liberalization and information technology, influence on customers' tastes, preferences and brand consciousness resulted to customers demand for superior products and services at lower prices, which majority of the companies could not afford (Akpan, Ikon and Chukwunonye, 2016). Consequently, the high level of unhealthy competition especially with the multi-national companies in the industry continues to endanger the survival of majority of the companies due to their inability to compete at the local and global market.

1.2 Statement of the Problem

Over the last decade, many studies undertaken globally examined the relationship between ICT investment and organization performance and concluded that there was a positive relationship between ICT investment and

business performance. However, according to Tembo (2014), there is little or no clear evidence that the same outcome is being achieved in developing countries, largely because of lack of relevant research being undertaken and also partly because of political and economic structure, restrictive regulatory environments, and hence less well-equipped to take advantage of the potential of ICTs to stimulate growth. Dyerson, Harindranath & Barnes, (2019) reiterated that the cause of poor performance in developing countries was attributed to several factors including the level of ICT Accessibility, Convenience, Collaboration as well as Automation within the organization, cost of ICT investments, ICT knowledge competency gap and management's attitude towards the technology. However, this study is set to assess the effect of information and communication technology on productivity.

1.3 Research Questions

The following research questions were raised to guide the study:

- i. What are the impacts of ICT on cost reduction?
- ii. How can the adoption of the various ICT products be applied to increase the level of efficiency?
- iii. How can the adoption of ICT products enhance flexibility in operation?

- iv. What are the contributions of Information and communication technology to the growth of manufacturing?

1.4 Objectives of the Study

The main purpose of this research is to assess the effect of information and communication technology on productivity of Coca-Cola Plc. Other objectives are:

- i. To highlight the impact of ICT on cost reduction.
- ii. To determine how the adoption of the various ICT products can be applied to increase the level of efficiency.
- iii. To determine how the adoption of ICT products can enhance flexibility in operation.
- iv. To examine the contribution of Information and communication technology to the growth of manufacturing.

1.5 Significance of the study

Organization: It has been observed that there is a shortage or inadequacy of literature relevant, specifically, to information and communication technology on productivity in organization. Therefore believe that this research report will be relevant to existing literature in such area.

Management and Employees of Organization: Furthermore, it is also expected that the research report will be significant to the management and employees of organization as a working material relevant to decisions on information and communication technology and productivity. Arguments presented and analysis made will surely provide useful aids to decision-making on information and communication technology and productivity in most industries especially the coca cola company. Moreover, the above is the expectation that the research will be significant in sensitizing managers on the importance of ensuring an efficient information and communication technology strategy.

Researcher: In conclusion, the significance of this research work is in line with fulfilling an academic requirement, which is a pre-requisite for the award of a Higher National Diploma (HND) in Business Administration.

1.6 Limitation of the study

This research is hampered most especially by time constraints. A near accurate research work demands a very long term of study so as to generate enough data and make enough analysis and verification of data and the analysis.

Unfortunately, the period within which this work should be completed is short and shaved between many other things to do. Also there is a shortage of relevant texts and documents either by their non-availability, unaffordable cost of procurement or confidentiality. These are vital data source that their absence will hamper on the claimed validity of any work.

Finally, the uncooperative attitudes of some staff of the company has its own negative effect on this work because their attitude has been a discouragement which reduce the zeal to unique more

1.7 Scope of the study

The research will be restricted to Coca-Cola, Kakuri industrial area Kaduna. The study will also centered on raw materials quality control and related departments like store, quality control, administrative department of the company. The study will cover period 3 years 2019-2021.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 Introduction

This chapter will review works of various authors, scholars, individuals and as well as researchers ideas as a source of information which serves as the bedrock of the studies. In a nutshell, the researcher hopes to bring to light different authors views on subject matter.

2.2 Conceptual Framework

2.2.1 Information and Communication Technology

In general, ICT refers to technologies that are used to capture, store, process and disseminate information. According to O'Brien (2012), an information system is a system that combines people, hardware, software, data resources and communication networks to collect, transform and distribute information in an organization. Thus, a firm's information system comprises of interrelated subsystems that support different functional areas such as production/operations, sales & marketing, finance, supply chain and human resources which are integrated to serve the firm as a whole (Ferreira, Erasmus, and Groenewald, 2015). In order to provide superior and unmatched services, there is a need to integrate both telecommunication and information technology capabilities within a firm's information system (Ngira, 2016).

According to Chavira (2013), a service is a means of delivering value to customers by facilitating the outcome that customers want to achieve without transfer of specific process, roles and risks. On the other hand, service delivery refers to a set of processes that provide the architecture on how the service will be rendered (such as service creation, session control and protocols). Organizations implement various service delivery channels to facilitate access to their services. A key consideration in the design and implementation of service delivery channels is to enhance customer satisfaction. Customer satisfaction as defined by Kotler and Keller (2006) is the extent to which a customer's expectation is met or matched by a perceived performance. Nagabhushanam (2013) defines an effective and efficient service as that which satisfies the needs of a given customer consistently over time. Service quality is a key component in creating and sustaining worthy relationships with customers and keeping abreast with their ever-changing needs (Njoka, 2013).

Information and Communication Technologies (ICTs) is a broader term for Information Technology (IT), which refers to all communication technologies, including the internet, wireless networks, cell phones, computers, software, middleware, video-conferencing, social networking, and other media applications and services enabling users to access, retrieve, store, transmit, and manipulate information in a digital form.

ICTs are also used to refer to the convergence of media technology such as audio-visual and telephone networks with computer networks, by means of a unified system of cabling (including signal distribution and management) or link system. However, there is no universally accepted definition of ICTs considering that the concepts, methods and tools involved in ICTs are steadily evolving on an almost daily basis.

2.2.2 Productivity

Hulten, (2010), defined productivity as “the relationship between output of goods and services and the inputs of resources (human and non human) used in the production process. Craig and Harris (2003), defined productivity “as an organization ability to transform inputs to outputs at the lowest possible cost”. Jain and Arghgarwal (2009), posit that productivity “is an attitude of mind. It is a mentality of the constant improvement of that which exists. It is the certainty of being able to do better today than yesterday and continuously. Stressing that it is the constant adaptation of economic and social life to changing conditions, it is a continual effort to apply new techniques and methods, it is the faith in human progress”. They proceeded by saying that though productivity in a general connotation is referred as the output to input ratio, above all, it entails the process of harnessing the capacity to increase productivity by ensuring proper and efficient use of all type of resources in employment using them to produce as many goods

and services as possible, of the kind and quality most wanted by the consumers at lower cost.

An effective productivity result is often obtained when management creates conditions which workers perceive as beneficial to them and which productivity gains are shared with employees. Pigors and Myers (2007), were of the view that in work situation where employees are granted minimal rights, productivity tends to be low because of the demoralizing effects of resentment and anxiety that result to dissatisfaction with the job. They also maintain that the quality of working life improves, productivity tends to rise up. This means that improved working life lead to satisfaction on the job.

Hellriegel and Slocum (2014), also define productivity as “the relationship between input consumed (labor hours, raw materials, money, machines and the like) and the output created (Quantity and quality of goods and services”.

2.2.3 Approaches of Productivity.

Jain and Argyarwal (2009), depicted the following as the approaches to productivity and they includes;

- **Human relations Approach to productivity:** - The well known Hawthorne experiment gave birth to what is known as the human relations approach to the study of organization. This approach in part, was a reaction against the mechanistic and rational considerations emphasized by Taylor and Fayol. The experiments and the importance of economic and technical factors was often

ignored. These researches concentrated on such aspects as styles of supervision; interpersonal relations and informal organization, and in demonstrating the importance of interactions, sentiment and satisfaction in determining the productivity of work group behavior. However, a review of several research findings during the last decades in this area has shown that the results are increasingly inconsistent, contradictory and confusing.

- Modern Approach to Productivity: - The modern approach to study of organization and productivity attempt to provide an integrated frame work which combines both the classical and the neoclassical elements. It treats organization as a system of mutually dependent variables. The studies undertaken by the Tavistock institute of human relations illustrated the usefulness of viewing organizations as socio technical systems.

The analysis of socio technical system is important for the determination of optimum solutions for process, design. The task of process specifications that will produce the output most economically. Process design is concerned with selecting the work stations needed to perform the operations and effect flow of work between different stations (Timms,1966). In selecting the work situations in an assembly line, work is divided into individual tasks and assigned to consecutive operations on the line. The manager should give considerations to the need for designing work situations so as to create favorable interpersonal relationship in addition to meeting the technological specifications. In industries where work

groups operate under conditions of pooled interdependence, the manager should give consideration to the creation of sequential work groups that generate social motivational and promote productivity.

2.3 Effect of information and Communication Technology on Productivity

Various studies have been carried out on the impact of ICT on bank performance with mixed results found. For example, Agboola and Salawu (2009) using 24 banks and 1200 bank customers studied various Information and Communication Technology (ICT) in use in Nigerian banks and how they could be utilized for optimal performance on business transactions in the banking industry. The selected transactions for the study are deposit, withdrawal, enquiries, reference letters, opening and closing of accounts, funds transfer, special bills, loans and overdraft. They found that the design of ICT in the banking system has not been adequately focused on deposit and withdrawal which are activities that directly impact on customer services. According to them products such as ATM, Electronic Data Interchange, Electronic Home and Office Banking and Telephone Banking that could have hastened these activities were the least fully adopted technologies. The rate of adoption of ATM was 16.7%, Electronic Home and Office Banking was 16.7% and Telephone Banking was 20.8%.

Venkatesh Shankar, Amy K. Smith and Arvind (2012) aimed to identify the impact of the means of communication through the internet based on the customer satisfaction and the degree of loyalty. It also identifies the relationship between the

customer satisfaction and loyalty, where the researchers prepared a synchronous model to gather information which consists of two parties who are the customers getting the service through traditional methods and customers who receive service through the website of the hotel industry. The most important findings of the study show that the customer satisfaction through the Internet and traditional methods is almost at the same level. However, as for the loyalty of the service provider, it is higher when it is via the Internet. The study also showed that there is a correlation between the customer satisfaction and loyalty such that the presence of one reinforces the other. In addition, this relationship is strengthened by dealing through the Internet in the long term.

Bruce Adams (2014) focused on the role of the Internet in increasing service sales; it concluded that there is a rapid increase in the number of bookings through the Internet for hotels. He further opines that expectations in the future indicate that the Internet will contribute by 27% of the total sales realized from hotels rooms through the hotel website. However, such percentage is increasing, and it showed that the Internet does not only affect the sales realized from hotel rooms, but also its marketing and distribution through the Internet

Al-Khatib and Al-Husseini (2012) aimed to test the nature of the relationship between the e - commerce and the strategic center for the Jordanian industrial companies. The study reached a number of the most important results such as the presence of a clear relationship between e - commerce and the strategic center of

the sample companies. The research also presented a set of recommendations. The most important of them is that companies should depend on e-marketing and e-commerce through analyzing their strategic analysis and strategic center to identify the strengths and weaknesses of the environmental threats and the imbalances and shortcomings in methods and system.

Harmsworth, (2016) aimed to find out how to take advantage of the geographic information systems in marketing the tourist sites in New Zealand. The study, therefore, showed the importance of GIS in tourism marketing and the possibility of using these systems to perform various analyzes.

Yassin and Al-Tai (2014) aimed to evaluate the theoretical framework for the standards of websites' development in general, evaluate the websites of the sample hotels, and make a comparison among hotels. This comparison is done on the basis of the assessment of hotel standards through the distribution of a questionnaire to the customers of the sample hotels in coordination with the booking officer who booked and payed online. The study concluded that the criteria of the website, service quality, information content, and the interface of the beneficiary affect the evaluation of the sample hotels websites on the World Wide Web. One of the main recommendations of this study is the interest of the hotel departments in designing websites on the internet and choosing the efficient cadre to manage these websites.

The study of Al-Sheshani (2011) sought to identify the impact of using e-commerce on the hotel services market in Jordan. It concluded that there is a positive and statistical significance between the use of e-commerce and the development of the service. The study recommended the adoption of the concept of e-commerce in the service sector due to its importance and positive impact on the performance of those organizations.

Heda and Abd Al-Haq (2010) aimed to identify the role that the technology plays in improving the competitiveness of the tourism companies. This is reflected clearly in most modern tourism activities and services both in terms of management, organization, contact, or other ways of dealing.

Agboola (2016) found that in all the banks he studied, the rate of ICT adoption was high while the technologies were adequately spread between banks' headquarters and branches. Aghaunor and Fotoh (2016) however found some variation between old and new generation banks in the rate of adoption of automated devices; new generation banks are more pro automation than the old generation banks.

A survey by Intermac Consulting Limited (2017) revealed that ATM services by banks and non-bank financial institutions was the most popular e-business platform in Nigeria. With over 96% awareness level among customers, they submitted that ATM services ranked better than not only all other forms of modern

banking services but also some traditional bank services such as current account. Corroborating the above, Olatokun and Igbiniedon (2009) in their study observed that there has been increased deployment of ATMs by banks in Nigeria; while only one bank had the ATM in 1998 this had increased to 14 in 2004. Between January 2005 and March 2006 debit card transaction in Nigeria banks increased by 93% with over 23 banks (92%) issuing such cards. The number of ATM transactions increased from 1,065, 972 in 2004 to 14,448,615 between January 2015 to March 2016.

Chineke, Euwiekpaefe and Chete (2016) examined the adoption of Internet banking in Nigeria. Using a sample of 12 banks, they collected data on the e-banking practices of the selected banks based on a model consisting of 36 items relating to e-banking. From the result, they concluded that even though internet banking is widely available in Nigeria, it is only being offered at the basic level of interaction. The banks had mainly information sites and very little internet transactional services. In a related development Dabwor (2010) analyzed the challenges of financial intermediation in the twenty first century in the Nigerian banking sector, using expository approach; the study identified high level of fraud in the banking sector owing to poor IT infrastructure and weak IT security which make bank customers vulnerable to internet hackers and cyber theft as a some of the major setbacks to the deployment of ICT in Nigeria's banking sector

Aghaunor and Fotoh (2016) examined the factors affecting e-commerce adoption in Nigeria banks. Using a survey of eighty customers of four 'adopting' and four 'non-adopting' banks, discriminant function analysis and t-test of independence of means, they concluded that all but one of the nine factors they identified were significant in explaining the adoption of e-commerce in Nigeria. The significant factors are top management support, perceived benefits, market e-readiness, supporting industries e-readiness, IT capability, and perceived compatibility. The non-significant factor is government e-readiness.

Also, Chiemeké, Ewuwiekpáefe and Chete (2016) in their study on the adoption of internet banking concluded that security concerns and inadequate operational facilities (especially power and proper telecommunications facilities) are the major factors inhibiting internet banking in Nigeria. Okunoye, Bada and Frolick (2007) carried out an exploratory case study to investigate the phenomenon of dynamism of information technology and how it affects service delivery in Nigerian banks using 7 banks based on track record in IT based service delivery and e-banking awards. Data was gathered through semi-structured interviews, on-site observations and surveys. They found that banks were driven by customers' needs, availability of the technology and competition to adopt a new technology and apply to service provision. In a study conducted by Osabuohien (2008) on the capacity of ICT to enhance the operations of Nigerian banks in the context of ongoing reforms of the banking sector. Using a sample of 180 banks staff from 3

banks in Lagos metropolis and the multiple regression analysis frameworks, he examined the factors determining the rate at which ICT is used in banks and the impact of ICT on operations of the banks. He found that the main variables that explain the rate of ICT use by bank staff were their age, educational status, extent of computer literacy, and the type of IT facility involved. Madueme (2010) evaluated the impact of ICT on banking efficiency in Nigeria using a survey of 13 banks. Based on the CAMEL rating and a transcendental logarithmic function of the banks, she concluded that the efficiency values obtained through the CAMEL rating system were higher during post adoption era than before adoption and estimated that a 1% increase in ICT capital on average leads to 0.9185 Naira increase in bank output post ICT adoption era. This agrees with her earlier finding in her 2009 study in which she concluded that information technology has impact on operational efficiency in the studied banks (Madueme, 2009).

Agboola (2001) using 6 banks studied the impact of computer automation on banking services in Lagos and concluded that electronic banking has tremendously improved the services of the banks to their customers. As a follow up, Agboola (2016) evaluated the response of Nigerian banks to the adoption of ICT. Sampling 36 out of the 89 banks that were then in existence, he evaluated the nature and degree of adoption of innovative technologies, the degree of utilization of the identified technologies and the impact of the adoption of IT devices on banks operations using both structural analyses and the impact analysis model. The

findings revealed that ICTs impacted positively on all the criteria that formed the basis of evaluation namely; competitive strength, market segmentation, improved revenue, proper forecasting and modernization for global impact, and time saving, error rate reduction, management decisions and speed of transaction for local impact.

Okoh, (2011) opined that Automated Teller Machines are beneficial to the customer because of the convenience it gives to customers. This is evident in the location of Automated Teller Machines at convenient location such as the Airports, railways stations etc and not necessary at the bank premises. Automated Teller Machine therefore provide mobility in banking services thereby giving the bank customer the opportunity to withdraw up to a certain limit during any time of the day or night. As such Automated Teller Machine reduces the work pressure on bank staff and avoids queues in bank premises.

Furthermore, Obodoehi (2009) opined that Automated Teller Machines provides services without error. The customer can obtain exact amount. There is no human error as far as the ATM is concerned. ATMs are of great help to travelers. They need not carry large amount of cash with them. They can withdraw cash from any city or state, across the country and even from outside the country with the aid of ATMs. Most of all ATM provide privacy in banking transaction for the customer (Simon and Adama, 2010)

Similarly, Agboola (2009) opined that using ATM, facilitate quick access to individual account in order to make withdrawal, credit cash advances, and check bank account balance as well as purchase prepaid cell phone credit. In countries where there is a full integrated cross-bank ATM network, ATM perform many functions which are not directly related to management of one's own bank account, such as:

- i. Deposit currency recognition, acceptance and recycling.
- ii. Paying routing bill, fees and taxes (utilities, phone bills, social security, legal fees, taxes, etc).
- iii. Printing bank statements
- iv. Updating passbooks
- v. Loading monetary value into stored value cards
- vi. Purchasing postage stamps, lotteries tickets train tickets, concert tickets, movie tickets shopping mall gift certificates etc. they are also use for the payment of fast loans, donation to charities, mobile phone credit, payment (In full or partially) the credit balance on a card linked to a specific current account transferring money between linked account (such as transferring between checking and savings accounts).

Furthermore, he opined that increasingly banks are seeking to use the ATM as a sales device to deliver preapproved loans and targeted advertising using such product as ITM (The intelligent Teller Machine) from Apra Related from NCR.

ATMs can also act as an advertising channel for companies to advertize their own products or their-party products and services.

As Paula (2009) observed that ATMs provides high degrees of incentive to minimize malfunctions, financial consequences of incorrect machine operation. An Automated Teller Machine enhances customer satisfaction by providing varieties of services to bank customer, anywhere and at all time even after banking hours. ATMs and the supporting electronic financial network are generally very reliable, with industry benchmarks typically producing 98.25% customer availability for ATMs. If ATMs do go out of service, customers could be left without ability to make transactions untill the beginning of their next time of opening hours (Obodoechi, 2010).

The external environment analysis encompasses a thorough and regular updated understanding of the big picture of the sum total of the environment changes occurring in the area of technology, competition, the local, state and national economies, the legal and regulatory arena, the ever changing markets in which the bank operates and its position in the market, socio-economic conditions as revealed by demographic information etc. Changes in these environments generate opportunities for the creation and enhancement of the competitive advantages for the bank or for existing or new competitors. In many cases, these advantages are only available to the first institution which recognizes and responds appropriately to the new reality. As changes spawn conditions that threaten the firm's

competitive position, failure to formulate appropriate and timely strategic responses can lead to reduced profitability and each ultimate demises of the bank. Fluctuations in the environment must be analyzed in terms of their implication for new horizons emerging and old ones recording for instance, in relation to the market seemed, product pricing, risk management, manpower requirement and delivery alternatives. All these contribute to an effective service delivery and customer satisfaction. Based on this premise, the idea of banking technology serves as a means of effective service and customer satisfaction (Tooki, 2016).

2.4 Issues faced by organization on information and communication technology

The Advances fee fraud or 419, which is one of the most popular of all internet frauds, Has its origin from Nigeria in the 1980s. Its development and spread follows the path of the developments in information technology at inception, postal letters were used as key media for committing 419 frauds. In the opinion of Amedu (2010), cyber-crimes became integrated into telecommunication facilities such as the telephone and fax from the late 1990s following the introduction of computers and internet, 419 crimes became prevalently perpetrated through the use of e-mail and other internet means. The latest dimension taken by the perpetrators of this crime is the use of fake internet bank site, and using that to encourage victims to open accounts with them. The country is the third highest ranked in internet 'money offer' frauds. As was reported in one of the national newspapers, frauds and forgeries in Nigerian bank as at June 2005 stood at 329 or

N1.15 billion monetary equivalent, against 222 cases or N1.47 billion monetary equivalent in April same year. There is even global suspicion that a Nigerian crime syndicate that coordinates global crimes such as money laundering, bank fraud and 419 seams exists today. These issues basically defeat the key ingredients of electronic banking, which includes confidentiality, integrity and availability.

Several factors are responsible for the above situation. They include inordinate tolerance for corruption among Nigerian public and government agencies; weakness of the existing legislative/judicial institutions to make and enforce relevant laws on cybercrimes; quality of graduates in terms of professional values and ethics; chronic unemployment among graduates, and the widening gap between the few rich and the many poor caused mainly by bad governance. In the main, erosion of good value principles and corruption constitute the greatest cause of rising cyber-crimes among Nigerian. This, according to transparency International, is worsened by fact that several generations of Nigerians have been raised in this norm. Hence, what is seen as a dangerous global crime is socially acclaimed and glamorized in Nigeria.

The above situation constitutes the environment upon which Electronic banking has emerged in Nigeria. Although the level of the adoption and practice of electronic banking (especially Internet banking) has remained quite insignificant, global projections still remains that Information Technology would continue to play a revolutionary role in the development and delivery of banking products and

services all over the world. In effect, it is this projection that has raised pertinent regulatory questions concerning Electronic banking, especially in Internet fraud-infested countries like Nigeria. One key issue here borders on how to handle the rising level of frauds and forgery prevalent in the entire banking system; and how to make Internet banking fit well in the banking structure of a country so notoriously identifiable with criminals use Internet access.

At the national level, the Nigerian government and the relevant regulatory agencies have strived to match the rapidly changing electronic banking environment with necessary regulations and frameworks (Soludo, 2005). Earlier efforts made to this effect included the enactment of the Failed Banks (Recovery of Debts) and Malpractices in Bank Decree No. 18 of 1994, and the Money Laundering of 1995. However, as noted above, poor enforcement procedure rendered these instruments very inactive in checking the menace of financial crimes. By the late 1990s, following record growth internet and computer usage in the country, almost all the regulations guiding the banking industry, including the Banks and Other Institution Act of 1991, were lacking adequate provisions to accommodate the emerging trend. Not even a mention of electronic banking or any manner of its application was mentioned in any of those prevailing regulatory documents. The situation created a lot of gaps between the levels of CBN regulatory tools and the advances in information technology. This at the same time made the banks vulnerable to all kinds of risks, including transaction, strategic,

reputation and foreign exchange risks (Soludo, 2005). This deficiency notwithstanding, it is not until 2003 when the maiden guidelines on electronic banking came into force.

The electronic banking guidelines emerged from the findings of a Technical Committee on Electronic Banking set up by the Central Bank of Nigeria in 2003 to find appropriate modalities for the operation of electronic banking in the country. It was indeed the findings and recommendations of the committee that led to the adoption of a set of guidelines on Electronic Banking in August 2003. Of the key provisions of the guidelines, only a section deals with issues relating to Internet Banking Section 1.3 paragraph 4 of the guidelines, exceptionally stresses that banks should put in place procedures for maintaining the bank's Web site, including the various security features needed for Internet banking services (CBN, 2003). Despite its numerous technical specifications, the guidelines have been widely criticized as not being enough to check the growing popularity of Electronic banking against the backdrop of growing sophistication in technology related crimes and frauds. Closer examination of the contents of the guidelines equally shows that the document fails to meet up with the four key areas where Electronic banking may have regulatory impact – changing the traditional lines upon which existing regulatory structures are laid; handling concerns about existing public policy issues; changing the nature and scope of existing risks; and rebalancing regulatory rules and industry discretion. Again, some important

recommendation of the Technical Committee that gave rise to the adoption of the guidelines was completely omitted. This is especially so with paragraph 6.1 of the Committee's report, which among others recommended that all banks, intending to offer transactional services on the Internet /other e-banking products, should obtain an approval-in-principle from CBN prior to commencing these services. Part of the criticisms is that the recent guidelines are capable of constraining the practice and development of Electronic Banking Nigeria. One of such areas, for instance, is the requirement on electronic banking product development. While acknowledgement that the existing regulations would apply wholly on electronic banking, section 4.2 of the Guidelines emphasizes that only banks, which are licensed, supervised and with physical presence in Nigeria, are permitted to offer electronic banking services in Nigeria, and that virtual banks are not to be allowed. The Guidelines also gives indications that the products/services can only be offered to residents of Nigeria with a verifiable address with the geographic boundary of Nigeria; any person residing physically in Nigeria as a citizen, under a resident permit or other legal residency designation under the Nigerian Immigration Act; any person known herein as a "classified person" who neither is temporarily in Nigeria. The Guidelines go further to indicate that the e-banking service should be offered in Naira only; and that where such a service is to be provided in foreign currency, it should be to only the holders of ordinary domiciliary accounts, and conform with all foreign exchange regulations On some other aspects, the Guidelines have been criticized by Access Bank executive and

customer for not addressing adequately the critical issues concerning Internet security. It failed to explicitly recommend a standard that allows banks to examine potential threats that may already be in existence in each individual financial institution's current network.

In addition to this array of criticisms, the workability of proper Internet framework is also queried amidst the poor state of basic information technological infrastructure in the country. This is essentially necessary since Electronic Banking generally relies on the existence of adequate operational infrastructure like telecommunications and power to function effectively. Though little success has been recorded, the supply of these requisite facilities is very erratic in the Nigerian case. Where they exist, high cost of acquisition and maintenance tend to deny a greater percentage of the population access to them. The case of Internet access is a glaring one where majority of the citizens rely solely on the services of commercial cyber cafes to meet their Internet needs. It is expected of the E-Banking Guidelines to provide procedures not only for banks investment in Internet facilities, but also in promoting customers' access to such bank's information that will enhance customers' loyalty.

Unfortunately, none of such information is contained in the document. Prior to the merger, each of the four banks maintained a unique brand, discernable areas of coverage, an easily identified degree of strength and competencies in various areas of banking services and a fair share of the market. Technology is undoubtedly a

very important tool of every bank's competitive strategy. It had drawn the line between success and failure. The deployment of Banks, a web enabled new generation enterprise banking solution has enabled banks to offer its customers banking services at their door step. The bank runs on a completely centralized system with banks (version 6.2) as the main Banking Application. The Bank's innovation technology driven products are products are

2.5 Theoretical Framework

2.5.1 Innovation Diffusion Theory

This theory developed by Roger in 1983 explains individuals' intention to adopt a technology as a modality to perform a traditional activity. The critical factors that determine the adoption of an innovation at the general level are the following: relative advantage, compatibility, complexity, trialability and observability. It is concerned with the manner in which a new technological idea, arefact or technique, or a new use of an old one, migrates from creation to use. According to (IDT) theory, technological innovation is communicated through particular channels, over time, among the members of a social system. The stages through which a technological innovation passes are: knowledge (exposure to its existence, and understanding of its functions); persuasion (the forming of a favourable attitude to it); decision (commitment to its adoption); implementation (putting it to use); and confirmation (reinforcement based on positive outcomes from it).

Early users generally are more highly educated, have higher social status, are more open to both mass media and interpersonal channels of communication, and have more contact with change agents. Mass media channels are relatively more important at the knowledge stage, whereas interpersonal channels are relatively more important at the persuasion stage. Innovation decisions may be optional (where the person or organization has a real opportunity to adopt or reject the idea), collective (where a decision is reached by consensus among the members of a system), or authority-based (where a decision is imposed by another person or organization which possesses requisite power, status or technical expertise).

Important characteristics of an innovation include: relative advantage (the degree to which it is perceived to be better than what it supersedes); compatibility (consistency with existing values, past experiences and needs); complexity (difficulty of understanding and use); trialability (the degree to which it can be experimented with on a limited basis); observability (the visibility of its results).

Different adopter categories are identified as: innovators (venturesome); early adopters (respectable); early majority (deliberate); late majority (skeptical); laggards (traditional).

Earlier adopting individuals tend not to be different in age, but to have more years of education, higher social status and upward social mobility, be in larger organizations, have greater empathy, less dogmatism, a greater ability to deal with abstractions, greater rationality, greater intelligence, a greater ability to cope with uncertainty and risk, higher aspirations, more contact with other people, greater exposure to both mass media and interpersonal communications channels and engage in more active information seeking.

Important roles in the innovation process include: opinion leaders (who have relatively frequent informal influence over the behavior of others); change agents (who positively influence innovation decisions, by mediating between the change agency and the relevant social system); change aides (who complement the change agent, by having more intensive contact with clients, and who have less competence credibility but more correctness or trustworthiness credibility).

The change agent functions are: to develop a need for change on the part of the client; to establish an information-exchange relationship; to diagnose the client problems; to create intent to change in the client; to translate this intent into action; to stabilize adoption and prevent discontinuance; and to shift the client from reliance on the change agent to self-reliance.

2.6 Review of Empirical Studies

Alma and Butkus (2020) **Impact of information and communication technologies on productivity growth** In modern economy information and communication technologies (ICT) play the essential role. The improvement of ICT infrastructure, developing ICT knowledge and usage can lead to economic growth due to higher productivity. However, this impact can depend on countries' ICT investment or expenditure amount, reached ICT development and productivity levels. Moreover, ICT impact on productivity growth can occur after a certain period. Consequently, forming the ICT development strategies it is important to identify ICT impact period and impact differences between relatively high and low productivity countries. Authors examined the impact of ICT investments on productivity in EU countries covering the period of 1995–2015. Research results have revealed that ICT development positively and directly influences productivity, but this effect manifests with a lag in time. Moreover, it was found that the impact of ICT development on productivity is about twice bigger in countries with relatively high productivity level compared with countries that have relatively low productivity level.

Dampana and Agbeyebe (2017) in their study examine the effects of Information Communication Technology on employee performance in an organization. This

paper reviews some related literature alongside theoretical framework which have bearing on the subject matter. This paper adopts the descriptive survey design in achieving the stated objective. The population of this study consists of 50 staffs of the study organization with the sample size of 34 drawn via simple random sampling technique. The questionnaire method was used in collecting the data. The data obtained was analyzed with particular reference to the research questions using descriptive statistical tools such as tables and frequencies. The findings show that out that Information and Communication Technology has improved the skills of workers in the bank thereby improving the employee's performance, that Information and Communication Technology has brought new techniques in all Areas of the Banks by improving the banking operation. Based on the findings, the researcher recommended that banks should improve more on its information technology so as to enhance its productivity, the use of (ICT) in the banking sector should not only be restricted to the cities alone, rural banking should also be improved upon.

Agboh (2015) examine the drivers and challenges of information and communication technologies (ICT) adoption by Small and Medium Size Enterprises (SMEs) in Morgan State Universities, Accra, Ghana. The study found that the key challenges to ICT adoption as lack of internal capabilities, high cost of ICTs equipment, poor infrastructure, financial constraints and lack of information about suitable ICT solutions and lack of time to implement. The study also identified the key drivers of ICT adoption as the desire to increase customer service and responsiveness, increase ability to compete, improve overall communication, increase sales and profit, and to have better access to information.

Onwuka (2015) in his study investigates information and communication technology (ICT) and the performance of selected Small and Medium Enterprises (SME) in Onitsha Metropolis. It is observed that despite the enormous benefits derived from ICT in the field of business, trade, industry and commerce the adoption level is relatively low in Nigeria when compared to development countries. The general objective of the study is to examine the contribution of ICT to the performance of selected SMEs in Onitsha metropolis. The study seeks to find out specifically the extent to which ICT affects the knowledge capability of SME employees. The study is anchored on Cooper and Z Mud's theory of Information Implementation process. The study employed descriptive research design; primary sources of data are the major instrument used for this study. Pearson's product moment correlation was used to analyze the data. The findings reveal that there exists a significant relationship between ICT and the knowledge capability of the SME employees in the selected organizations. Base on the findings, the study recommends that the operators of Small and Medium Enterprises should embrace the use of ICT in the business operations and

government should provide ICT infrastructures that will facilitate business efficiency

Olise, (2014) examine the determinants of ICT adoption for improved SMEs performance in Anambra State. The study provides empirical evidence on levels of awareness and adoption patterns of ICT facilities among SMEs, it evaluates factors influencing ICT adoption in the SME sector; and also assess the impact of ICT adoption on SMEs performance. The found that there is significant difference in the levels of awareness and adoption patterns of ICT facilities among SMEs, also capital base, turnover, and asses value of the business investigated have significant influence on ICT adoption. The studies referred to in this empirical review is on the impact of adoption of ICT by SMEs.

Others investigated the factors affecting ICT adoption by SMEs. None of these emphasized on the ICT and performance of SMEs in Onitsha Metropolis. Thus, this study will attempts to add to the body of studies by highlight the need for effective ICT adoption and reduce barriers to the adoption and recommendation that will close the gap of ICT challenges and government supports.

Mohammad (2014) carried out study on how IT affects the productivity of human resources. Based on a review of theoretical background and the literature and exploratory interviews with the participants, eight indices of human resources productivity were identified in this study, including motivation, creativity and innovation; spirit of competitiveness, activity cost reduction, the improvement of the quality of activities, work time reduction, job satisfaction, and human resources spirit. Results suggested that that there is a positive relationship between IT and human resources productivity.

2.6 Summary

Information Technology (IT) also called Information and communication Technology (ICT) is the appropriate use of technology tools by which users operate and exchange information or data in its various forms such as text, graphics, sound and video. IT can be explained and categorized in different forms such as in terms of capital, including the simplest one is the BEA's category "Office, Computing and Accounting Machinery" (OCAM), which involves mainly of computers. It is imperious to suggest that productivity is not a uniform widespread concept but there exist different definitions that are appropriate under different circumstances. Productivity is generally explained as output per unit of input. It is an important indicator of the efficiency with which organizational resources been it human resources or material resource are being used, so it is important to measure it within any given organization to analyze the returns that the investors are receiving.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the procedures used in collecting and analysing data for the study. The chapter discusses the research design, area of the study, population of the study, sample size and sampling techniques, instruments for data collection, validity and reliability of the instruments, method of data presentation and analysis.

3.2 Research Design

The research design adopted for this study is the survey research design. This allowed for easier comparison of responses of the entire respondents in order to reach logical and constructive conclusion. The justification for the choice of the above approach was to generalize from a representative sample to a whole population (Samak and Tawfiq, 2017)

3.3 Area of the study

The geographical location of this research study is 17A, InuwaAbdukadir Road, Kaduna, Kadun. This organization is chosen for this study for the purpose of proximity.

3.4 Population of the study

According to Robert (2012), population is a collection of elements about which the researcher wishes to make inference. The population of the study consists of the entire staff of Coca-Cola Plc, Kaduna which presently stood at 27 staff.

3.5 Sample Size and Sampling Technique

Sample is a proportion of population under consideration that represents the whole population (Osuala, 2009). A sampling technique is the name or other identification of the specific process by which the entities of the sample have been selected. The entire staff of Coca-Cola Plc were involved in the study because ndagi (1996) opined that any population below 100 persons or objects should be adopted as the sample size. Therefore, the researcher used the entire population as sample size 27.

3.6 Instrument for Data Collection

The instrument of primary data used is a well-designed but structured questionnaire. The scale of strongly agree, agree, undecided, disagree and strongly disagree options were drawn to elicit responses to address the research questionnaires.

The 5 points likert's rating scale is shown thus;

	SA	A	UD	D	SD
Grade point	5	4	3	2	1
Range	4.5-5.0	3.5-4.4	2.5-3.4	1.5-2.4	0.5-1.4

Key:

SA. = Strongly agree = 5

A. = Agree. = 4

UD. = undecided. = 3

D = disagree. = 2

SD = strongly disagree = 1

3.7 Validity and Reliability of the Instrument

Two copies of the questionnaire accompanied by letter containing the purpose of the research will be given to two lecturers of the Department of Business Administration. The suggestions of the experts were equally used in improving the questionnaires. Reliability has to do with consistency obtained from the result of the application of the instruments. An instrument is reliable if it consistently gives the same or similar result. A pilot test will be conducted on few respondents from an organisation to pretest the efficacy of the questionnaire; this is in conformity with the views of Nwana (2012).

Reliability was therefore obtained by giving some of the questionnaires to about twenty selected staff of the company to see if the questionnaire is consistent in measuring what it ought to measure. Besides, the difficulties likely to be experienced by those that would be used in the pilot study shall be noted and corrected accordingly.

3.8 Method of Data Collection

The researcher conducted face to face personal interview with the respondents and personal observation were also made in the course of the interview. However, the questionnaires were administered by the researcher to the respondents on direct hand basis.

3.9 Method of Data Presentation and Analysis

Data collected from the respondents were presented in tables and analyzed accordingly with the aid of arithmetic mean and simple percentage. The choice of these statistical tools is because they provide accurate and absolute measure of data, and make the data very easy to be interpreted. The techniques are also very convenient and more appropriate to enable the readers to comprehend the findings of the study.

Mean score: this was adopted in analysing each variables in the questionnaire.

Simple percentage: this was used in the analysis of each of the questions rating to respondents demographic variables.

The mean score has the formula given by the equation below:

$$\text{Mean (x)} = \frac{\sum fx}{\sum f}$$

Where :

Σ = summation

F = frequency

X = variables

Each value of the acronyms on the 5-point scale was multiplied by the corresponding frequency of the variable. The frequency (f) column was multiplied by (x) to get (fx). The mean score of each of the variable was obtained by dividing the sum total of (fx) by the sum of (f).

$$= 5+4+3+2+1 / 5$$

$$= 15/5$$

$$= 3.0$$

Therefore, the mean scores of 3.0 and above are regarded as agreed responses, while points below a mean average of 3.0 are treated as disagreed responses.

CHAPTER FOUR

DATA PRESENTATION AND ANALYSIS

4.1 Introduction

This chapter deals with the presentation and analysis of data collected through questionnaires administered to the respondents of Keystone Organization, Kaduna. The questionnaires distributed to the staff of the organization were designed to address and answer certain issues raised in the research question. A total number of 25 questionnaires were distributed to the staff of the organization and all were returned correctly filled and returned by the respondents.

Table 4.1.1: Analysis of Response Rate

Options	No. of Questionnaires	Percentage (%)
Retrieved	25	100
Non-Retrieved	0	0
Total	25	100

Source: Administered Questionnaire, 2022.

4.2 Characteristics of Respondents

It contains the presentation and analysis of respondents' bio-data which shows the capability of the respondents to provide appropriate needed responses to the various survey statements.

Table 4.2.1: Age of Respondents

Variables	No. of Respondents	Percentage (%)
18 – 25	10	40
26 – 33	11	44
34 – 41	4	16
42 and above	-	-
Total	25	100

Source: Field Survey, 2022.

Table 4.2.1 above shows that 10 respondents representing 40% are between the age of 18 and 25, 11 respondents representing 44% were at the range of 26 – 30 and finally 4 respondents representing 16% were at the range of 34 – 41 and none of the respondents were 42 and above years of age . This means that the majority of the respondents are between the age of 26 and 33 years of old.

Table 4.2.3: Educational Background

Options	No. of Respondents	Percentage (%)
Primary	-	-
Secondary	-	-
Tertiary	25	100
Total	25	100%

Source: Field Survey, 2022.

The above table shows that the entire respondents are graduate. This means that most of the respondents may likely know the effect and influence of ICT

on their various customer's services as a result of their level of attainment in their various educational background.

Table 4.2.2: Working Experience of the Respondents.

Variables	No. of Respondents	Percentages (%)
1 - 5 years	14	56
6-10 years	6	24
11-15 years	4	16
16 -20 years	1	4
21 years and above	-	-
Total	25	100

Source: Field Survey, 2022.

The data presented on table 4.2.2 above shows that 14 respondents representing 56% have been working between 1- 5 years, 6 respondents representing 24% are between 6-10 years, 4 respondents that represent 16% were between 11-15 years, 1 respondents representing 4% were between 16 and 20 years' experience while none of the respondents were of the range of 21 years or more.

Table 4.2.2: Designation of the Respondents.

Variables	No. of Respondents	Percentages (%)
Management staff	1	4
Operating Staff	17	68
Other level	7	28
Total	25	100

Source: Field Survey, 2022.

The data presented on table 4.2.2 above shows that 1 respondent representing 4% was management staff, 17 respondents representing 68% are operating staff while none of the respondents were of the range of 17 respondents are other level.

4.3 Data Presentation and Analysis

Research Question 1

How can the adoption of ICT products actual provide more efficient and effective replacement of the former manual procedure?

The response to the above research question is presented in table 4.3.1.

Table 4.3.1: The adoption of ICT products actual provide more efficient and effective replacement of the former manual procedure

S/N	Variables	SA	A	UD	D	SD	Total	X	Remarks
1.	It facilitate accurate records and accounting operations	21 X 5 105	3 X 4 12	1 X 3 3	0 X 2 0	0 X 1 0	25 <u>120</u> 25	4.8	Strongly Agreed
2.	It reduces cost of operations.	19 X 5 95	5 X 4 20	1 X 3 3	0 X 2 0	0 X 1 0	25 <u>118</u> 25	4.7	Strongly Agreed
3.	It provides time, speed accurate and reliable up to information for effective management decision making.	16 X 5 80	6 X 4 24	3 X 3 9	0 x 2 0	0 X 1 0	25 <u>113</u> 25	4.5	Strongly Agreed
4.	It assists personnel to render more efficient.	13 X 5 65	9 X 4 36	3 X 3 9	0 X 2 0	0 X 1 0	25 <u>110</u> 25	4.4	Agreed

N-25

cut-off point = 3.0

Source: Field Survey, 2022.

Variable 1 which indicates a mean score of 4.8 is accepted as the mean score is greater than 3.0. This implies that the sample respondents agreed that the adoption of ICT products facilitate accurate records and accounting operations. Variable 2 which says that It reduces cost of operations was also agreed upon by the sample respondents as it has 4.7 mean score.

Variable 3 indicates that the adoption of ICT in the organization provides time, speed accurate and reliable up to information for effective management decision making. with a mean score of 4.5 while variable 4 with mean score of 4.4 was also accepted by the sample respondents which indicate that increase in organization's performance could lead to a corresponding increase in organization's operations.

Research Question 2: Can the adoption of the various ICT products be applied to increase the level of efficiency?

The response to research question 2 is presented in table 4.3.2.

Table 4.3.2: The adoption of the various ICT products has to be applied to increase the level of efficiency.

S/N	Variables	SA	A	UD	D	SD	Total	X	Remarks
5.	It provided customers with convenient business hours, personalized.	18 X 5 90	6 X 4 24	1 X 3 3	0 X 2 0	0 X 1 0	25 <u>117</u> 25	4.6	Strongly Agreed
6.	ICT makes international market accessible	7 X 5 35	18 X 4 72	0 X 3 0	0 X 2 0	0 X 1 0	25 <u>107</u> 25	4.3	Agreed
7.	Improving services delivery	17 X 5 85	5 X 4 20	3 X 3 9	0 x 2 0	0 X 1 0	25 <u>109</u> 25	4.4	Agreed
8.	Increase the effectiveness and efficient service in competitive environment	18 X 5 90	4 X 4 16	2 X 3 6	0 X 2 0	0 X 1 0	25 <u>112</u> 25	4.5	Strongly Agreed

N-25

cut-off point = 3.0

Variables, 5, 6, 7 and 8 of the above table indicates that all the variables were accepted by the sample respondents on the adoption of the various ICT products has to be applied to increase the level of efficiency. Analysis of data on table 4.3.2 above indicates that the adoption of the various ICT products has to be applied to increase the level of efficiency will provide customers with convenient business hours, personalized, ICT makes international market accessible, Improving services delivery and increase the effectiveness and efficient service in competitive environment.

The variables have 4.6, 4.3, 4.4 and 4.5 respectively greater than the cut-off point of 3.0.

Research Question 3

Can this adoption of ICT products erase customers delay and enhance faster access to account enquires?

The response to research question 3 is presented in table 4.3.3.

Table 4.3.3: Adoption of ICT products erase customers delay and enhance faster access to account enquires.

S/N	Variables	SA	A	UD	D	SD	Total	X	Remarks
9.	It eases delay and customers queue will be minimized.	15 X 5 75	10 X 4 40	5 X 3 15	0 X 2 0	0 X 1 0	30 <u>130</u> 30	4.3	Agreed
10.	It allows customers to access their accounts in any location and at any time	12 X 5 60	16 X 4 64	0 X 3 0	2 X 2 4	0 X 1 0	30 <u>128</u> 30	4.3	Agreed
11.	ICT products in organization hastens fund transfer	18 X 5 90	12 X 4 48	0 X 3 0	0 x 2 0	0 X 1 0	30 <u>138</u> 30	4.6	Strongly Agreed
12.	It allow customers to receive prompt and fair attention.	15 X 5 75	10 X 4 40	2 X 3 6	3 X 2 6	0 X 1 0	30 <u>127</u> 30	4.2	Agreed

N-25

cut-off point = 3.0

Source: Field Survey, 2022.

The analysis of data in table 4.3.3 above shows that adoption of ICT products will eases delay and customers queue will be minimized. In the

same vein it was shown that it allows customers to access their accounts in any location and at any time and hastens fund transfer. Lastly, variable 12 in the table shows that adoption of ICT allow customers to receive prompt and fair attention.

Research Question 4: How can the adoption of ICT products enhance flexibility in transaction including access to international market?

The response to research question 4 is presented in table 4.3.2.

Table 4.3.2: the adoption of ICT products enhance flexibility in transaction including access to international market.

S/N	Variables	SA	A	UD	D	SD	Total	Mean	Remarks
13.	It increases the number of transaction and business	18 X 5 90	7 X 4 28	0 X 3 0	0 X 2 0	0 X 1 0	25 <u>118</u> 25	4.7	Strongly Agreed
14.	Access to the e-services without any obstruction	14 X 5 70	11 X 4 44	0 X 3 0	0 X 2 0	0 X 1 0	25 <u>114</u> 25	4.6	Strongly Agreed
15.	Convenience, time saving and ease access to the e-services	11 X 5 55	14 X 4 56	0 X 3 0	0 X 2 0	0 X 1 0	25 <u>111</u> 25	4.4	Agreed
16.	Offer a perfect opportunity for maximizing profits.	12 X 5 60	12 X 4 48	1 X 3 3	0 X 2 0	0 X 1 0	25 <u>111</u> 25	4.4	Agreed
17.	Increase the number of business to attain greater performance	17 X 5 85	8 X 4 32	0 X 3 0	0 X 2 0	0 X 1 0	25 <u>117</u> 25	4.7	Strongly Agreed

N-25

cut-off point = 3.0

Source: Field Survey, 2022.

Variables, 5, 6, 7 and 8 of the above table indicates that all the variables were accepted by the sample respondents on the adoption of the various ICT enhance flexibility in e-transaction including access to international market. Analysis of data on table 4.3.2 above indicates that the adoption of the various ICT products It increases the number of transaction and business Access to the e-services without any obstruction, convenience, time saving and ease access to the e-services, offer a perfect opportunity for maximizing profits and increase the number of business to attain greater performance. The variables have 4.7, 4.4, 4.4 and 4.7 respectively greater than the cut-off point of 3.0.

4.4 Summary of Findings

The followings are the findings of the study:

ICT improved the efficiency and effectiveness of organization's operations, it leads to financial stability and payment system oversight, increase the performance of organizations, helps to increase the number of e- transactions and businesses, it brought about quickly access to the e-services without any obstruction, it brought about conveniences; time saving and easy access to the e-services, it offers a perfect opportunity for maximizing profit, it allows the successful e-payment which lead to-choice of variety to serve customer diversified needs which lead to higher profits, attracts more investors to

the organization and offer perfect opportunity for maximizing profit. Lastly, ICT in e-sector increase the potential of the organization to attain greater Customers' satisfaction.

4.5 Discussion of Findings

The data presented and analyzed in this chapter was not just revealing but deserve further discussion. The findings of the study are discussed thus.

Research Questions 1:*How can the adoption of ICT products actual provide more efficient and effective replacement of the former manual procedure?*

To answer the above question, the data in table 4.3.1 was utilized. The analysis of data on table 4.3.1 shows that the adoption of ICT products facilitate accurate records and accounting operations, ICT in the organization provides time, speed accurate and reliable up to information for effective management decision making and increase in organization's performance could lead a corresponding increase in organization's operations. In the same vein, ICT lead to financial stability and payment system oversight and the table also show that the organization's performance increases as a result of ICT.

Research Question 2:*Can the adoption of the various ICT products be applied to increase the level of efficiency?*

To answer the above question, the data in table 4.3.2 was adopted. The analysis of the data in table 4.3.2 shows that the respondents agreed that the adoption of the various ICT products has to be applied to increase the level of efficiency will provide customers with convenient business hours, personalized, ICT makes international market accessible, Improving services delivery and increase the effectiveness and efficient service in competitive environment.

Research Question 3:

Can this adoption of ICT products erase customers delay and enhance faster access to account enquire?

To answer the question above, reference was made to the data in table 4.3.3. The analysis of data on 4.3.3 shows that adoption of ICT products eases delay and customers queue will be minimized. In the same vein it was shown that it allows customers to access their accounts in any location and at any time and hastens fund transfer. Lastly, adoption of ICT allow customers to receive prompt and fair attention. The findings further revealed that ICT in the organization attract more investors to the organization thereby offering perfect opportunity for maximizing profit, just as e-transaction helps to increase the potential of the organization to attain greater Customers' satisfaction.

Research Question 4:

How can the adoption of ICT products enhance flexibility in transaction including access to international market?

To answer the question above, reference was made to the data in table 4.3.4.

The analysis of data on 4.3.4 shows that the adoption of the various ICT products increases the number of transaction and business.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Summary

This research work is on impact of information and technology on customers service in Coca-Cola Plc. This study strived to find solution and the exploration of areas of ICT that may have suffered neglect and that would have performed tremendously towards enhancing customer services in Coca-Cola Plc main branch, by arresting problems generating from customer delay and prolonged queuing, inaccurate postings, poor information processing due to manual operations and improper utilization of the ICT applications, such as automated teller machines (ATM), smart card technology, debit and credit cards through electronic fund transfer at Point of Sale (POS), electronic data interchange etc. however, the fact that Coca-Cola Plc. uses computers is not enough to qualify it as an E-organization, rather the question lies with “how has it been able to use the ICT infrastructure to its full capacity to drive the business of local and global e-commerce thus moving customer satisfaction to its extreme peak. Therefore, this research work reveal chapter 1-5 which portray a picture of a recognized problem which was carefully diagnosed and solution prescribed for remedy.

5.2 Conclusion

Evidence obtainable from this research work has shown a remarkably high degree of acceptability by the customers that the adoption of ICT has really paved the way to enhanced customer services in Coca-Cola Plc main branch. Findings of this research also revealed that there is the need for improvement on the part of the organization, to fully utilize ICT applications, especially in making international market accessible through provision of the necessary facilities that will continuously address the barriers of time and distance.

It was discovered that Nigerian manufacturing sector since 1980s have performed better in their investment profile and use of ICT systems, than the other industrial sectors of the economy.

The application of Information Communication Technology (ICT) in Nigerian manufacturing sector is becoming the backbone of organization services regeneration in Nigeria. It is also found out that organizations now offer customers the flexibility of operating account in any branch, so they invest in ICT to its full capacity as a component part of their strategy for effective performance.

5.3 Recommendations

Based on the previous analysis the researcher hereby makes the following suggestions.

- 1) The management of Coca-Cola Plc. Should to ensure full utilization of the ICT applications to reap its outstanding and potentials benefits.
- 2) The organization should ensure that its soft-wares and hard-wares are upgraded periodically. Maintenance and servicing of the ICT products is carrying out often, to ensure smooth operation.
- 3) Although the adoption of ATM system has improved in a little measure the withdrawal process and account checks are cumbersome. Personal interview however revealed few instances of perpetrators of fraud. In respect of security of the ATM system.
- 4) Adequate incentives should be given to staff in order to motivate them such as better salaries, job security, relevant allowances etc. this will play a vital role in promoting their effectiveness and efficiency to customers services
- 5) Staff/ personnel should undergo training in human relations to enable them maintain good customers relations to enable them maintain good customer relations and promote company's good will.

- 6) Organization should make provisions that will assist customers in making international market accessible via its electronic transactions such that the organization can collaborate between local and international markets on payment systems, cashless transaction digital on payment systems, digital on payment systems, digital cash and other electronic based projects.
- 7) Lastly, in order to make ICT in manufacturing sector to be accessible both locally and globally there is a need to address the issue of power failure, bad network, internet fraud, etc.

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APPENDIX A

Department of Business Administration
C.B.M.S.
Kaduna polytechnic
P.M.B 2113
Kaduna.

The Manager
National Board for Technical Education
Kaduna.

Dear sir/ madam,

LETTER OF INTRODUCTION

I am an undergraduate student of Kaduna polytechnic, as part of the requirements for the award of higher national diploma (HND) in business administration and management, I am conducting a research work on the effect of information and communication technology on productivity of Coca-Cola Plc, Kaduna.

I will be highly delighted if you will kindly answer the following questions and tick as appropriate.

All information given is purely for academic purpose and will be treated as confidential too.

Yours faithfully,

John Dashe Damulak
(KPT/CBMS/19/41360)

APPENDIX B

SECTION 'A'

Personal data (tick [☐] as appropriate)

1. Age

- | | |
|---------|------------------------------|
| 20- 29. | [<input type="checkbox"/>] |
| 30-35. | [<input type="checkbox"/>] |
| 36-40. | [<input type="checkbox"/>] |
| 41-45. | [<input type="checkbox"/>] |
| 46-50. | [<input type="checkbox"/>] |

2. Gender

- | | |
|---------|------------------------------|
| Male. | [<input type="checkbox"/>] |
| Female. | [<input type="checkbox"/>] |

3. Marital Status

- | | |
|---------|------------------------------|
| Single | [<input type="checkbox"/>] |
| Married | [<input type="checkbox"/>] |

4. Educational background of respondents:

- | | |
|---------------|------------------------------|
| SSCE. | [<input type="checkbox"/>] |
| ND/NCE. | [<input type="checkbox"/>] |
| HND/ B.Sc. | [<input type="checkbox"/>] |
| Postgraduate. | [<input type="checkbox"/>] |

5. Rank

- | | |
|----------------------|------------------------------|
| Management staff | [<input type="checkbox"/>] |
| Non-management staff | [<input type="checkbox"/>] |

6. Level in the organization

- | | |
|--------------|------------------------------|
| Senior staff | [<input type="checkbox"/>] |
| Junior staff | [<input type="checkbox"/>] |

7. Length of services

- | | |
|--------------------|------------------------------|
| 1 – 5 years | [<input type="checkbox"/>] |
| 6 – 10 years | [<input type="checkbox"/>] |
| 11 – 15 years | [<input type="checkbox"/>] |
| 16 years and above | [<input type="checkbox"/>] |

SECTION 'B'

Please tick [☐] as appropriate

Strongly agreed. = SA

Agreed. = A

Undecided. = UD

Disagreed. = D

Strongly disagreed. = SD

Research Question 1: The adoption of ICT products actual provide more efficient and effective replacement of the former manual procedure

S/N	Variables	SA	A	UD	D	SD
1.	It facilitate accurate records and accounting operations					
2.	It reduces cost of operations.					
3.	It provides time, speed accurate and reliable up to information for effective management decision making.					
4.	It assists personnel to render more efficient.					

Research Question 2: Can the adoption of the various ICT products be applied to increase the level of efficiency?

S/N	Variables	SA	A	UD	D	SD
5.	It provided customers with convenient business hours, personalized.					
6.	ICT makes international market accessible					
7.	Improving services delivery					
8.	Increase the effectiveness and efficient service in competitive environment					

Research Question 3: Can this adoption of ICT products erase customers delay and enhance faster access to account enquires?

S/N	Variables	SA	A	UD	D	SD
9.	It eases delay and customers queue will be minimized.					
10.	It allows customers to access their accounts in any location and at any time					
11.	ICT products in organization hastens fund transfer					
12.	It allow customers to receive prompt and fair attention.					

Research Question 4: How can the adoption of ICT products enhance flexibility in transaction including access to international market?

S/N	Variables	SA	A	UD	D	SD
13.	It increases the number of transaction and business					
14.	Access to the e-services without any obstruction					
15.	Convenience, time saving and ease access to the e-services					
16.	Offer a perfect opportunity for maximizing profits.					
17.	Increase the number of business to attain greater performance					

