THE REPUBLIC OF TURKEY
BAHCESEHIR UNIVERSITY

ICT'S AND NIGERIAN TEXTILE INDUSTRY DEVELOPMENT:
TRANSFORMATION AND EMPLOYMENT GENERATION

Master's Thesis

MAKHAZAT SULEIMAN OKATAHI

ISTANBUL, 2018

THE REPUBLIC OF TURKEY
BAHCESEHIR UNIVERSITY

ICT'S AND NIGERIAN TEXTILE INDUSTRY DEVELOPMENT: TRANSFORMATION AND EMPLOYMENT GENERATION

Master's Thesis

MAKHAZAT SULEIMAN OKATAHI

Thesis Supervisor: Asst. Prof. Dr. Betul ERDOGDU SAKAR

ISTANBUL, 2018

Name of the thesis: ICT's and Nigerian textile industry development:

Transformation and employment generation

Name/Last Name of the Student: Makhazat Suleiman OKATAHI

Date of the Defense of Thesis:

The thesis has been approved by the Graduate School of Natural and Applied

sciences.

Prof. Dr. Nafiz ARICA

Graduate School Director

I certify that this thesis meets all the requirements as a thesis for the degree of

Master of Science.

Assoc. Prof. Dr. Mehmet Alper TUNGA

Program Coordinator

This is to certify that we have read this thesis and we find it fully adequate in
scope, quality and content, as a thesis for the degree of Master of Science.

Examining Committee Members	Signature
Thesis Supervisor Asst. Prof. Dr. Betul Erdogdu SAKAR	…………………….
Member Asst. Prof. Tarkan AYDIN	………………….....
Member Asst. Prof. Gorkem SERBES	…………………..

DEDICATION

I dedicate this study to my parents for their support physically, spiritually and financially and my younger sister Queen Mariam who has being a source of inspiration to me. I am saying a big thank you to them.

ACKNOWLEDGEMENT

ABSTRACT

ICT's AND NIGERIAN TEXTILE INDUSTRY DEVELOPMENT:
TRANSFORMATION AND EMPLOYMENT GENERATION

Makhazat Suleiman OKATAHI

Information Technology

Thesis Supervisor: Asst. Prof. Dr. Betul Erdogdu SAKAR

January 2018, 56 pages

This study was carried out by evaluating how ICTs can transform the deteriorating Nigerian textile industry due to economic crisis which has being a major concern for major stakeholders in the textile sector. The Nigerian textile industry which was one of the major employers of labor in the late 70's and 80's in the country after the Nigeria government. I tend to use this study to analyze the impact of ICT on the textile industry and how it can help in transforming the industry. Several authors work was used throughout the thesis to review in line with the subject matter. Questionnaires were used in gathering data from the correspondents. All the questionnaires were retrieved presented, analyzed and tested using IBM SPSS tools. Findings shows that the Nigerian textile industries do not have the modern ICTs that will help improve productivity, quality and boost the nations' economy. Finally, the research recommended that the textile industries should be equipped with the relevant technology also the establishment of intensive seminar, workshop and conferences to help educate and improve the technical skills of Nigerians in ICT.

Keyword: Chi-Square, Computer-aided Design, Computer-aided Manufacturing, IBM Statistical Package for the Social Science (SPSS), Information Communications Technologies.

ÖZET

ICT VE NİJERYA TEKSTİL SANAYİSİNDEKİ GELİŞME: DÖNÜŞTÜRME

Makhazat Suleiman

Bilgi Teknolojisi

Tez Danışmanı: Yrd. Doç. Dr. Betül Erdoğdu SAKAR

Ocak 2018, 56 Sayfa

Bu çalışma, tekstil sektöründeki büyük pay sahiplerinin başlıca sorunu haline gelmiş olan ekonomik krizden ötürü kötüye giden Nijerya tekstil sanayisini ICT'nin nasıl dönüştürebileceği değerlendirmesiyle yürütülmüştür. Nijerya tekstil sanayisi Ülkede 70'lerin sonunda ve 80'lerde Nijerya hükümetinden sonra en büyük işverenlerden birisiydi. Bu çalışmayı ICT'nin tekstil sanayisi üzerindeki etkisini ve sanayinin dönüştürülmesine nasıl yardımcı olabileceğini incelemekte kullanma eğilimindeyim. Birçok yazara ait eser, tez boyunca ana konuya paralel bir değerlendirme yapmak için kullanıldı. Katılımcılardan verilerin toplanmasında anketler kullanıldı. Tüm anketler IBM SPSS araçları kullanılarak düzeltildi, sunuldu, analiz ve test edildi. Bulgular Nijerya tekstil sanayisinin, üretkenlik ve kaliteyi yükseltmeye ve milli ekonomiyi canlandırmaya yardımcı olacak modern ICT'lere sahip olmadığını göstermektedir. Sonuç olarak araştırma, tekstil sanayisinin ilgili teknolojilerde donatılmasının yanı sıra Nijeryalıların ICT konusunda eğitilmeleri ve teknik becerilerini geliştirmelerine yardımcı olacak yoğun bir seminer, çalıştay ve konferans etkinliklerinin düzenlenmesinin gerekli olduğunu tavsiye etmektedir.

Anahtar Kelimeler: Ki-kare, Bilgisayar Destekli Tasarım, Bilgisayar Destekli İmalat, IBM Sosyal Bilimler için İstatistik Paket Programı (SPSS), Bilgi ve İletişim Teknolojileri.

CONTENTS

TABLES

ABBREVATIONS

ATC	:	Agreement on Textile and Clothing
BPR	:	Business Process Re-engineering
CAD	:	Computer Aided Design
CAM	:	Computer Aided Manufacturing
CNC	:	Computer Numeric Control
CRM	:	Customer Relation Management
CSFs	:	Critical Success Factors
EIS	:	Enterprise Information System
ERP	:	Enterprise Resource Planning
ICT	:	Information Communication Technology
IMF	:	International Monetary Fund
IS	:	Information System
ISPs	:	Internet Service Providers
IT	:	Information Technology
MFA	:	Multi-Fiber Agreement
OGRD	:	Organization Readiness
PC	:	Personal Computer
PM	:	Project Management
SA	:	South Africa
SI	:	System Integration
SPSS	:	Statistical Package for the Social Sciences
TC	:	Textile and Clothing
TED	:	Training and Education
UNTL	:	United Textile
WTO	:	World Trade Organization

1. INTRODUCTION

Background of the Study

This research paper displays a best in class review of the part of Information and Communications Technologies (ICTs) on modern textile industrial improvement, auxiliary change and furthermore, employment generation. The paper concentrates on how ICTs impact the nexus of financial advancement and modern textile structure. There is expanding proof of the association of basic attributes and industry-particular factors on the force of ICTs appropriation in business applications.

The rate and simplicity with which ICTs are received is impacted not just by industry specific factors, yet additionally by the level of the nation's monetary advancement. The reason nations at various levels of mechanical and monetary advancement get to and partake in the ICT upheaval differentially is dictated by three arrangement of components specifically: the nature of institution (formal and casual principles that give impetuses), the strategies of the legislature including and especially media transmission control and the nature and knowledge base of key performing actors (people and associations that populate sector and nations). (Oyelaran-Oyeyinka and Lal, 2004)

ICT is a field of work and study that includes technologies such as desktop and laptop computers, software, peripherals, and connections to the Internet that are intended to fulfill information processing and communications functions. Furthermore, ICT is the combination of informatics technology with other, related technologies, specifically communication technology. Thus, ICT uses the newest technologies to process and communicate information. (Ina and Amir, 2010.)

Information Technology is an organization's collection of information resources, their users, and the management that oversees them; includes the IT infrastructure and all other information systems in the organization. Nigeria is a developing nation that is rich in many natural and human resources which has an

extraordinary capability of making it a main nation in economy over the world within two decades of its independence. Indeed, having excess of these assets, evidence to the likelihood of the country and its peoples, and perhaps being in front of other developing nations across Africa and the world. Having these bounteous resources there are expectation to ensure provision of job security to its esteemed citizens of high population and maintain a steady and stable economy. (David, Michael, and Olusegun, 2015.)

Kaduna mill was the first modern Nigeria Textile Industry which was established in 1956. In 1964 the United Nigerian Textiles Limited was established as the second. Arewa textile company was the third, and was incorporated in 1965 (Mohammed, 1984; Abubakar, 1997; Muhammed, 2003; and Uzoigwe, 2005). The Nigerian Textile Industry excelled between 1970 and 1987 with the order for products in excess availability of supply by 91 percent (Adebisi, 1987).The industry had over 100 textile firm, with over 200,000 workers being employed, the Nigerian Government was the only institution that has the highest number of employer of labor than the Nigerian textile industry during this period. By 1994, Nigeria has about 124 textile companies that were in full operation (Uzoigwe, 2005). As at 2004, quite a number of textile companies had folded. In 2002 the Kaduna Textile stopped operating while some others closed down in 2004. The United Textiles PLC (UNTL) factory in Kaduna stopped operating in October 2007 having being rated as the biggest Textile Company in West Africa which has an employment capacity of about 5,500 employees, leaving about 4,400 able workers unemployed. (Gado and Nmadu, 2011.)

The Nigerian government made an effort to balance the profits made by the colonial government in textile industry; and in order to supplement local initiatives in cloth manufacture, the Nigerian government gave support for the establishment of more textile and textile allied industry in different locations in Nigeria. The sectional government, in an effort to promote industrial development, established integrated composite textile mills in the Northern, Eastern and Western Nigeria. (Diogu, Chukwuemeka, and Anne, 2014.)

Methodology Used During the Research

Simple random sampling technique was adopted in selecting 120 textile workers of the various textile industries, 153 textile entrepreneurs, textile retail outlets, textile educationist and IT consultants were selected using judgmental sampling technique and this gave a total sample of 273. Simple random sampling technique was used for the selection of sample size before the distribution of a well-structure Questionnaires and face-to-face field visit was used in data collection. The important data/information collected were observed and analyzed through IBM SPSS software features such as frequencies, cross tabulations and chi square. This method was found more convenient and understandable.

Statement of the Problem

The textile industry in Nigeria had suffered neglect in the hand of the government in previous years due corruption and lack of zeal for economic development in Nigeria and the unavailability of modern day technology for quality textile industrial output.

Some of the unanswered questions with regards with regards bad textile industry performance in Nigeria today are; What are the ICT tools available in the textile industries, what are the benefits of ICTs to textile production in Nigeria, what are the factors that limit use of ICT in the textile industry and what are the effects of not using ICT in the textile industry.

Objective of the Study

The major objective of the study is identifying the impact of information technology towards the positive transformation of textile industries and the production of quality products in Nigeria.

The objectives of this thesis are as follows:

    a) What ICT tools are available in the Nigerian textile industry?

    b) What are the benefits of ICTs to textile production in Nigeria?

c) What are the factors that determine limited use of ICT in the textile industry?

d) What are the effects of not using ICT in the textile industry?

Significance of The Study

The importance of the study is that it views at the impact of ICT towards textile industry transformation and as a platform for employment generation.

It is important to the government to have a deep look at the significance of textile with regards to employment generation and provision of clothing material for personal and typical use. These will propel the government to make a broad step in the transformation of the textile sector of the economy with modern technologies.

The study is important to students in higher institutions and colleges; this will serve as a basis in which another project could be established.

This study will be significant to the industrialist and entrepreneurs. This is because it is understandable that the presence of raw materials will determine the establishment of industries.

The Nigerian textile industry lag behind other textile and clothing industry across the globe that uses present-day ICT tools both for production and business purposes, the failure of the Nigerian textile industries not to invest in most of the modern ICT tools has led to its deterioration based on its products quality and in its global competitiveness.

ICT usage in Nigeria is on a high increase daily from the use of computers, mobile phones, internet, emails, e-commerce and e-business etc. in all kind of works.

Most developing and developed countries have been able to invest on several ICT tools to transform their economies and maintain a stable global competitiveness with the successful implementation of ICT into various fields of works. The usage of ICT to transform the Nigerian textile industry will depend on how the Nation

has adopted and invested in ICTs on significant field of woks and the success of the implementation of these ICTs.

The next chapter takes a look at ICT definition and benefits of ICTs, role of ICT in the Textile industry, some of the contemporary ICTs that are being used in Textile and clothing industry and Classification of ICT from which researched questions were established. The methodology used was a designed survey which was based on the use of oral interview and the use questionnaires, which were distributed to several textile industries, schools, IT consultants and textile retail outlets in Nigeria. This also forms the basis in which findings and conclusion of the study was evaluated. This survey methodology was adopted in order to justify the purpose of the study, which is ICTs and Nigerian textile industry development: transformation and employment generation. This survey research method was more convenient to employ.

2. LITERATURE REVIEW

Previous researches that were carried out national and internationally relating to the subject matter include;

Moodley research work which he titled, the challenge of e-business for the South African apparel sector, 2002. His paper explores the potential of e-business to provide a necessary lever to enhance competitiveness of the South African (SA) apparel sector. In particular, his paper critically discusses the opportunities, challenges and risks of e-business for the SA garment sector and Irdem, Mujdelen and Orkun comprehensive research on ICT as a competitive advantage tool after the termination of textile and clothing, a case study of Turkish Textile and Clothing Company. Their research was to determine the status Turkey, Textile & Company industry and factors for gaining competitive advantage especially the ICT factors.

Technopedia defines Information and communications technology (ICT) as all the technology used to handle telecommunications, broadcast media, intelligent building management systems, audiovisual processing and transmission systems, and network-based control and monitoring functions.

ICT has more recently been used to describe the bringing together of several technologies and the application of common transmission networks carrying multiple data and communication types and formats.

According to Technopedia ICT are Converging technologies that include the combination of sight and sounds, telephone and computer networks via a well known cabling system. Internet service providers (ISPs) commonly provide internet, phone and television services to homes and businesses through a single optical cable. The elimination of the telephone networks has provided huge economic incentives to implement this convergence, which eliminates many of the costs associated with cabling, signal distribution, user installation, servicing and maintenance costs. ICT is often considered an extended synonym for information technology (IT); its scope is broader.

Based on Bharadwaj's (2000) study, tangible IT-based resources consist of physical IT infrastructure, human IT resources (such as technical and managerial IT skills), and intangible IT-enabled resources (such as functionality, information, and customer orientation). The tangible IT infrastructure includes computers, communication technologies, and database systems that can be bought or copied easily by competitors. (Ying-yu, Yi-Long and Bing-Li, 2014).

ICT empowers organizations to get to substantial measure of data at an exceptionally fast rate. ICT likewise helps organizations to extend their range to faraway areas, offer new products and services, reshape employments and work processes, and change the way they direct business. An organization's ICT infrastructure consists of; ICT resources, ICT services and ICT management. These serve as a wide diagram for securing, creating, actualizing and incorporating ICT in a way that it backs the business capacities and methodologies of an organization.

Utilization of ICT permits the flow of information that ties together the textile and clothing production network, and ICT is the way to accomplish effective data sharing. Innovative technology can empower a provider to enhance business practices, increase productivity and competitiveness, and to meet the ever-shorter lead times required. Inside an organization, ICT can give a detailed tracking mechanism so that the progress of a request through the production line is accessible in real-time. (Enlightenment Economics).

2.1 TEXTILE AND TEXTILE INDUSTRY

Textile is referred to as to any material made of interlacing of fibers for example fabric, cloth, carpet, and belt among others. It can also be referred to as a flexible woven material which has some natural or artificial fibers which are often called thread or yarn. Apart from food and shelter, textile (clothing) has been identified as the most important in the hierarchy of man's need. Textiles to human sustenance and the socio-cultural and economic development of a nation are so significant and cannot be over emphasized. Industrial textiles refer to textiles

produced using automated electronic machines which usually come in a variety of colors, designs, and quality Traditionally, Nigeria is well known for the production of cotton, silk and other fibers, which are essential materials for the textile industries. Nevertheless, the circumstances have changed today; Nigeria now relies on imported raw materials to make the industry function. (David, Michael, and Olusegun, 2015.)

The textile industry is a large workforce that includes manpower and technology for efficient functioning of the production lines. The manpower and technology required in the textile industries must be effective, efficient and working mutually to produce its desired output of which technology has being one of the problems facing the industry in Nigeria.

2.2 ROLE OF ICTs IN THE TEXTILE INDUSTRY

Information and Communication Technology (ICT) has a significant part to play as developing nations adjust to the new era. Firstly, ICT is a multidimensional technology, which can enhance business practices and optimize the productivity and competitiveness of developing nation's textile firms. Secondly, ICT is the major mover that turns value along the value chain, empowering new business models, separating production lines, and generating present-day opportunities for developing nations in the global supply chain(Enlightenment Economics)

The use of present-day ICT tools over the world in the textile industry cannot be overemphasized as it has make it easy to pass information across and communicate effectively and efficiently in a very short time. The use of various ICT tools in the textile industry also aid in the design and manufacturing of quality products that has high flexibility, reduce time for product to get to market, monitors the flow of raw materials all the way to the end users and also help increase competitiveness at global market to yield the required consumer relationship and financial gains.

Studies show that IT has the characteristics that may optimize organizational performance (Brynjolfsson, 1993; Cardona et al., 2013; Gu and Jung, 2013; Kohli and Devaraj, 2003). However, IT business size and worth and the effects of IT can be based on several factors such as IT capability, IT resources, IT infrastructure, management practice, and the competitive environment (Bharadwaj, 2000). The textile industry is distinguished by extreme global competition, mostly in nations that has easy laws in doing business, which makes factors such as quality, efficiency, and innovative capabilities significant for business sustenance (Gu and Jung, 2013).

Furthermore, IT is pictured as a fixed resource (Bharadwaj, 2000; Jean, 2007; Mata et al., 1995) that provides sustained competitive advantage, which leads to optimization of IT business and textile industry worth.

2.3 PROBLEMS OF TEXTILE INDUSTRIES DEVELOPMENT IN NIGERIA

Nigeria being an upcoming nation, to meets its economic demands she was faced with worldwide economic policies, importantly the multi-fiber agreement (MFA). In 1974 MFA was signed by countries to bargain bilateral agreement on tariffs, during this period the Nigerian textile industry excelled because Nigeria was not a signatory to the MFA, thus, the importation of foreign fabric was put on a hold (Diogu et al, 2014)

Abernathy, Donlop, Hammod and Weil (2002), study showed that the Agreement on Textile and clothing (ATC) was adopted in place of MFA because of system of trade restraint MFA established. In 1995, ATC had an agreement with the world trade organization (WTO). Having reached this agreement with WTO, all associates of WTO including Nigeria were made to put on hold quotas on textiles and apparel over a period of ten years. This had a negative effect on Nigeria textile industries because imported textiles were sometimes superior and less expensive to the local textile products. The following are some of the problems of the Nigerian textile industry;

Global recession: Developing countries economy was affected by global recession, particularly, the Nigeria society. Some of the effects were low economic growth, closure of companies that cannot not compete with those using modern technology, retrenchment of staff in companies and government establishments, unemployment of youths, financial liquidity and high cost of living. There is a worldwide decrease in economic activities (Diogu et al, 2014).

Economic policies: economic policies have a great negative effect on the progress of Nigeria textile industries. Policies such as lifting bans on foreign textiles and devaluation of naira which raised cost of imported textile raw materials such as dyestuff, chemicals, machine spare parts and equipment have frequently hindered the development of the nation's industry (G.O Diogu et al, 2014).

People's perception: Most Nigerians believe that foreign products are superior to local ones. Ogunaike (2010) study shows that foreign made textiles are desired by Nigerian consumers than the local textiles. The purchase of locally made textiles is massively affected by this negative perception.

Marketing Strategies: According to Diogu et al (2014) study, that shows that customer or consumers complaints are not properly checked via feedback platform to observe any product failure or gets feedbacks from costumer's opinion. In Njoku (2004) study, she explained that different kind of textile products are not well displayed to Nigeria textile consumers and most locally made goods lack good finishing and packaging. From her research, she revealed that the industry and marketers do not promote made-in-Nigeria products to the desired level required to create awareness and to the customers and potential customers.

Energy problems: Nigeria has been faced with a lot of problems in terms of power generation. Standby generators have being an option for majority of company owners and textiles industries. Due to the cost of petroleum products in Nigeria solely depending on standby generator will be the difficult to run textile industries. Also, this affects the cost of textile product in the market due to the increase in production cost. This suggests that the Nigeria wax fabric purchase

becomes low, once being highly patronized due to its affordability(G.O Diogu et al, 2014).

Technological and Infrastructural problems: For effective production of the production lines in textile industries requires technological devices and effective manpower. Machines, equipment, transportation and water are the basic infrastructural needs. The Nigerian textile industry's facilities have deteriorated that it will require a lot of money to put them in place effectively and efficiently. The industry also lacks modern technological facilities that can manufacture affordable textiles of decent quality. (Diogu et al, 2014).

Smuggling of Textile Goods: G.O Diogu et al (2014) research stated that smuggling is the movement of goods through a place without being authorized, through an international boarder that goes against the government laws and regulations. In textile transactions, smuggling takes place through an attempt by certain individual to supply demand of a specific textile product that is contraband or with heavy tax. This poses a huge problem as an evidence of corrupt, disrespect to the rule of law and greed. Smuggling destabilizes the growth of local industries, thus, making it difficult for the survival of the textile industries from its products. For this reason foreign textile products are less expensive and believed to be better quality than the locally made textile products. Due to the competitive advantage of foreign made textiles has over the locally made ones' smuggling continues to get involve in bringing in banned textile products into the country illegally.

Financial problems: funding is one of the major problems of Nigeria textile industry, the industry has problems in getting funds from financial institution like the banks which comes with a high lending rates. Textile industry is a capital-intensive sector; the deterioration of the sector has led to the bailout of 70billion naira by the federal government under former president Olusegun Obansanjo (G.O Diogu et al 2014). Adamu-suka (2011) research stated that the funding by the federal government was increase to 100billion naira. The bailing will be of great benefit to the ailing sector if it is well utilized.

2.4 SOLUTION TO TEXTILE INDUSTRY DEVELOPMENT IN NIGERIA

i. **Provision of adequate infrastructural and technological facilities:** construction of infrastructures like farmlands (for cotton production), water conservancy, and increased scientific and technological projection will help keep the textile industry functioning steadily and improving quality and efficiency of industrial output value. (Harris, 2007)

ii. **Provision of favorable economic policies:** An economic policy has a great impact in a nation economic stability globally. An economic policy that includes high level of manpower which provides creativity, entrepreneurial abilities, efficient multi fiber raw material manufacturing capacity, large domestics market, enormous export potential, very low import content and flexible textile manufacturing systems will encourage the transformation of the Nigeria textile industry and Nigeria economy growth.

iii. **Better marketing strategy:** the provision and implementation of better marketing strategy such as an effective feedback platform for customers, and well finished and packaged textile products will help in keeping and attracting customers and investors into the sector.

iv. **Provision of adequate electricity:** the textile sector is a large energy consumer. Adequate power supply to the textile industries will be a huge step in saving the nation textile industry. This will help to reduce the use of standby generator which uses high cost of petroleum products that leads to high cost of production and most times shutting down of the industry due to this reason. The textile industry cannot function properly if there is limited power supply.

v. **Adequate budget allocation:** The government should increase her budget allocation to the textile sector that would enable those in the sector to implement the government economic policy in the sector.

vi. **Better security measures:** adequate security measures should be put in

place to help reduce smuggling of textiles product that pose threats to locally made textile goods.

vii. **Positive perspective towards locally made goods:** The government should encourage cultural pride, nation mindfulness and good moral and ethical value by patronizing, advertizing and be proud of made-in-Nigeria products. Orientation and sensitization activities should be put in place by ministry of information and other related agencies to help tackle problem of negative perception by most Nigerians about homemade textile products.

2.5 CONTEMPORARY ICTs IN THE TEXTILE INDUSTRY

2.5.1 Cad/Cam Systems

CAD/CAM (computer-aided design and computer-aided manufacturing) is described as the computer software that is used to both design and manufacture products.

CAD is the utilization of computer technology for design and design documentation. CAD/CAM applications are utilized to both design a product and program fabricating processes, particularly, computer numerical control (CNC) machining. CAM programming software uses the models and assemblies made in CAD programming software to create ways that move the machines that transforms the designs into physical parts. CAD/CAM programming is frequently used for machining of models and completed parts. (http://www.autodesk.com/solutions/cad-cam)

According to Werner, Thalmann and Thalmann (2010), study Fashion is significant from the beginning of mankind's history which cannot be overlooked. The clothing and textile industry has impacted a lot of lives and societies with its ideas of which styles and ideas ended up noticeably well known.

Dwivedi and Dwivedi (2013) stated that CAD/CAM systems are utilized in different fields of use. The essential scope is expanding the efficiency of the

fashioner, enhancing quality of the design. Presently, a ton of CAD project makes conceivable the formation of three-dimensional models, which can be seen in various ways.

In the great innovation of clothing design utilizing industrial framework, the essential patterns are intended for bodies that make up the dimensional typology display for a given populace. The largely use in the garments industry of CAD systems to configure designs alongside database coming from 3D scanning innovation of the human body, are prerequisites to amplify virtual displaying of the dimensional correspondence body-dress in the work of concluding the 2D designs after the solid body measurements. (Olaru, Spânachi, Filipescu & Salistean, 2014)

There are five key procedures that are involved in the clothing of CAD systems which are: 2D design configuration, design prepositioning, e-virtual sewing process (also called virtual try-on), drape recreation and design adjustment in 2D or 3D(Meng, Mok and Jin, 2010) the 3D body dimension is the framework of 3D clothing digital technology(Dai and Zhou, 2008). These technologies is helping the procedure in garment designing, by fastening up the process of garment design. 3D platform assists designer to check rapidly the issues identified with fabric draping on the 3D avatar and surveying the garment fit. These aids in reducing the time between pattern changes which are visualized on the 3D window. (Spahiu, Shehi and Piperi, 2014).

Computer aided designing software not just give the possibility to accelerate the way of putting another model into production and enhance the quality of the materials, but also to decrease material expenses and work power, guaranteeing a flexible change of the collection. The vast majority systems are made by the module rule in which isolate garment designing stages are executed.

CAD applications assist the designers to produce the outline and architect new products. The arrangements, measurement and part points of interest are drawn on the screen so that numerous options can be searched easily. CAM assists organization to adjust to themselves to quick changing needs of clients. The

CAD/CAM advancements greatly affect the item development procedures of Textile and Clothing (T&C) organizations. The adaptability has expanded and an opportunity to market is shortened. The thoughts could be pictured as completed items in the PC screen far before than the production process has begun. (Irem Erdogmus, Mujdelen I. Yener, Orkun Goze, 2009.)

2.5.2 Ecommerce

E-commerce can be characterized as the utilization of the worldwide Internet for purchasing and offering of products and services, including service and support after the deal. The Internet can be an efficient platform for showcasing and sharing product information, but focus should be on giving complete business transactions with the use of computing and communication technologies

Furthermore, Electronic commerce is the mutual incorporation of communications, information administration, and security abilities to permit business applications inside various organizations to automatically trade data to identify with the offer of products and services.

Davenport and Prusak (1998) were able to find out that the term e-business has no widely accepted definition. The author defines e-business as any type of business or regulatory exchange or data trade happens by means of an ICT-based, computer-intervened network. E-business is at last about utilizing ICTs to the systems of trust, learning, sharing and data preparing that happens both within and between organizations.

E-business in this manner involves the use of ICTs to the total value chain of business procedures. Network processing is the innovation that supports e-business. The importance of e-business for the SA garment industry applies in three significant areas: (1) maximizing the efficiency of internal processes (increasing working collaborations); (2) putting together inter-firm gaps and (3) associating with worldwide markets (Moodley, 2003)

For competitive advantage, several Chinese companies are beginning to utilize e-commerce in their businesses in order to be efficient in their business operations.

As e-commerce evolves, it has great influence on textile company which gives a considerable measure of opportunities to them like extending their market, and getting unlike data(Ouyang and Li, 2005)..

From T&C industry point of view, e-business is a creative technology and is spreading among the organization, however tangibility is its most serious challenge, since textile surface requires human to choose, and assessment can be troublesome in an online platform (Irem, Mujdelen, Orkun, 2009.)

The textile companies have currently opened themselves to the worldwide market and are involved in global contention. Thus, the textile company has more purposes behind selection of e-business to guarantee their survival from the wild contention, including distribution channels, maximizing general sales, growing their range past neighborhood markets, or increasing more exposure in existing markets. (Alain, Keng, Yew and Zhu, 2009.)

2.5.3 Enterprise Resource Planning (ERP)

ERP is a framework that allows users' access to any applicable item of information available inside an organization with a specific end goal to improve the adequacy and achievement of decision making. An ERP framework is characterized as an exceptional brought together, merged and solid network of business frameworks, built on a single integrated platform (Vaman,2007), and it is generally the biggest, most difficult and very expensive information system in any organization (Magal and Word, 2011).

An ERP framework is one approach to actualize an enterprise information system (EIS) that reacts to business issues, for example, making or supporting competitive advantages enhancing business operation proficiency. An ERP is much of the time actualized with business process re-engineering (BPR) and business process standardization. The achievement of an ERP framework relies upon viable implementation; thus, the critical success factors (CSFs) of ERP implementation(Kayo,Yutaka, Ruri,2014).

The four critical success factors (CSFs) that helps in accomplishing effective execution of Enterprise Resource Planning (ERP) activities are project management (PM), business process re-engineering (BPR), system integration (SI), and training and education (TED). The Organizational readiness (OGRD) is fundamentally and decidedly connected with these CFSs. Managerially, this knowledge can help in better planning, management and control of ERP projects (Ram, et al., 2015)

Enterprise Resource Planning (ERP) framework is a device in dealing with the business administration function from operational, tactical and strategic management towards the development of Information System (IS). The principle objective of ERP framework is to enhance and streamline inward business procedures, which commonly requires reengineering of current business procedures. (Marina, Marzanah, Fatima, Yusmadi and Salfarina, 2016.)

2.5.4 Customer Relationship Management (CRM)

CRM can be characterized as an administration approach in view of relationship advertising and ICT that empowers companies to distinguish, bring in, and increment maintenance of beneficial costumers by overseeing relationship with them. (Ryals and Payne, 2001)

The term CRM is resulting from mix of relationship advertising and ICT to bring one on one point of view into promoting, treatment of every costumer as an individual resource and picking up benefit through association with them (Bose, R., 2002)

CRM is a database that put together data about business clients, an approach to analyze the data in the database, a procedure for applying the analysis to better meet customers' needs and recognize potential clients, collecting information to guarantee procedure is working. A successful CRM is a way to show that customers are known, recognized and are understood
.http://www.onebusiness.ca/sites/default/files/MEDI_Booklet_Customer_Relationship_Management_Accessible_E.pdf

2.5.5 Supply Chain Management (SCM)

From the use of conventional SCM models to new ones that are developed on network based coordinated efforts, supply chain management has transformed rapidly. This coordinated effort requires the sharing of basic and timely information on the transfer of product from the raw material all the way to the consumer. The net impact is end to end supply chain improvement depending on open communication between systems of trading associates. (Moodley, S. 2001)

SCM carries out the following tasks:

Defining of criteria for choosing suppliers and for the assessment of their achievement;

i. The meaning of various strategy supplies for various sorts of supply;
ii. Transaction and exchanging products and services;
iii. The coordination of difficult and different activities completed by outsiders, for example, the co-design and co-engineering of particular component to be made by the provider;
iv. The union of provider and consumer on targets which may be halfway or completely different, for example, the choice about the advancement directions to be executed;
v. The joint innovation and development of new items, procedures and types of distribution;
vi. The administration of cross-limits venture, (Stocchetti and Elena, 2011).

Computers, telephone, television, radio, mobile phones, internet, e-mail and website are considered as the basic ICT tools required to exist in modern textile industries.

2.6 CLASSIFICATION OF ICT TOOLS IN THE TEXTILE INDUSTRIES

The above ICT's are being categorized into two, which are as follows;

A. ICTs for internal use: these are ICTs that are needed by the members of the

organization for production, information and communication.

   i.   Computer, website and Internet access, (used for storage and information search)

   ii. Telephone, mobile phones, radio, e-mails (aids communication)

   iii. Enterprise resource planning(ERP), (enables industries to put together all business functions and ease decision making)

   iv. Computer aided design and computer aided manufacturing (CAD/CAM), (this technology aids members of the company the design and manufacturing of products)

B. ICTs for external use: these are ICT needed by the organization to enhance relationship with its surroundings because of the significance of access to business needs.

   i.   Customer relationship management(CRM), (enhances the organization customers trust management through the establishment of customer databases with important information)

   ii. E-commerce, (aids organization to carry out transaction through buying and selling over the internet with their stakeholders by the use of electronic systems).(Maria, 2011)

 Maria Teresa-Garcia Alvarez study has classified ICTs into Internal and External matters. Based on this classification research questions were established that relates ICTs to Textile industry

   i.   Research Question 1: Which of the following ICT tools are available in the Nigerian textile industries?

   ii. Research question 2: What are the benefits of ICT in the textile manufacturing and marketing in Nigeria?

iii.   Research Question 3: What are the factors limiting the use of ICT in Textile manufacturing and marketing in Nigeria?

iv.   Research Question 4: What are the consequences of not using ICT in the Textile and marketing industries in Nigeria?

Table 2. 1: Classification of ICT's

	Internal ICT	External ICT
Information and Communication Technology	Tools aiding communication Tools for information search Tools for design and manufacturing Information storage systems Tools for effective decision making	Tools for buying and selling Tool for customer relationship
Effect of information and communication technology	Easy access to information and effective communication Aids easy, fast and quality product production Aids effective and efficient business functioning	Aids easy and quality business transaction Aids in good product manufacturing and quality services through good customer relationship

3. RESEARCH METHODOLOGY

The methodology will be of two folds, explanatory and descriptive. In this chapter a detail explanation was given on the various methods and techniques adopted to carry out this study. The design that was adopted during this study gives detailed explanation and description of population of the study with the techniques used as well as the methods used in gathering and analyzing data were all showed in this chapter.

3.1 RESEARCH DESIGN

A survey research design was adopted to show a visible explanation of the true events that was observed. This research design was adopted in order to evaluate the impact of ICT on Nigeria textile industry and how it will aid in employment generation. This survey research method was more convenient to use.

3.2 METHOD OF PARTICIPANTS SELECTION AND DATA COLLECTION

With the use of the adopted survey design, the study made use of stratified random sampling technique in selecting from the four textile industrial cities across Nigeria (Lagos, Kaduna, Aba and Asaba). Simple random sampling technique was adopted in the second phase in selecting 120 textile workers of the various textile industries in these aforementioned cities, 153 textile entrepreneurs, retail outlets, textile educationist and IT consultants were selected using judgmental sampling technique and this gave a total sample of 273. With the use of well-structure questionnaire, a face-to-face field visit was used in questionnaire distribution and data collection. A total of 252 copies of the questionnaires were retrieved, as the researchers could not reach the remaining 21 copies.

3.3 POPULATION OF THE STUDY

For this study, the population was made to cover the selected citizens of Nigeria who resides in Lagos, Kaduna, Aba, and Asaba numbering a total number 645

certified textile industries and textile associates, which serve as a unit analysis for the study. The figure of population of the study quoted above refers to the intended target population of the study but since they are too large, an accessible population of 273 was identified which represent the total number of participants used for the study.

3.4 SAMPLING TECHNIQUE AND SIZE

During this research study, a simple random sampling technique was adopted for the selection of sample size that was used in the distribution of questionnaires. All individual involved in the population was given equal number of chances of being selected for representation as a sample member. Thus, the sample size for the study is 273.

3.5 METHOD OF DATA ANALYSIS AND TECHNIQUES

For understanding, a total number of fifty-two 252 copies of the Questionnaire were collected, as 21 copies could not be retrieved. The important data/information collected were observed and analyzed through IBM SPSS software features such as frequencies, cross tabulations and chi square. Details of the data are shown below:

a. Total number of Questionnaires distributed   -   273
b. Total number of Questionnaires retrieved   -   252
c. Total number of Questionnaires not returned   -   21

From this point of view, two hundred and fifty-two (252) Questionnaires were suitable enough to carry out the analysis, which was used.

3.6 PROCEDURE USED IN GATHERING DATA

The procedure that was used in putting together useful data for this research study was via physical distribution of Questionnaires to respondents during respondent's free times. The respondents were given enough time to fill in the questionnaires which were later collected personally.

4. FINDINGS

Finally, the comprehensive analysis of the ICT's features that was observed in the Nigerian textile industry in relation to the research questions that was used were carried out on this chapter. The presentation and analysis of data became all important, because this analysis would be made and understood based on the detailed data collection from the research field.

The analysis and the resolve of data is concept to find the problems observed in the research methodology

Table 4.1: **Gender of participant**

Gender	Frequency	Percentage
Male	203	80.6
Female	49	19.4
Total	252	100.0

Source: survey field, 2017.

Table 4.1 shows the frequencies and percentages of the gender of participant, where the male participant has the highest frequency 203 and 80.6percent while the female participant were 49 and 19.4percent for frequency and percentage respectively.

Table 4.2: Job of participant

Job of Participant	Frequency	Percentage
Textile industrial worker	110	43.7
Textile educationist	23	9.1
Textile entrepreneur	104	41.3
IT consultant	15	6.0
Total	252	100.0

Source: survey field, 2017.

Table 4.2 displays the job of participant, textile industrial worker has the highest frequency of 110 with 43.7percent, textile entrepreneur has a frequency of 104 with 41.3percent, textile educationist were 23 participant with 9.1percent and IT consultant has a frequency of 15 with 6percent

Table 4.3: Working experience of participant

Working Experience	Frequency	Percentage
1-5	45	17.9
6-15	164	65.1
16 above	43	17.1
Total	252	100.0

Source: survey field, 2017.

Table 4.3 presents the frequencies and percentages of participants working experience, where 1-5 years has frequencies of 45 with 17.9percent, 6-15 years has frequencies of 165 with 65.1percent and 16 above years has frequencies of 43 with 17.1percent.

 Research question

Table 4. 4*:* **Which of the following ICT tools are available in the Nigerian Textile industries?**

ICT Tools	Strongly Agreed Frequency (percentage)	Agreed Frequency (percentage)	Disagreed Frequency (percentage)	Strongly disagree Frequency (percentage)
Computers	14 (5.6)	198 (78.5)	32 (12.7)	8 (3.2)
Mobile phones	163 (65.1)	87 (34.1)	2 (0.8)	0 (0)
Internet	10 (4)	37(14.7)	109(43.3)	96(38)
ERP	0 (0)	3 (1.2)	113 (44.8)	139 (54)
Television	41(16.3)	63(25)	57(22.6)	91(36.1)
Radio	171(67.8)	43(17.1)	20(8)	18(7.1)
Telephone	33(13.1)	43(17.9)	96(36.5)	77(32.5)
CAD/CAM	13(5.1)	31(12.3)	164(65.1)	44(17.5)
E-Commerce	27(8)	61(24.2)	103(43.6)	61(24.2)

| Email | 66(34.1) | 94(29.8) | 55(21.8) | 37(14.3) |

Table 4.4 shows the frequencies and percentages of participants' responses to ICT tools that are available in the Nigerian textile industry with various responses from the respondents which were strongly agreed, agreed, disagreed or strongly disagreed. The availability of Radio, mobile phones and E-mail has the highest frequencies of respondents that strongly agreed while CAD/CAM, internet and ERP has the lowest frequencies of response from the respondents that strongly agreed. Computer, mobile phones and E-mail availability were agreed to be available with the highest frequencies while internet, CAD/CAM and ERP has the least frequencies from the respondents that agreed. The highest frequencies from the respondents that disagree were CAD/CAM, ERP and E-commerce respectively while Email, radio and mobile phones has the lowest frequencies of response from the respondents that disagreed. ERP, Internet and Television has the highest frequencies from the respondents that strongly disagreed with availability of the aforementioned ICT tools while radio, computers and mobile phone were the least frequencies of response from the respondents that strongly disagreed.

Research question 2

Table 4.5: What are the benefits ICT in the textile manufacturing and Marketing in Nigeria?

Benefits of ICT	Strongly agreed Frequency (percentage)	Agreed Frequency (percentage)	Disagree Frequency (percentage)	Strongly disagree Frequency (percentage)
Productivity and quality	93(37)	82(32.5)	50(20)	27(10.5)
Timely information	163(64.7)	70(27.7)	19(7.6)	0(0)
Provides strong Competitive advantage at	134(53.2)	81(32.1)	17(6.7)	20(8)

the global				
Better marketing exposure and marketing	95(40.5)	100(40)	38(13.3)	19(7.2)
Reduction of industrial risks	63(25)	78(31)	44(17)	67(27)
Provides income	116(46)	100(40)	30(12)	6(2)
Better awareness and information	184(73)	60(23.8)	8(3.2)	0(0)
Links manufacturers and consumers easily	182(68.2)	45(21.8)	20(8)	5(2)
Reduce cost of manufacturing	61(24.2)	42(16.7)	87(34.5)	62(24.6)
Improves easy entry to the market	91(36.1)	100(39.7)	37(14.7)	24(9.5)

Source: survey field, 2017.

Table 4.5 presented findings from this research question where all the respondents' responses were strongly agreed, agreed, disagreed or strongly disagreed to the benefits of ICT in the Nigerian textile industry. The benefits of better awareness and information, linking manufacturers and consumers easily and provision of timely information has the highest frequencies of response from the respondents, while improves easy to the market, reduction of industrial risk and reduce cost of manufacturing gave the least frequencies of response from the respondents that strongly agreed. The benefits of better marketing exposure and marketing, provides income and improves easy entry to the market with the highest frequencies of agreed while the better awareness and information, links manufacturers and consumers easily and benefits of reduce cost of manufacturing shows the lowest frequencies of responses from the respondents that agreed.

Reduce cost of manufacturing, productivity and quality and reduction of industrial risk has the highest frequencies of disagree from the respondents, while Timely information provides strong competitive advantage at global market and better awareness and information were the least frequencies response from the respondents that disagreed with the factors. The highest frequencies of response from the respondents strongly disagreed to the benefit of reduction of industrial risk, Reduce cost of manufacturing and productivity and quality while provides income, timely information and better awareness and information has the lowest frequencies that strongly disagreed.

Research question 3

Table 4.6: What are the factors limiting the use of ICT in Textile Manufacturing and marketing in Nigeria?

Factors	Strongly agreed Frequency (percentage)	Agreed Frequency (percentage)	Disagree Frequency (percentage)	Strongly disagree Frequency (percentage)
Unpreserved use of ICT	31(12.4)	56(34)	137(42.5)	28(11.1)
Do not have ICT skills	23(9.1)	42(13.5)	89(35.3)	98(42.1)
No enough time for ICT usage	5(2)	30(12)	103(41)	114(45)
ICT is difficult to operate	23(9.1)	89(35.3)	70(27.8)	70(27.8)
Have no knowledge of using ICT	55(21.8)	79(31.3)	91(36.1)	27(10.7)
High cost of technology	121(48.0)	94(37.3)	30(11.9)	7(2.8)
Lack of ICT training	31(12.3)	27(10.7)	102(40.4)	92(36.6)
Lack of adequate	66(26.4)	27(10.7)	104(41.3)	55(20.6)

power supply				
Lack of access to ICT	66(26.2)	77(30.6)	61(24.2)	48(19.0)
Afraid to use ICT	8(3.2)	21(8.3)	101(40.5)	122(48)
Have no use to use ICT	0(0)	10(4)	110(43.6)	132(52.4)
Lack of support from responsible agencies	73(29)	97(38.9)	32(12.7)	50(19.8)
Some ICT's are not users friendly	75(29.8)	97(38.1)	38(15.1)	42(16.7)
Lack of other supporting infrastructures	81(32.1)	62(24.6)	93(37)	16(6.3)
Poor income level	42(16.7)	49(19.4)	63(25)	98(38.9)

Source: survey field, 2017.

Table 4.6 presents findings from the research survey factors limiting the use of ICT in the textile manufacturing and marketing in Nigeria, where all respondents' responses were strongly agreed, agreed, disagreed, strongly disagreed. High cost of technology, lack of support from responsible agencies and lack of other supporting infrastructures has the highest frequencies that strongly agreed to the factors that limits the use of ICT in textile manufacturing and marketing industry while afraid to use ICT, no enough time for ICT usage and have no use to use ICT has the lowest frequencies of responses from the respondents. Also lack of support from responsible agencies, some ICT's are not users friendly and high cost of technology has the highest frequencies of responses from the respondents that agreed to the factors while no enough time for ICT usage, lack of ICT training and lack of adequate power supply were the lowest frequencies of response from the respondents that agreed. Have no use to use ICT, ICT is difficult to operate and have no knowledge to use ICT has the highest frequencies

of respondent that disagreed with the factors, while lack of access to ICT, poor income level and some ICT's are not users friendly were the factors that has the lowest frequencies of response from the respondents that disagreed. Strongly disagreed responses with the highest frequencies from the respondent were have no use to us ICT, afraid to use ICT and no enough time for ICT while have no knowledge of using ICT, lack of other supporting infrastructures and high cost of technology have the lowest percentage of response from the respondents of the factors that limit the use of ICT in the Textile manufacturing and marketing in Nigeria.

From this, the respondents that strongly agreed and agreed were slightly lower than the respondents that disagree and strongly disagreed with the factors, which means factors limiting the use of ICT in the textile manufacturing and marketing in Nigeria should be taken into consideration to help the ailing textile industry in Nigeria. From the respondents point of view they think that most of the factors were not really the limiting the use of ICT in the textile sector.

Research question 4

**Table 4.7: What are the consequences of not using ICT in the textile
and marketing industries in Nigeria?**

Consequences	Strongly agree Frequency (percentage)	Agreed Frequency (percentage)	Disagreed Frequency (percentage)	Strongly disagree Frequency (percentage)
Limited access to information	102(28.4)	112(52.8)	10(16)	28(11.2)
Poor textile products and pricing	93(37)	133(53)	25(9.9)	1(4)
Loss due to limited power supply	84(33.3)	89(35.3)	59(23.4)	20(7.9)
Increase in cost of	67(26.6)	99(39.2)	66(26.2)	20(8)

manufacturing				
Delay in decimating information	123(49.2)	112(44.4)	15(5.6)	2(0.8)
Unnecessary transportation expenses	91(36.1)	157(62.3)	2(0.8)	2(0.8)
Low income for the industry	122(52.4)	66(26.2)	38(15.1)	16(6.2)
Delay in the distribution of textile products	153(60.7)	57(22.6)	37(14.7)	5(2)
Increase industry risk	67(27.3)	78(31.0)	92(36.5)	13(5.2)
Decrease in textile quality and productivity	188(76.6)	61(24.2)	3(1.2)	0(0)
Difficulty in linking easily with consumers	168(66.7)	57(22.6)	18(7.1)	9(3.6)
Lack of maintenance facilities	73(29)	87(34.5)	69(27.4)	23(9.1)
Lack of global competition	129(51.2)	121(48)	1(0.4)	1(0.4)
Lack of modern industrial ICT knowledge	146(59.1)	97(38.5)	2(0.8)	4(1.6)
Lack of ICT Skills	132(52.4)	112(44.4)	3(1.2)	5(2)

Source: survey field, 2017.

Findings from the consequences of not using ICT in the textile manufacturing and marketing in Nigeria shows that the respondents had their opinions differently on strongly agreed, agreed, disagreed and strongly disagreed.

Decrease in textile quality and productivity, difficulty in linking easily with consumers or customers and lack of modern industrial ICT knowledge gained the highest number of frequencies of response that strongly agreed from respondents while lack of maintenance facilities, increase industrial risk and increase in cost of manufacturing has the lowest frequencies of response from respondents on this consequences that strongly agreed. The highest frequencies of response that agreed from the respondents were unnecessary transportation expenses, poor textile product and price, lack of global completion, while low income for industry, decrease in textile quality and productivity and difficulty in linking easily with consumer has the lowest frequencies of response from the respondents that agreed to these consequences. Increase industrial risk, lack of maintenance facilities and increase in cost of manufacturing has the highest frequencies of response from the respondents that disagreed to these factors while lack of industrial ICT knowledge, unnecessary transportation expenses and lack of global competition were the least frequencies of response from the respondents that disagree. Limited access to information, lack of maintenance facilities and low income for industry were the highest frequencies of respondents that strongly disagreed while delay in decimation of information, lack of global competition and decrease in textile product and productivity were the least frequencies of response from the respondents that strongly disagreed to the factors.

From this it will be noticed that the lowest percentage of responses from the respondents that strongly agreed and agreed were higher than the highest responses from those that disagree and strongly disagree which means that the consequences of not using ICT in the textile manufacturing and marketing in Nigeria will have a negative impact on the Textile industry transformation and the nation economic growth.

4.1. CROSS TABULATION AND CHI SQUARE ANALYSIS

Cross tabulation is a method of analysis that is most frequently used for questionnaire analysis data. It allows us to evaluate the association between

categorical variables in more details than simple frequencies for individual variables.

A cross tabulation analysis was conducted using IBM SPSS software to show more insight on how the various participants responded to each of the research question. From the frequencies analysis, a detail analysis was not shown on how each of the participant demography responded to the research questions. Therefore, a cross tabulation will give the actual observed frequencies of the participant.

Chi-square applies a statistical test to evaluate cross tabulation thereby making comparison between the observed frequencies in the cells of the tables with expected frequencies and also displays the Chi-Square value. (Greasley, 2008)

The count were the observed frequencies response from the participants to each of the research questions as strongly agreed, agreed, disagreed and strongly disagreed while the expected count are the frequencies that would be expected if the data is randomly distributed by applying cross tabulation and Chi-Square.

Table 4.8: Crosstab Gender of participant and availability of ICT in Textile Industry (computers are not used in the Nigerian textile industry)

Gender		Strongly agreed	Agreed	Disagreed	Strongly disagreed	Total
Male	Count	13	160	24	6	203
	Expected count	11.3	159.5	25.8	6.4	203.0
	percentage within gender of participant	6.4	78.8	11.8	3.0	100.0
Female	Count	1	38	8	2	49
	Expected count	2.7	38.5	6.2	1.6	49.0
	Percentage within gender of participant	2.0	77.6	16.3	4.1	100.0
Total	Count	14	198	32	8	252
	Expected count	14.0	198.0	32.0	8.0	252.0
	Percentage within gender of participant	5.6	78.6	12.7	3.2	100.0

Source: IBM SPSS, 2017.

Table 4.9: Chi-Square tests

	Value	Degree of freedom	Asymptotic Significance (2-sided)
Chi-Square	2.149[a]	3	.542
Number of valid cases	252		

 a. 2 cells (25.0 percent) have expected count less than 5. The minimum expected count is 1.56.

Table 4.8 shows the observed count, expected count and the percentages of the participants' responses to the research questions.

Table 4.9 shows that the value of Chi-Square is 2.15 with a statistical significance or likelihood of .54. This means that the likelihood of the responses to occur by chance is less than .54 or is 54 in 100. So probability (p) = 54. With this statistical significant we concluded that there is an association between the Gender of participant and availability of ICT in the textile industry (computers are used in the textile industry). The footnote (a), tells us that 2 cells with 25percent has an expected count less than 5 which has violated the assumption of Chi-Square of "0 cells have an expected count of less than 5". We concluded that the responses of the participant maybe dependent on the job of the participant.

Table 4.10: Crosstab job of participant and benefits of ICT (reduction of Industrial risk)

Job of Participant		strongly agreed	Agreed	Disagreed	strongly disagreed	Total
Textile industrial worker	Count	33	44	15	18	110
	Expected Count	27.5	34.0	19.2	29.2	110.0
	percentage within job of participant	30.0	40.0	13.6	16.4	100.0
Textile educationist	Count	2	8	13	0	23
	Expected Count	5.8	7.1	4.0	6.1	23.0
	Percentage within job of participant	8.7	34.8	56.5	0.0	100.0
Textile entrepreneur	Count	28	26	11	39	104
	Expected Count	26.0	32.2	18.2	27.7	104.0
	Percentage within job of participant	26.9	25.0	10.6	37.5	100.0
IT consultant	Count	0	0	5	10	15
	Expected Count	3.8	4.6	2.6	4.0	15.0
	Percentage within job of participant	0.0	0.0	33.3	66.7	100.0
Total	Count	63	78	44	67	252
	Expected Count	63.0	78.0	44.0	67.0	252.0
	Percentage within job of participant	25.0	31.0	17.5	26.6	100.0

Source: IBM SPSS, 2017

Table 4.11: Chi-Square tests

	Value	Degree of freedom	Asymptotic Significance (2-sided)
Chi-Square	66.468[a]	9	.000

Number of Valid Cases	252		

a. 5 cells (31.3 percent) have expected count less than 5.

The minimum expected count is 2.62.

Table 4.10 shows the expected count, observed count and the percentages of the participants' responses to the research questions.

Table 4.11 shows that the value of Chi-Square is 66.47 with a statistical significance or likelihood of .00. This means that the likelihood of the responses to occur by chance is less than .00 or is 0. So probability (p) = 0. With this statistical significant we concluded that there is no association between the job of the participant and the benefit of ICT in the textile industry (reduction of industrial risk). The footnote (a), tells us that 5 cells with 31percent has an expected count less than 5 which has violated the assumption of Chi-Square of "0 cells have an expected count of less than 5". We concluded that the responses of the participant are dependent of the job of participant.

Table 4.12 : Crosstab Gender of participant and benefits of ICT in Textile Industry (reduction of industrial risk)

Gender		Strongly agreed	Agreed	Disagreed	Strongly disagreed	Total
Male	Count	56	67	34	46	203
	Expected Count	50.8	62.8	35.4	54.0	203.0
	Percentage within Gender of participant	27.6	33.0	16.7	22.7	100.0
Female	Count	7	11	10	21	49
	Expected Count	12.3	15.2	8.6	13.0	49.0
	Percentage within Gender of participant	14.3	22.4	20.4	42.9	100.0
Total	Count	63	78	44	67	252
	Expected Count	63.0	78.0	44.0	67.0	252.0
	Percentage within Gender of participant	25.0	31.0	17.5	26.6	100.0

Source: IBM SPSS, 2017.

a. 0 cells (.0 percent) have expected count less than 5.

The minimum expected count is 8.56.

Table 4.10 shows the expected count, observed count and the percentages of the participants' r

Table 4.12 shows the expected count, observed count and the percentages of the participants' responses to the research questions.

Table 4.13 shows that the value of Chi-Square is 10.57 with a statistical significance or likelihood of .014. This means that the likelihood of the responses to occur by chance is less than .01 or is 1 in 100. So probability (p) = 1. With this statistical significant we concluded that there is an association between the Gender of participant and the benefit of ICT in the textile industry (reduction of industrial risk). The footnote (a), tells us that 0 cells with 0percent has an expected count less than 5 which is in relation with the assumption of Chi-Square of "0 cells have an expected count of less than 5". We concluded that the responses of the participant are independent of the Gender of participant.

Table 4.13: Chi-Square tests

	Value	Degree of freedom	Asymptotic Significance (2-sided)
Chi-Square	10.573[a]	3	.014
Number of Valid Cases	252		

Table 4.14: Crosstab job of participant and benefit of ICT (reduces cost of manufacturing)

Job of Participant		strongly agreed	Agreed	Disagreed	strongly disagreed	Total
Textile industrial worker	Count	30	15	35	30	110
	Expected Count	26.6	18.3	38.0	27.1	110.0
	Percentage within job of participant	27.3	13.6	31.8	27.3	100.0
Textile educationist	Count	4	9	0	10	23
	Expected Count	5.6	3.8	7.9	5.7	23.0
	Percentage within job of participant	17.4	39.1	0.0	43.5	100.0
Textile entrepreneur	Count	22	18	42	22	104
	Expected Count	25.2	17.3	35.9	25.6	104.0
	Percentage within job of participant	21.2	17.3	40.4	21.2	100.0
IT consultant	Count	5	0	10	0	15
	Expected Count	3.6	2.5	5.2	3.7	15.0
	Percentage within job of participant	33.3	0.0	66.7	0.0	100.0
Total	Count	61	42	87	62	252
	Expected Count	61.0	42.0	87.0	62.0	252.0
	Percentage within job of participant	24.2	16.7	34.5	24.6	100.0

Source: IBM SPSS, 2017.

Table 4.15: Chi-Square tests

	Value	Degree of Freedom	Asymptotic Significance (2-sided)
Chi-Square	33.421[a]	9	.000
Number of Valid Cases	252		

a. 4 cells (25.0 percent) have expected count less than 5. The minimum expected count   is 2.50

Table 4.14 shows the expected count, observed count and the percentages of the participants' responses to the research questions.

Table 4.15 shows that the value of Chi-Square is 33.42 with a statistical significance or likelihood of .00. This means that the probability of the responses to occur by chance is less that .00 or is 0. So probability (p) = 0. With this statistical significant we concluded that there is no association between the job of the participant and the benefit of ICT in the textile industry (reduces cost of manufacturing). The footnote (a), tells us that 4 cells with 25percent has an expected count less than 5 which has violated the assumption of Chi-Square of "0 cells have an expected count of less than 5". We concluded that the responses of the participant are dependent on the job of the participant.

Table 4.16: Crosstab working experience of participant and benefits of ICT (reduces cost of manufacturing)

Working experience of participants		Strongly agreed	Agreed	Disagreed	Strongly disagreed	Total
1-5	Count	10	0	24	11	45
	Expected Count	10.9	7.5	15.5	11.1	45.0
	Percentage within job of participant	22.2	0.0	53.3	24.4	100.0
6-15	Count	51	42	42	29	164
	Expected Count	39.7	27.3	56.6	40.3	164.0
	Percentage within job of participant	31.1	25.6	25.6	17.7	100.0
16 above	Count	0	0	21	22	43
	Expected Count	10.4	7.2	14.8	10.6	43.0
	Percentage within job of participant	0.0	0.0	48.8	51.2	100.0
Total	Count	61	42	87	62	252
	Expected Count	61.0	42.0	87.0	62.0	252.0
	Percentage within job of participant	24.2	16.7	34.5	24.6	100.0

Source: IBM SPSS, 2017.

Table 4.17: Chi square test

	Value	Degree of freedom	Asymptotic Significance (2-sided)
Chi-Square	62.695[a]	6	.000
Number of valid cases	252		

a. 0 cells (.0 percent) have expected count less than 5. The minimum expected count is 7.17.

Table 4.16 shows the observed count, expected count and the percentages of the participants' responses to the research questions.

Table 4.17 shows that the value of chi-square is 62.69 with a statistical significance or likelihood of .00. This means that the likelihood of the responses to occur by chance is less than .00 or is 0. So probability (p) = 0. With this statistical significant we concluded that there is an association between the work experience of participant and the benefit of ICT in the textile industry (reduces cost of manufacturing). The footnote (a), tells us that 0 cells with 0percent has an expected count less than 5 which is in relation with the assumption of chi-square of "0 cells have an expected count of less than 5". We concluded that the responses of the participant may not be dependent on the working experience of participant.

Table 4.18: Crosstab Gender of participant and availability of ICT in textile industry (mobiles phones are not used in the textile industry)

Gender		strongly agreed	Agreed	Disagreed	Total
Male	Count	127	74	2	203
	Expected Count	131.3	70.1	1.6	203.0
	Percentage within Gender of participant	62.6	36.5	1.0	100.0
Female	Count	36	13	0	49
	Expected Count	31.7	16.9	.4	49.0
	Percentage within Gender of participant	73.5	26.5	0.0	100.0
Total	Count	163	87	2	252
	Expected Count	163.0	87.0	2.0	252.0
	Percentage within Gender of participant	64.7	34.5	0.8	100.0

Source: IBM SPSS, 2017.

Table 4.19: Chi-Square tests

	Value	Degree of Freedom	Asymptotic Significance (2-sided)
Chi-Square	2.335[a]	2	.311
Number of Valid Cases	252		

a. 2 cells (33.3 percent) have expected count less than 5.
The minimum expected count is .39.

Table 4.18 shows the observed count, expected count and the percentages of the participants' responses to the research questions.

Table 4.19 shows that the value of chi-square is 2.33 with a statistical significance or likelihood of .31. This means that the likelihood of the responses to occur by chance is .31 or is 31 in 100. So probability (p) = 31. With this statistical significant we concluded that there is an association between the gender of participant and availability of ICT in textile industry (mobile phones are not use in textile industry). The footnote (a), tells us that 2 cells with 33.3percent has an expected count less than 5 which has violated the assumption of chi-square of "0 cells have an expected count of less than 5". We concluded that the responses of the participant may not be dependent on the gender of participant.

Table 4.20: Crosstab Gender of participant and factors limiting the use of ICT in the textile industry (have no knowledge to use ICT)

Gender		strongly agreed	Agreed	Disagreed	Strongly disagreed	Total
Male	Count	42	62	75	24	203
	Expected Count	44.3	63.6	73.3	21.8	203.0
	Percentage within Gender of participant	20.7	30.5	36.9	11.8	100.0
Female	Count	13	17	16	3	49
	Expected Count	10.7	15.4	17.7	5.3	49.0
	Percentage within Gender of participant	26.5	34.7	32.7	6.1	100.0
Total	Count	55	79	91	27	252
	Expected Count	55.0	79.0	91.0	27.0	252.0
	Percentage within Gender of participant	21.8	31.3	36.1	10.7	100.0

Source: IBM SPSS, 2017.

Table 4.21: Chi-Square tests

	Value	Degree of Freedom	Asymptotic Significance (2-sided)
Chi-Square	2.233[a]	3	.526
Number of valid cases	252		

a. 0 cells (.0 percent) have expected count less than 5. The
minimum expected count is 5.25.

Table 4.20 shows the expected count, observed count and the percentages of the
participants' responses to the research questions.

Table 4.21 shows that the value of chi-square is 2.23 with a statistical significance
or likelihood of .52. This means that the likelihood of the responses to occur by
chance is less than .52 or is 52. So probability (p) = 52. With this statistical
significant we concluded that there is an association between the gender of
participant and factors limiting the use of ICT in the textile industry (have no
knowledge to use ICT). The footnote (a), tells us that 0 cells with 0percent has an
expected count less than 5 which has not violated the assumption of Chi-Square of
"0 cells have an expected count of less than 5". We concluded that the responses
of the participant are independent on the gender of participant.

**Table 4.22: Crosstab Gender of participant and factors limiting the use of
ICT in the textile industry (lack of access to ICT)**

Gender		strongly agreed	Agreed	Disagreed	Strongly disagreed	Total
Male	Count	49	66	55	33	203
	Expected Count	53.2	62.0	49.1	38.7	203.0
	Percentage within Gender of participant	24.1	32.5	27.1	16.3	100.0
Female	Count	17	11	6	15	49
	Expected Count	12.8	15.0	11.9	9.3	49.0
	Percentage within Gender of participant	34.7	22.4	12.2	30.6	100.0
Total	Count	66	77	61	48	252
	Expected Count	66.0	77.0	61.0	48.0	252.0
	percentage within Gender of	26.2	30.6	24.2	19.0	100.0

participant					

Source: IBM SPSS

Table 4.23: Chi-square tests

	Value	Df	Asymptotic Significance . (2-sided)
Pearson Chi-Square	10.854[a]	3	.013
N of valid cases	252		

a. 0 cells (.0 percent) have expected count less than 5. The minimum expected count is 9.33.

Table 4.22 shows the expected count, observed count and the percentages of the participants' responses to the research questions.

Table 4.23 shows that the chi-square value is 10.85 with a statistical significance or probability of .01. This means that the probability of the responses to occur by chance is less than .01 or is 1. So probability (p) = 1. With this statistical significant we concluded that there is an association between the gender of participant and factors limiting the use of ICT in the textile industry (lack of access to ICT). The footnote (a), tells us that 0 cells with 0percent has an expected count less than 5 which has not violated the assumption of chi-square of "0 cells have an expected count of less than 5". We concluded that the responses of the participant are independent of the gender of participant.

Table 4. 24: Crosstab gender of participant and factors limiting the use of ICT in Textile Industry (poor income level)

Gender		Strongly agreed	Agreed	Disagreed	Strongly disagreed	Total
Male	Count	31	46	45	81	203
	Expected count	33.8	39.5	50.8	78.9	203.0
	Percentage within gender of participant	15.3	22.7	22.2	39.9	100.0
Female	Count	11	3	18	17	49
	Expected count	8.2	9.5	12.3	19.1	49.0
	Percentage within gender of participant	22.4	6.1	36.7	34.7	100.0
Total	Count	42	49	63	98	252
	Expected count	42.0	49.0	63.0	98.0	252.0
	Percentage within gender of participant	16.7	19.4	25.0	38.9	100.0

Source: IBM SPSS, 2017.

Table 4. 25: Chi-Square tests

	Value	Degree of Freedom	Asymptotic Significance (2-sided)
Chi-Square	10.398[a]	3	.015
Number of valid cases	252		

a. 0 cells (.0 percent) have expected count less than 5.
The   minimum expected count is 8.17.

Table 4.24 shows the expected count, observed count and the percentages of the participants' responses to the research questions.

Table 4.25 shows that the value of Chi-Square is 10.39 with a statistical significance or likelihood of .01. This means that the likelihood of the responses to occur by chance is less than .1 or is 1. So probability (p) = 1. With this statistical significant we concluded that there is an association between the gender of participant and factors limiting the use of ICT in the textile industry (poor income level). The footnote (a), tells us that 0 cells with 0percent has an expected count less than 5 which has not violated the assumption of chi-square of "0 cells have an expected count of less than 5". We concluded that the responses of the participant are independent of the gender of participant.

Table 4.26: Crosstab job of Participant and benefits of ICT (improves easy entry to the market)

Job of participant		Strongly agreed	Agreed	Disagreed	Strongly disagreed	Total
Textile industrial worker	Count	35	39	26	10	110
	Expected Count	39.7	43.7	16.2	10.5	110.0
	Percentage within job of participant	31.8	35.5	23.6	9.1	100.0
Textile educationist	Count	2	13	5	3	23
	Expected Count	8.3	9.1	3.4	2.2	23.0
	Percentage within job of participant	8.7	56.5	21.7	13.0	100.0
Textile entrepreneur	Count	54	33	6	11	104
	Expected Count	37.6	41.3	15.3	9.9	104.0
	Percentage within job of participant	51.9	31.7	5.8	10.6	100.0
IT consultant	Count	0	15	0	0	15
	Expected Count	5.4	6.0	2.2	1.4	15.0

	Percentage within job of participant	0.0	100.0	0.0	0.0	100.0
Total	Count	91	100	37	24	252
	Expected Count	91.0	100.0	37.0	24.0	252.0
	Percentage within job of participant	36.1	39.7	14.7	9.5	100.0

Source: IBM SPSS, 2017

Table 4.27: Chi-Square tests

	Value	Degree of freedom	Asymptotic Significance (2-sided)
Chi-Square	52.001[a]	9	.000
N of valid cases	252		

a. 4 cells (25.0 percent) have expected count less than 5. The minimum expected count is 1.43.

Table 4.26 shows the expected count, observed count and the percentages of the participants' responses to the research questions.

Table 4.27 shows that the value of Chi-Square is 52.00 with a statistical significance or likelihood of .00. This means that the likelihood of the responses to occur by chance is less that .00 or is 0. So probability (p) = 0. With this statistical significant we concluded that there is no association between the job of the participant and the benefit of ICT in the textile industry (improve easy entry to the market). The footnote (a), tells us that 4 cells with 25percent has an expected count less than 5 which has violated the assumption of Chi-Square of "0 cells have an expected count of less than 5". We concluded that the responses of the participant are dependent on the job of the participant.

4.2. DISCUSSION OF FINDINGS

The results presented in table 4.4 shows that the Nigerian textile industries do not make use of modern ICT tools such as Internet, ERP, CAD/CAM and E-commerce. According to Irem Erdogmus et al. 2009, they show that CAM technologies helps designers to make new products where production and assembly systems double the rate of production and also help in making quick shifts of the product line to move from one product to another. Their research also shows that the use of CAD/CAM technologies in the textile industry helps the industry to adapt themselves to rapid changing needs of customers, an increased flexibility and shortened time to the market. That is, with the non-availability of CAD/CAM in the textile industry, the rate of product production will be slow, marketing and global competition will be difficult to attain.

Irem Ergogmus et al. also agreed that the use of ERP in the textile companies will aid the integration of all business activities and gives important benefit to business process. S. Moodley, 2003, agreed that e-business helps in the maximizing the efficiency of internal process, increasing working collaboration, putting together inter-firm gaps and association with the worldwide markets. That is, the non-availability of this ICT tool will have a negative effect in textile marketing and global competition. Most of the computers being used in the textile sector are limited to internet access, email access are mostly done at nearest ICT centers.

The results shown on table 4.5 shows that information technology is beneficial to textile marketing were most of the respondents strongly agreed and agreed to most of the benefits ICT. Enlightening economics (Global textile and garments industry, 2008) supported this finding by stating that utilizing ICT allows the flow of information that ties together the textile and clothing production network, increases productivity and global competitiveness.

Data presented in table 4.6 revealed that the textile industries are limited by some social and personal factors in the utilization of these technologies. The textile sectors are aware of the benefits of ICTs but due to high cost of technology, lack of supporting infrastructure, lack of support from responsible agencies, lack of

adequate power supply and lack of access to ICT, the textile sector were unable to acquire these ICT tools. G.O. Diogu et al (2014) supported this by stating that lack of support from supporting institution like the banks which comes with high lending rates, the sector facing lack of adequate power supply where standby generators are being used to complement power generation, but due to high cost of petroleum products, standby generator cannot solely run the textile sector. They also supported the fact that the textile sector lack modern technological facilities that can manufacture affordable quality textiles. That is, for effective production line textile industries requires technological devices.

Results presented on table 4.7 showed the decrease in textile quality and productivity, difficulty in linking with customers easily, lack of modern industrial ICT knowledge, delay in the distribution of textile product, low income for industry were the major consequence that will be faced by textile industries that do make use of ICTs. Gu and Jung, 2013, study agreed to this, stating that if ICTs are not used in the textile industries there will be lack of global competition, lack of quality textile products, poor efficiency of production lines and lack of innovative capabilities or lack of modern industrial knowledge will be a big problem for the industry in textile business sustenance. Enlightenment economic (Global textile and garments industry, 2008) also agreed that lack of modern industrial knowledge or lack of innovation capabilities will decrease the textile industrial sector in undergoing business practice and also decreases productivity and global competitiveness if ICTs are neglected in the Textile Sector

Results from tables 4.8 to table 4.27 presents the cross tabulation of demography of participants and their responses to the research questions, where the results shows that some of the responses of the participants were most likely to depend on job of the participants and working experience of the participant and not on their gender. The results also display their various Chi-Square values and the probability of the responses of occurring by chance

5. CONCLUSION RECOMMENDATION

This chapter consists of the summary, conclusion and recommendations of the research work. The objective of this study is to evaluate how information communication technology can transform textile industries in Nigeria.

In the introductory chapter, the researcher begins by introducing the background of study followed by statement of problem, objective of the study, methodology of the study and importance of the study.

In chapter two, previous researches that were done nationally and globally relating to the subject matter were stated, also meaning of ICT, benefits of ICT, what is textile and textile industry, where it was identified that apart from food and shelter, textile is the most important in the hierarchy of man's need, role of ICT's in the textile industry, problems of textile industry which includes; global recession, economic policies, people's perception, marketing strategy, energy problems, smuggling of textiles goods and financial problems. Solutions to textile industry development in Nigeria which includes: provision of adequate infrastructure facilities, provision of favorable economic policies, better marketing strategy, provision of adequate electricity, adequate budget allocation, better security measures, positive perceptive towards locally made goods.

Modern ICT in the textile industry were discussed such as CAD/CAM systems, E-commerce, Enterprise Resource Planning (ERP), Customer Relationship Management (CRM) and Supply Chain Management (SCM). In this chapter there was also classification of ICT tools in the textile industries into internal and external use, which form the basis of the research questions. In chapter three, elaboration on the methods used in collecting the data that was used to compile this research work. It is also significant to note that all the stages that are needed in the collection of data as research design given as an arrangement for the collection and analysis of data. In chapter four, results and finding gathered from the respondents were analyzed using IBM SPSS software tools and presented in the form of tables under various headings and explained in relation to the thesis

topic.

In conclusion, it was discovered that unavailability of modern ICT's in the Nigerian textile industry like Internet, ERP, CAD/CAM systems and E-commerce which are used globally in the textile sectors, were the major hindrances in the battle to transform the Nigeria textile sector. Also the textile sector do not have some of the information technologies to facilitate information delivery, even though they were aware of the benefits of information technology and has been found to be beneficial to the textile manufacturing and marketing . However, several factors have been found as limiting factors to the textile industries in the use of ICT. Factors such as high cost of technology, lack of support from responsible agencies, lack of supporting infrastructures, etc. it was also observed that the no use of ICT in textile and manufacturing will results to decrease in quality and productivity, difficulty in linking with consumers easily, lack of modern industrial ICT knowledge, etc.

IBM SPSS statistical test analysis shows that the responses of the participants were most likely to depend on the job of the participants and their work experiences rather than their genders.

Based on the findings statistical analysis the following recommendations are proffered from the statistical analysis;

i. Since the job of the participants (textile workers and textile entrepreneurs) and working experience of the participants (6-15) responses are dependent on the research questions and also has the highest frequencies of participant, Government should develop policies, strategies and priorities that will be set practices towards industrial (textile) development based on their responses.

ii. The benefits of ICTs in the textile industry were strongly agreed and agreed upon by all the participants, the relevant agencies should develop partnership mechanisms that will involve all interested stakeholders in ICT and the textile sector based on the strong agreed responses from the participants.

iii. High cost of technology was strongly agreed and agreed upon by the respondents to be one of the factors limiting the use of ICTs in the textile sector in Nigeria; responsible agencies should identify and engage funding institutions that would support the textile industrial activities.

iv. Lack of support from responsible agencies was strongly agreed and agreed upon by the respondents as one of the factors limiting the use of ICT in the textile industry in Nigeria, The ministry of sciences and technology should organize periodic seminar and sensitization programs for all responsible agencies on the importance of ICTs in the textile sector.

v. Results from the availability of ICTs in the textile industries in Nigeria, shows that ICTs like Cad/Cam systems, ERP, Internet Ecommerce are not available in the textile sector in Nigeria, The government should equip the textile industries with these technologies and should provide other infrastructures that will facilitate the use of ICTs.

Scope of the Study

The scope of the study is "Transformation of Nigeria textile industry and development using ICT". The reason for this scope is the fact that the textile

industry was the highest employer of labor, second to the Nigeria government in the 1980s and presently the rate of unemployment in Nigeria is on the increase, based on the this reason the research study was carry out.

Limitations

Some of the areas of limitation in the course of this research work include the following;

i.   Inability to get accurate data from the respondents due to fear from most of the respondents of giving necessary information. This is because most of the respondents do not understand what it means to undertake such research work.

ii. The fear of being taxed by the government or punished by the government representatives at grass root hinders them from giving a complete state of things in their areas.

iii. Lack of ICT knowledge also limits this research as some of the textile workers are not literate enough to use information technology.

REFERENCES

Books

Abernathy, Frederick H., John T. Dunlop, Janice H. Hammond, and David W.,
      2004.Globalization in the Apparel and Textile Industries: What Is
      New and What Is Not? In *Locating Global Advantage: Industry*
      Dynamics in the International Economy. Martin K. & Richard F., (Eds.)
      Stanford, CA: Stanford University Press.

Davenport, T., Prusak, L., 1998. Working knowledge: *How organization*
      manage what they know. Boston MA: Harvard Business School press.

Greasley, P., 2008. Quantitative Data analysis using spss:
      An introduction for health and social science
      United Kingdom: McGraw-Hill Education

Magal, S. & Word, J., 2011. *Integrated Business Processes with ERP*
      systems. New jersey Hoboken: John Wiley and Sons
      Publishing.

Stocchetti, A. & Elena Scattola, E., 2011. Supply Chain Management
      in Industrial Production: *A Retrospective View,*
      Supply Chain Management - New Perspectives.
      Renko, S., (Eds.) Rijeka, Croatia: InTech publication
      ISBN: 978-953-307-633-1

Varman, J., 2007. ERP in practice: *ERP strategies for*
      steering organizational competence and competitive advantage.
      India: McGraw-Hill Education

Periodicals

Alain, Y. C., Keng B. O., Yew, K. T. & Zhu. S. Y., 2009. Factors affecting the
        adoption of E-Commerce: A study of the
 Textile İndustry in Wujin, china. *International Journal of business and
        management science*. **2**(2): pp. 117-130.

Bharadwaj, A.S., 2002. A resource-based perspective on information technology
        capability and firm performance:
        An empirical investigation. *MİS Quarterly*, **24**(1), pp. 169-196.

Bose, R., 2002. Customer Relationship Management: key components for IT
        success, *İndustrial management and Data system*.**102**(2), 89-97.

Brynjolfsson. E., 1993. The productivity paradox of information
        technology. *Communication of the ACM*. **36**(12). pp. 66-77.

Cardona, M., Kretschmer, T. & Strobel, T., 2013. ICT and
        productivity; conclusions from the empirical literature.
        Information Economics and policy. **25**(3) pp. 109-125.

Dai, L. & Zhou, J., 2008. The application of 3D digital technology to
        fashion Design. *Asian social science*. **4**(6).

David O.M., Micheal O. F., & Olusegun J. A., 2015. Nigerian textile industry: A
        tool for actualizing economic stability and national development.
European Journal of Business and Social Science **4**. pp. 331-344.

Devaraj, S. & Kohli., R. 2003. Performance impacts of information technology:
        is actual usage the missing link. *Management Science* **49**(3)
        pp. 273-289.

 Diogu, G.O., Chukwuemeka, N. & Diogu A.N., 2012. Problems and
        prospects of Nigerian and textile industry*: Nsukka Journal
        of Humanities*. **22**. pp 299-308

Dwivedi, A. & Dwivedi, A., 2013. Role of computer and automation in
        design and manufacturing for mechanical and Textile industries:
        CAD/CAM. *International Journal of İnnovative Technology and
        exploring Engineering*, **3**(3), p.8.

Gado, N.D. & Nmadu, T.M. 2011. The performance of textile companies in

the North West zone of Nigeria: The role of Infrastructure as resources. *İnternational Journal of human resources studies*. **2**(1) pp. 89-100

Gu, J.W. & Jung, H.W., 2013. The effect of IS resources, capabilities, and qualities on organizational performance; An integrated approach. *Information and management.* **50**(2) 87-97.

Irem, E., Mujdelen, İ.Y., Orkun G., 2009. Information and communication Technologies as a competitive advantage tool after termination of agreement on textiles and clothing. A study of Turkish textiles and clothing industry. *Oneri* **8**(31) pp 69-80.

Jean, R-J.B., 2007. The ambiguous relationship of ICT and organization performance: a literature review. *Critical perspective on İnternational Business* **3**(4), pp. 306-321.

Kayo, l., Yutaka, T., Ruri N., 2014. Satisfaction structure of the implementation effect of enterprise resource planning(ERP). An analysis from the management style perspective of Japanese firm. *International Journal of Business and information*. **9**(3).

Lal, K. (2004). "E-business and Export Behavior: Evidence from Indian Firms", World Development, **32**(3): 505-17.
    Mata, F.J., Fuerst, W.L., and Barney, J.B., 1995. Information technology and sustained competitive advantage; A resource-based analysis. *MIS Quarterly.* **19**(4) pp. 487-505.

Maria, T. G-A., 2011. Analysis of the effects of ICTs in knowledge management and innovation: The case of Zara Group. *Computers in Human behavior*. **51**(2015) pp. 994-1002.

Marina, H., Marzanah A.J., Fatima S., Yusmadi Y.J., Salfarina H., 2016. Enterprise resource adoption lifecycle: A systematic literature review. *Journal of theoritical and applied information technology.* **85**(3).

Meng Y., Mok, P., & Jin, X., 2010. Interactive virtual try-on clothing design systems. *Elsevier-computer aided design.* **42**. pp. 310-321.

Mohammed, S. S., Khaled A., Ali A., Rahmat B., 2016. An İnvestigation

study on optimizing Enterprising Resource Planning
(ERP) İmplementation in emerging public university: Al Baha
university case study. *İnternational Journal of Electrical and
computer engeering (İJECE)*. **6**(4), pp. 1920-1928.

Moodley, S., 2003. The challenge of e-business for the South African
apparel sector. *Technovation*. **23**(7), pp. 557-570.

Ogunnaike, O. (2010) Nigeria's perception of locally made products:
A study on Textile fabric consumers in Kaduna state.
Economic sciences series. **62**(1), pp. 30-36

Ram, J., 2015. "Examining the role of organizational readiness in
ERP project delivery;" *Journal of computer İnformation
systems*. **55**(2) PP. 29-39, 2015.

Ryals, L., and Payne, A., 2001. Customer relationship management in
financial services: Towards information-enabled
relationship market. *Journal of strategic marketing*. **9**(1), 2-27.

Toni, M.S., Klara G. N., 2002. A taxonomy of players and activities
across the   ERP project life cycle. *Information and
management.* **41**(3), pp. 257-278,

Ying-Yu, K.C., Yi-Long J., Bing-Li-Wu., 2016. Effect of digital
transformation on organization performance of SMEs. Evidence
from the Taiwanese textile industry's web portal. *Internet Research*.
26 (1), pp. 189-212.

Other Sources

Adamu-Suka, M, 2011. United Textile Nigeria Limited (UNTL) and the
Federal Government Intervention Fund.
Sunday Trust Newspaper, Nov. 27th.

Abubakar, A.T., 1997. The marketing problem of Textile industries in Nigeria:
A case study of United Nigeria Textile PLC.
Thesis for MBA Degree. Zaria: Ahmadu Bello University

Adebisi, O.O., 1987. The impact of import Regulation on the
Textile Manufacturing Industry in Nigeria. *Thesis for MBA Degree.*
Jos: university of Jos.

Enlightenment Economics, 2008. *The Global Textile and Garments İndustry:*
The role of ICT in exploiting the value chain.
http://www.infodev.org/infodevfiles/resource/InfodevDocuments_582.pdf
.   [Aceessed 22 June 2017]

Harris, D., 2007. China's cotton association calls for Global cooperation.

http://www.cottongrower.com/uncategorized/chinas-cotton-association-calls-for-
global-cooperation-2/. [Accessed 3 August 2017]

Freeman I., & Hasnaoui A., (2010), İnformation and communication
technology: a tool to implement and drive corporate
social responsibilities (CSR).
http://hal.archives-ouvertes.fr/hal-00495968

Mohammed, H., 1984. Kaduna Textile Mills Limited (KTL) management
of the marketing function. *Thesis for MBA Degree.*
Zaria: Ahmadu Bello University.

Moodley, S., 2001. E-Business and the changing terms of competition and
trade in the South African Apparel Industry.
Industrial restructuring project Research Report. Durban:
University of Natal.

Njoku, U.A. (2004) marketability of made in Nigeria Textile material,
Thesis for PhD degree. British West Indies: St. Clements University.

Ouyang, F., Li, Y., 2005. The Actuality, questions and countermeasures
of electronic commerce application in SME's: *A survey in
the east of Guangdong province, china*. 15-17 August, 2005 Xi'an
China. ICEC proceedings of the 7th international
Conference on Electronic Commerce. pp. 114-118.

Olaru, S., Filipescu, E., Filipescu, E., Niculescu, C. Salistean, A., 2012.
3D fit garment simulation based on 3D body
scanner Anthropometric data. 19-21 April, 2012 Tallinn, Estonia.
In 8th International DAAAM Baltic Conference.
http://innomet.ttu.ee/daaam_publications/2012/olaru.pdf

Sphahiu, T., Shehi, E., & Piperi, E., 2014. *Advance cad/cam systems
for garment design and simulation.* 20 November, 2014
Tirana, Albania. 6th İnternational conference of textile. pp. 1-6.

Werner, H.M., Thalmann, N.M., & Thalmann, D., 2010.
user interface for fashion design
https://pdfs.semanticscholar.org/d7b8/46b871ba64d294951e088f2d9100c32a3a87
.pdf . [Accessed 22 June, 2017]

What is cad/cam software? http://www.autodesk.com/solutions/cad-cam

What is Customer Relationship Management?
http://www.onebusiness.ca/sites/default/files/MEDI_Booklet_Customer_Relations
hip_Management_Accessible_E.pdf [Accessed 22 June, 2017]

What does information communication technologies mean?
https://www.techopedia.com/definition/24152/information-and-communications-
technology-ict [Accessed 22 June, 2017]