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**EFFECTS OF GLOBALIZATION ON LOGISTIC MANAGEMENT  
OF MULTINATIONAL COMPANIES IN NIGERIA**

by

**ADEITAN AYODEJI DENNIS**

**A DISSERTATION**

submitted in fulfilment of the requirement for the degree

**MAGISTER TECHNOLOGIAE**

in

**OPERATIONS MANAGEMENT**

in the

**FACULTY OF ENGINEERING AND THE BUILT ENVIRONMENT**

at the

**UNIVERSITY OF JOHANNESBURG**

**SUPERVISOR: DR. EMMANUEL EMEM-OBONG AGBENYEKU**

**CO-SUPERVISOR: PROF. C.O. AIGBAVBOA**



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**A DISSERTATION** submitted in fulfilment of the requirements for the award of the degree Magister Technologiae in Operations Management in the Faculty of Engineering and the Built Environment, Department of Quality and Operations Management, University of Johannesburg, Republic of South Africa.

**JOHANNESBURG, SEPTEMBER 2019**

## DECLARATION

I, **ADEITAN AYODEJI DENNIS**, do hereby declare that this dissertation is the result of my investigation and research, except to the extent indicated in the references and by comments included in the body of the report and that it has not been presented elsewhere for a similar purpose. It was submitted to the University of Johannesburg (Department of Quality and Operations Management) as a requirement to obtain a **MAGISTER TECHNOLOGIAE** degree in **Operations Management**.

\_\_\_\_\_  
Signature

University of Johannesburg,  
Doornfontein Campus

\_\_\_\_\_  
10/12/2019

Date



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## **DEDICATION**

I dedicate this dissertation to my parents, Mr and Mrs Ayo Adeitan, my siblings, Oluwanifemi Adewole (nee Adeitan), Adedamola Donald Adeitan, Adedoyinsola Adeitan, my niece, Inioluwa Adewole, my in-law Mr Adebayo Adewole, and lastly, Oyindamola Olubiyo.



## ABSTRACT

Globalization process has been recognized as an important underlying force impacting global logistic service providers because it is an essential function in the transportation and logistics system, the actions of which appear in different parts of the logistics management processes. This study explored the effect of globalization on logistics management in Nigerian multinational companies. Data used in this study were obtained from both primary and secondary sources. Secondary data were obtained through literature reviews of related studies while primary data were collected through a structured questionnaire which was distributed to logistics management professionals in the Nigerian logistics industry. One hundred and fifty (150) questionnaires were sent to the respondents; one hundred and six (106) questionnaires were responded to and returned for analysis. This represented a response rate of 71%. Data obtained from the research study were analyzed using descriptive statistics and exploratory factor analysis (EFA). Findings from the descriptive analysis of the level of awareness of logistics activities in Nigerian industries revealed transport logistics as most aware form of logistics activities among the respondents while awareness level of fourth party logistics (4pl) and green logistics activities is low in the Nigerian industries. The study also revealed that respondents are more aware of technologies, cultural, political, global economic growth, and reductions of trade barriers as top factors that influence globalization in Nigeria. In addition, the decrease in transport process costs, encouraging customer service quality, and the increase in the wide network of resources are the top benefits of globalization in logistics management in Nigeria. Furthermore, access to new/effective information, efficiency in logistic chains transportation modes, and improvement in technology are the most important impacts of good logistics management in Nigeria. Lastly, cost effectiveness, advancements in technology, and quality operations are the most important factors to be considered for logistics management in Nigeria to take advantage of globalization. The research recommended that for globalization to benefit logistics management in Nigeria, efficient legislation and policies should be enacted to improve transport efficiency in order to reach new customers in new markets. Also, an increase in the economies of scale to reduce transport costs, would lead to a better sustainable growth of the Nigerian logistics industry.

Keywords: Logistics management, globalization, management, sustainable growth, multinational companies, logistics information flow



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## LIST OF ABBREVIATIONS

3PL:	Third party logistics
4PL:	Fourth party logistics
AAGM:	American Apollo global management
B2B:	Business-to-business
B2C:	Business-to-consumer
CSCMP:	Council of supply chain management professional
CSR:	Corporate social responsibility
DRP:	Distribution resources planning
DSS:	Decision support system
EDI:	Electronic data interchange
EU:	European union
FDI:	Foreign direct investment
FMCG:	Fast-moving consumer good
GNP:	Gross national product
ILS:	Integrated logistic support
LSP:	Logistics service providers
MNC:	Multinational company
MNE:	Multinational enterprise
NACE:	National Association of Corrosion Engineers
NBC:	Nigerian Bottling Company (NBC)
NAFTA:	North American Free Trade Agreement
OWG:	Open working group
PEST:	Political, economic, socio-cultural & technological
RBV:	Resource-based view
R & D:	Research & development

SCM:	Supply chain management
SCRM:	Supply chain risk management
SDGs:	Sustainable Development Goals (SDGs)
SMEs:	Small and medium-sized enterprises
TEU:	Twenty-foot equivalent unit
TGV:	Train à Grande Vitesse
VRIO:	Valuable, Rare, hard to Imitate and Organized



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## LIST OF PUBLICATIONS

- Adeitan, AD, Aigbavboa, CO & Agbenyeku, EE. Global Logistics in the Era of Industry 4.0. Future Technologies Conference 2019 - San Francisco, United States. Published
- Adeitan, AD, Aigbavboa, CO, Agbenyeku, EE & Bamisaye, OS. Industry 4.0 and Construction Supply Chain Management. Creative Construction Conference 2019, CCC 2019, Budapest, Hungary. Published
- Adeitan, AD, Aigbavboa, CO & Agbenyeku, EE. An Assessment of Logistics and Transport Subdivision as an Element of Globalization. ISEC EURO MED SEC 03. The Third European and Mediterranean Structural Engineering and Construction Conference, Limassol, Cyprus June 22-27, 2020. Accepted
- Adeitan, AD, Aigbavboa, CO & Agbenyeku, EE. Impact of Globalization on Current Practices in the Supply Chain Management of Nigeria SMEs. ISEC EURO MED SEC 03. The Third European and Mediterranean Structural Engineering and Construction Conference, Limassol, Cyprus June 22-27, 2020. Accepted
- Adeitan, AD, Aigbavboa, CO, Agbenyeku, EE & Adeitan, A. Influence of Effective and New Information Flow on Logistics Management in Nigeria. ISEC EURO MED SEC 03. The Third European and Mediterranean Structural Engineering and Construction Conference, Limassol, Cyprus June 22-27, 2020. Accepted



UNIVERSITY  
OF  
JOHANNESBURG

## CHAPTER ONE

### 1. INTRODUCTION

#### 1.1 STUDY OVERVIEW

Globalization plays an essential function in logistics system and its actions appear in different parts of logistics processes. A good transport classification in logistics movements may perhaps supply better logistics competence, decrease process cost, and encourage service quality (Mangan et al., 2016).

The purpose of the study is to determine the effects of globalization on logistic management. The study adopted a case study research design approach. The study reveals the importance of globalization on logistic management in a highly competitive and advance market, how globalization can increase organizational competitive edge, and those challenges faced in today's global market. The study also indicates how globalization can influence organizational performance. The extension of globalization and the emergence of transnational societies have brought about an increased preoccupation with the components of the marketing mix, especially the distribution policy. The research analysis starts with the introduction of the research problems, the research questions, objectives and the research methodology. The scope of study is limited to multinational companies in Nigeria.

According to Badenhorst-Weiss & Waugh (2015), the market environment in which logistics service providers operate in this new era differs considerably compared to the scenery from the previous years. Hence, this research tends to highlight some of these problems that have been faced in Nigerian logistic services. Global logistic plays a key role in the economics of countries. According to Taylor (2006), logistics have an enormous impact on supply chain management as global logistics data is essential for supporting organizational decision making, which includes forecasting and demand planning. Globalizations has also massively increased the need for an efficient supply chain in the case where all modes of logistic services are reliable. This is fundamentally impacting the dynamic environment of business decisions. To adequately measure the effects of globalization on logistic management, we need to understand the evolution of previous activities and highlight the current services offered across organizational segments,

while tracking the present services across divers regions. It is important to understand how logistic service providers (LSP) operate globally.

Multinational corporations function proactively on a universal scale with the centre of operations in a developed nation. They are known to be the major drivers of globalization because of their presence and operations in two or more countries around the world and more than half of these companies' revenue is being generated outside the centre of operations.

## **1.2 BACKGROUND OF THE STUDY**

The world has been said to be a global village. According to Čepinskis & Masteika (2011), globalization is easing supply lines, thereby increasing the freight transport intensity of the world economy. Imilarly & Mikusova (2010) state that globalization can be seen from two perspectives; firstly, a vision that would be called 'inside-out'. From this perspective globalization offers opportunities for further growth. Secondly the 'outside-inside' perspective, which represent a noticeable restriction, implication and risk. Organizations are presented with frequent opportunities: while taking advantage of such opportunities, they also strive to survive in the new complex situation which comes with globalization (Mikusova, 2010).

The globalization process has been recognized as an important underlying force impacting global logistic service providers (Lemoine, 2005). In recent years organizations have experienced steady growth in international trade and international transport, while the driving forces of such growth are global worldwide economic growth and relaxations of trade barriers. Pesut (2009) indicates that global logistics can be influenced by several economic, social and political aspects because the process can be flexible or changeable. Globalization as a universal trend affects every nerve of the organization: the effects are felt from the human resource management to logistic management and marketing, among others.

Hamilton & Webster (2009) defined globalization as political, social and economic links in different countries, while according to Steger (2009) it is the shrinkage of time and space.

Logistics, on the other hand, is a scientific aspect that has to do with procuring, maintaining and transporting material, personnel and facilities from one destination to another. The etymology of the word 'logistic' in the Greek language means speech, word, reason, oration, ratio and calculation (Pesut, 2009). Logistic management can be defined as that part of supply chain

management that plans, implements and controls the efficient, effective forward and reverse flow and storage of goods, services and related information between the point of origin and the point of consumption in order to meet customers' requirement (Pesut, 2009).

For an organization to compete in a global economy, an efficient logistic management is considered a strategic priority. The organization has to implement a logistic management strategy by assessing all logistic functions and defining how logistic processes will function adequately within the organization, thereby contributing to the overall supply chain management goals (Rodrigue et al., 2009). Organizations mostly evaluate their success continually and are open to opportunities, because the supply chain environment evolves regularly, therefore logistic management roles must be flexible. The logistic concept is defined as a thread that connects crucial processes and provides the basis for the design of systems that will cost-effectively deliver value to targeted customers (Christopher, 2003). The concept of logistics can also be adjusted for international trade and can then be called a global logistic concept. Logistic management is sometimes misused as supply chain management. Logistic management focuses on short-term procedures while supply chain management is usually focused on the long term.

Logistic management implements a fine-tuned logistic strategy; because the supply chain is constantly changing, so is the logistics processes (Ahmer, 2013). Once an organization can develop and implement a formal logistic strategy, such a strategy will add flexibility to the decision-making process, and will enable the organization to predict service disruption, thereby empowering the organization to ensure that services are at a peak level.

Management has to do with directing, controlling, planning, disseminating or overseeing organization, events, ideas or good and services (Sidikova, 2011). This is a very important aspect of any organization for efficient and effective attainment of organizational goals.

Management, according to Drucker (2003), is a creative and systematic flow of knowledge that can be applied to achieve quality results by using humans as well as other resources in an effective way. Change is what takes us out of our comfort zone, and it is inevitable; organizations should be flexible to change both externally and internally. Change comes in an



organization in many forms (Kute & Upadhyay, 2014). In a global market change is consistent; management should be willing to adjust to environmental changes at every possible opportunity. Technology introduction and aging boomer populations are all factors that can affect management. Management will go through tremendous change in order to grow and expand while competing in a global market. Asghar (2010) states that rapid development in technology advancement, high expectations of customers and ever-changing market situations have compelled organizations to incessantly reassess, to re-evaluate how they operate and to understand, adopt and implement changes in their organizational model in response to global changing trends.

Effective management is a strategic resource to gain sustainable competitive advantage in this age of globalization (Ndahiro, Shukla & Oduor, 2015). In the hope of extracting the greatest value from innovation, organizations have adjusted their management structures. Work processes and cultural use of information technology is now shifting from a supportive role to a more strategically oriented role in organization management, building and rebuilding their existing IT system in response to needs and market change to enable them to compete globally. Management needs to ensure that well trained, skillful and efficient staff are employed in the organization (Orlikowski, 2006; Olubayo, 2014). Subsidiaries of P&G, Unilever, PZ Cussons, Nestle, 7up, Nigerian Bottling Company (NBC), Nigeria Brewery, DHL, FedEx and Fan Milk Companies in Nigeria are adopted as the case study because of their efficient global operations and effective logistic management. The research will hopefully assist logistic managers, researchers and transportation operators to define and comprehend views on logistic management and the effect of globalization on logistic management in Nigeria.

### **1.3 STATEMENT OF THE PROBLEM**

The main objective of this research is to identify some of the effects of globalization on logistic management in Nigeria by means of analytical statistics and to suggest possible solutions. Currently, the global logistics scene and procurement are experiencing rapid change over the last decades due to technology advancement and change in government and policy (Hussein & Shale, 2014). As the market becomes more and more globalized through regional and international

trade agreements, integrations and treaties, logistics activities and procurement practitioners face greater challenges. Such problems range from language barriers, cross-border laws and regulations, inadequate and unequipped personnel, currency exchange rates and payment, and trade agreements (Thai, 2007). Hence, it is imperative for those organizations that operate across other countries' borders to understand the effects of globalization on logistic management functions. As per the view point of Cuyvers et al. (2011), globalization is the type of activity which enables the manager of an organization in Nigeria to keep up with the seismic impact and tide of globalization in terms of growing and expanding the existing operation of the firm throughout the entire world.

#### **1.4 RESEARCH QUESTION**

The following will form the research questions:

- What is the level of awareness of logistics activities in Nigeria?
- What are the factors that influence globalization of logistics management in Nigeria?
- What are the benefits of globalization for logistics management in Nigeria?
- What are the impacts of globalization on logistics management in Nigeria?
- What factor(s) must be considered for logistics management in Nigeria to take full advantage of globalization?
- Can effective and new information flow influence logistics management in Nigeria?

#### **1.5 RESEARCH AIM**

The aim of this research is to explore the effect of globalization on logistics management in Nigeria using multi-national companies as a case study.

#### **1.6 RESEARCH OBJECTIVES**

The objectives of this research are as follows:

- To assess the level of awareness of logistics activities in Nigeria industries;
- To determine the factors that influence globalization in Nigeria;

- To identify the benefits of globalization for logistics management in Nigeria;
- To ascertain how globalization has impacted on logistics management in Nigeria;
- To understand the factors to be considered for logistics management in Nigeria to take advantage of the adoption of globalization in Nigeria; and
- To explore the influence of effective and new information on logistics management in Nigeria.

### **1.7 SIGNIFICANCE OF THE STUDY**

This research provides adequate information on the problems facing the logistic management in Nigeria. The study also addresses the problem and gaps in literature on how big multinational companies in Nigeria are negotiating the hyper-globalized spaces of the present era. Hence, the present study provides researchers and stakeholders with a clear pointer and adequate illumination on problematic factors hindering the logistic workflow in Nigeria. If the problems are identified, then the solutions too are not unrealistic. In other words, this research provides companies, government bodies or researchers in the country with the adequate proposed solutions to some of these problems (struggle with globalization tide) which could aid effective improvements in logistic managements. With this proffered solution, it could as well aid researchers with new ideas on how to go about the unidentified problems in this research and it could help them out to carry out desirable solutions using the models prescribed from this theoretical framework.

### **1.8 SCOPE OF THE STUDY**

The scope of this study is limited to the effects of globalization on logistic management in Multinational companies in Nigeria. The study sought opinions of staff in logistic departments of P&G, Unilever, PZ Cussons, Nestle, 7up, Nigerian Bottling Company (NBC), Nigeria Brewery, DHL, FedEx and Fan Milk in Nigeria. These companies were specifically selected for their

global standing as multinational companies which access the competitive market in which business operations are carried out. The companies have a global standing and access to several means of transportation. The study was also limited in time.

## **1.9 RESEARCH LIMITATIONS**

This study is limited to P&G, Unilever, PZ Cussons, Nestle, 7up, Nigerian Bottling Company (NBC), Nigeria Brewery, DHL, FedEx and Fan Milk in Nigeria. The study determines the effects of globalization on logistic management and the challenges facing globalization regarding logistic management. The respondents include all personnel in the logistic department. The study also determined the role of globalization on logistics and economic growth.

The sample population selected for this study was limited to staff within the logistic department. Thus, the ability to generate data confidentially was somewhat challenging. However, personnel were assured of their right to confidentiality and privacy in line with divulging information during the data collection. The research was limited by time, resources and logistic constraints.

This study also concentrated on two empirical findings about the relationship of globalization and logistics management.

## **1.10 RESEARCH METHODOLOGY**

### **1.10.1 RESEARCH APPROACH AND DESIGN**

A quantitative research was used in the current research. As Houser & Osman (2010) indicated, the quantitative approach is a formal objective, and systemic procedure to depict, test relationship and inspect circumstances and end results association among factors.

### **1.10.2 RESEARCH DESIGN**

This examination gives an all-encompassing review on the key approach that was determined while completing this review. This study utilized a case study research design that focuses on selected multinational companies in Nigeria. The fundamental goal was to examine the effects of globalization on logistic management in Nigeria. Consequently, this study embraced a quantitative descriptive research approach, implementing a survey research strategy and using structured questionnaires obtained from early studies with modifications by the researcher. Using the snowball sampling technique, questionnaires were administered to 150 personnel in logistics

departments of P&G, Unilever, PZ Cussons, Nestle, 7up, Nigerian Bottling Company (NBC), Nigeria Brewery, DHL, FedEx and Fan Milk in Nigeria. This constituted the primary instrument of data collection. Data analysis was done using SPSS analysis software.

### **1.10.3 INSTRUMENT OF DATA COLLECTION**

A structured and self-administered instrument of information collection was put in place in the light of the fact that it is the best and most practical instrument. The study was limited to selected multinational companies in Nigeria as earlier stated. A questionnaire was specifically chosen because its usage is popular in companies with large logistic systems (Hult, Ketchen & Slater, 2014).

### **1.10.4 DATA ANALYSIS AND INTERPRETATION**

In this chapter, the effects of globalization on logistic management are discussed based on the findings. The analyzed data was generated from the administered questionnaires. Tables, frequencies, percentage were used to present the findings which were ascertained using SPSS.

## **1.11 OVERVIEW OF CHAPTERS**

The study was structured around the following chapters:

### **Chapter 1: INTRODUCTION**

Chapter one gives an introduction to the research work. It consists of the background of the study, objectives of the study, significance of the study, and the scope of the study.

### **Chapter 2: AN OVERVIEW OF GLOBALIZATION AND LOGISTICS MANAGEMENT**

Chapter two consist of the literature review, which gives definitions of key words, while explicating the meanings of globalization, logistics, logistic management, management, procurement and similar terms.

**Chapter 3: AN OVERVIEW OF EFFECTS OF GLOBALIZATION ON LOGISTICS MANAGEMENT IN FRANCE AND ITALY**

This chapter covers the overview of the current logistics management practices, effective ways of outsourcing logistics, the challenges facing global logistics, the logistics foreign direct investment in Italy and the role of logistics development on economic growth in France and Italy.

**Chapter 4: AN OVERVIEW OF EFFECTS OF GLOBALIZATION ON LOGISTICS MANAGEMENT IN SOUTH AFRICA AND KENYA**

This chapter covers the overview of the current logistics practices, the globalization effects on logistics management, the international procurement, the effect of economic policies on globalization of logistics management and the role of global logistics development on economic growth in South Africa and Kenya. Unrelated view of scholar and researchers on the same topic are reviewed in this chapter.

**Chapter 5: AN OVERVIEW OF MULTINATIONAL COMPANIES IN NIGERIA**

This chapter presents an overview of multinational companies in Nigeria and their current logistics practices. The effects of globalization on logistics management in multinational companies in Nigeria, the effect of economic policies on globalization of logistics management and the role of global logistics development on economic growth in Nigeria are also discussed. Unrelated views of scholars and researchers on the same topic are reviewed in this chapter.

**Chapter 6: RESEARCH METHODOLOGY**

This chapter gives details of the research methodology. It presents the methods in which data were accumulated.

## **Chapter 7: FINDINGS AND ANALYSIS**

This chapter focuses on the research findings and analysis method to analyze the findings, including interpretation of the data collected and data presentation method.

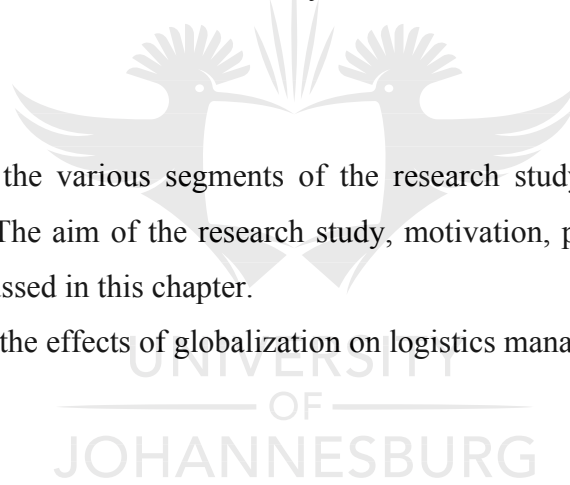
## **Chapter 8: DISCUSSION OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS**

This chapter focuses on the data collected and the methods by means of which the findings are analyzed. In addition, the chapter focuses on discussions of the findings and the methods with which these findings are presented. This chapter further focuses on conclusions drawn from the data collected and the literature review. It also provides a summary of recommendations. All the findings are used to draw conclusions for the study.

### **1.12 CONCLUSION**

This chapter introduced the various segments of the research study and the structure of the research was presented. The aim of the research study, motivation, purpose, research questions and objectives were discussed in this chapter.

Chapter two will explore the effects of globalization on logistics management.



## **CHAPTER TWO**

### **AN OVERVIEW OF GLOBALIZATION AND LOGISTICS MANAGEMENT**

#### **2.0 INTRODUCTION**

In this part, literature relating to globalization impact on logistics management, supply chain management and international procurement is explored. The history of logistics outsourcing, their characteristics, and various effective ways globalization impacts logistics management are also discussed.

#### **2.1 GLOBALIZATION**

To understand the effect of globalization, it is necessary to clearly understand what globalization means. Globalization is a concept that cannot be easily defined or encompassed with a frame of set time. It cannot be a theory based upon certainty which is applicable in all environment and situations. It is a process that involves economic integration and a transfer of policy across various borders through transmission of knowledge and cultural stability (Didigwu & Augustus, 2015).

Globalization can also be defined as a global process, a revolution and an establishment of a global market, free from sociopolitical control. Globalization typically refers to the process by which different economies and societies become more closely integrated, and concurrent with increasing worldwide globalization, there has been much research into its consequences (Nilson & Theresse, 2010). Hamilton & Webster (2009) defined globalization as political, social and economic links in different countries. It is the shrinkage of time and space (Steger, 2009).

Globalization can also be defined as a concept by means of which regions can rapidly develop, thereby creating a significant awareness of the security and well-being of individuals in that society. Globalization is a process or concept which signifies different things to different people at a point in time, either politically, socially, economically or culturally. The intensity and extensity at which the global market is growing are speeding up the global interaction and processes, while worldwide evolution of transport and communication has largely increased the rate of diffusion of goods, ideas, information, and human capital with such rapid growth that the boundaries between domestic matters and global affairs are becoming increasingly blurred. Globalization has been recognized as an important aspect in economic life. The achievement of worldwide economic equilibrium cannot be ensured, but the stability in most economic



environments indicates the positive effects fostered by the development of trading and adequate access to new markets. Organizations need to take into consideration the actions necessary in pursuit of globalization (Didigwu & Augustus, 2015).

Palmer (2002) saw the concept as the diminution or elimination of state-enforced restrictions on exchanges across borders and the increasingly integrated and complex global system of production and exchange that have emerged as a result. This definition raises the question whether the world has changed so fundamentally to a point where the original function of the country borders has been over taken by time (Herrmann, 2012). Borders are now becoming more transparent, while accessing the market is now a facilitated process: governments and organizations have been forced to augment their competitiveness, thereby creating adequate infrastructure and strategies needed to increase the benefits from all the accelerated international commercial growth. Globalization has also created a concept whereby the world is assumed to operate a single market; organizations are now involved in production interdependently because consumers are now consuming similar goods, therefore they are responding to the same impulses.

Globalization has challenged organizations to grow more competitive and innovative in various aspects in order to survive in a given global market. Organizations that are well-known in developed countries are now operating in an emerging market while seeking out more customers. This acts as intensified competition on a global scale. Smaller organizations are working efficiently to survive in a global market, while striving to gain competitive advantage over others. Globalization has also altered the culture within a society by transforming the ways in which organizations operate. Most countries and organization are now making their policies and cultural influence flexible in order to accommodate other organizations having access to their market (Salaria, 2012). Organizations need to take into consideration the fact that globalization is not a smooth process. It has experienced a high rate of integration, which has been characterized under trade, capital flow and the movement of labour. It is a process that has involved the spread of ideas and innovation within its environment. Technology is also a major factor that fosters globalization. It has increased the rate at which consumers communicate with organizations, sharing of information and ideas, receiving of complaints all in a short space of time.

Globalization is a process with many facets and offers a wide range of options by integrating markets, ensuring more and adequate products are available to consumers universally, thereby increasing the choices of consumers. Technology has also enabled global products to be highly customized to meet the test and preference of local or international consumers.

Globalization through technology has given organizations access to remote staff on other parts of the world. Organizations can now have access to digital marketing agencies, which can easily manage their marketing strategy, having direct access to final consumers. Technological revolution and easy access to the Internet by individuals, which are part of globalization mean that governments can no longer have a monopoly on the flow of information. Thus, such actions have provided more cultural freedom to individuals. Globalization has been viewed as a world network of exchanging goods and services on a rapidly increased scale. It also has increased an intensive movement of capital by encouraging large networks of banks with rapid development of foreign direct investment.

Globalization is also recognized as a process in which the cost and benefits are identified to have given rise to ideology and social movement on a global scale. It is seen as a desirable factor that is necessary for the better good of human society. It is also a process that has in many ways contributed to the growth of the world economy: while liberating the market forces, it has also enabled peaceful international relations and increased conflict resolution, and it is used as a means of peace treaty between two countries willing to operate together in a global market.

### **2.1.1 DRIVERS OF GLOBALIZATION**

Globalization has moved rapidly over the years; the rate at which organizations operate in a global scale has increased periodically. Organizations now operate easily in the global market because of the drivers of globalizations which have made the process flexible and accommodating. Such drivers can be considered as the following,

#### **I. TECHNOLOGY**

Operation of business has rapidly changed in every aspect owing to technology. Cheap and easy access to technology and energy has drastically altered the process in which organizations conduct business. Adequate communication infrastructure has led to a wide array of business practices. This is now referred to as globalization.

The development or innovation and enhancement of technology have impacted the global business environment tremendously. Now communication, transportation and productions are at an advanced and more effective stage. The innovation of technology has impacted global business because there are various and effective programs that are used by organizations to maintain a record of inventories and shipments; communications are now easily made anywhere in the world with consumers, manufactures and suppliers. Through technology, organizations can now conduct research on products' enhancement while interacting with consumers, that is, is gathering feedback on a product, which enables the organization to learn more and have a knowledge of what consumers feel about a certain product and how to improve a product if the need arises.

Technology has also enabled organizations operating in a global market to compete fiercely through the means of establishing various plants or branches across the globe while effectively operating such locations by creating, sharing and disseminating ideas or products to their various employees. Organizations now understand the strategy of incorporating technology in the business in order to move forward and remain competitive in a global economic market (Chigona & Licker, 2008).

Technology has also increased the rate at which organization outsource, that is organizations now are now establishing facilities or plants in countries with a cheap labor force.

## II. COMPETITORS

The high rate at which organizations are operating in a global market has increased the rate of competitors in such markets, which has also created the need to reduce lead times in innovations and productions. Therefore, organizations are required to manage their resources more proactively on a global basis (Yeniyurt, Henke-Jr, & Cavusgil, 2012).

According to Geiersbach (2010), the intensification of competition at both domestic and international levels has driven firms to look beyond their domestic market for new opportunities. Organizations are now venturing into new markets to keep up with their

competitors. A factor that has been considered as a positive strategy of organization is global sourcing, under the pressure from global competition (Jiang & Tian, 2010). A major driver of global logistics is the product quality-based competition (Mwangi, 2013). Organizations operating in a global market need to identify their competitive advantages, that is, their core competency over other organizations in such an environment, understanding the factors or characteristics that distinguish their products from other similar products.

Organizations must also have adequate knowledge about their major competitors so as to compete effectively. They need to inquire about the strength and weakness of their competitors while initiating new ways of differentiating their products and services from those of the competitors (Palmer, 2002).

For an organization to compete successfully in a global market, such an organization needs to develop its global power brands. This is a process whereby the organization focuses on the ranges of brands in which it has a core competency and can easily sell non-core brands. P & G introduced these processes in 2012 when the company cut down some products that were not doing well in the market to focus more on the products producing a higher income rate, which was more international products. Organizations are now ensuring that their products are available in all global markets with a higher quality at a lower price, creating job opportunities in such a country, and invariably encouraging its consumers towards the purchasing of such products. Organizations are moving globally to retain customers and remain relevant in the business while achieving their aims and goals of existence.

### III. GOVERNMENT POLICIES.

Government laws and policies are also considered as drivers of globalization. The policies are now becoming flexible and accommodating to foreign products and international organizations. The conditions and restrictions on exportation have been minimized in several countries. Some governments are willing to develop and improve

their countries' economy and increase job opportunities within the countries. They therefore offer international organizations assistance in the form of subsidies, access to domestic or new markets and technical assistance. Some go as far as providing security to the personnel of such organizations. There are examples in Nigeria due to insurgency.

The World Trade Organization has been at the forefront in fronting agreements that create a framework that aims at establishing global economic development through the liberalization of global trade (Anderson & Kovacic, 2009). Government are now creating conducive environments for foreign investors, while working towards the reduction of financial crises within their country. Laws are now made to reduce the volume of volatility such as small taxes on capital outflow.

Governments are also working towards protecting local and domestic infant organizations long enough to enable them to become competitive internationally, while working with developed countries to assist in establishing more stringent labour and environmental standards, thereby preventing either one of the countries from being exploited. Governments are also promoting high quality education in order to ensure that the younger generations can meet up to the fast-rapid growth of globalization. Government policies have also encouraged governments and other organizations to form strategic alliances with other countries.

#### IV. MARKET DRIVERS

The opportunity to operate in new domestic markets is also major driver of globalization. Organizations are working effectively and efficiently to meet the needs and demands of consumers in the new market. As a result of rapid globalization, many consumers are now emerging owing to the high rate of awareness of a product by converging the desires and lifestyles of consumers. Consumers now have choice of preference, a situation where the same products are available to a consumer at different prices and quality.

The market drivers also depend on the behaviour of consumers towards certain products. Market drivers have increased the rate at which organizations operate, thereby increasing their profits while achieving organizational goals.

Organizations are open to new threats, weaknesses, opportunities and strengths through the market drivers when a particular organization ventures into a certain market and takes advantage of the opportunities in that market, creating a distinguished market niche.

Organizations which are influenced by market drivers can easily build a global marketing mix in a certain situation where products, price, place and promotions are geared towards the specific needs of the country in which such organizations are operating as shown in Figure 2.1. Organizations need to understand the market in which they operate, have knowledge on how such markets are operated, know the rules and regulations on how to operate adequately in such markets, and understand the system of operations. They must be able to identify their target market and should be attentive to how consumers react to certain products by gathering relevant feedback from suppliers and consumers.

## V. COST DRIVERS

Organizations are using the strategy of rendering services and delivering products at a lower cost in order to create customer loyalty. According to Hultman et al. (2002), affordability through low cost is at the core of any organization's business idea. Hamilton & Webster (2009) posit that any organization seeks a competitive advantage in its environment. The rate at which technology is accelerating has also affected globalization, and the cost of business as seen in Figure 2.1. Organizations must be aware of the cost of sourcing in different countries because sourcing efficiency and cost differs from country to country, and an organization that is aware of this can take advantage of the facts.

Organizations are under pressure either by consumers, who will rather buy alternative products at a lower cost or by competitors, to reduce cost of products; therefore, organizations have shifted sourcing from local suppliers to low-cost country-based suppliers in order to meet up with demands.

The following are examples of cost drivers:

- Exchange rate: Organizations that operate in a global market must experience currency fluctuation because most countries operate based on their own currency which may not

be equivalent to that with which the organization is operating. Therefore, the cost of changing currency from dollars to euros or from dollars to naira.

- **Tariff and non-tariff:** Countries are now putting barriers in place to free and easy flow of goods and services. Products can no longer flow freely among countries. Governments are now using tariff and taxes to establish discrimination in the global markets. In recent times, tariffs have been declining globally as a result of multilateral, region and bilateral trade liberation. For example, the current USA president has introduced a new tariff on Chinese imports, while China also retaliated by announcing a tariff on US imported goods such as steel and pork. Such decisions can affect the cost of goods which in return affect globalization.

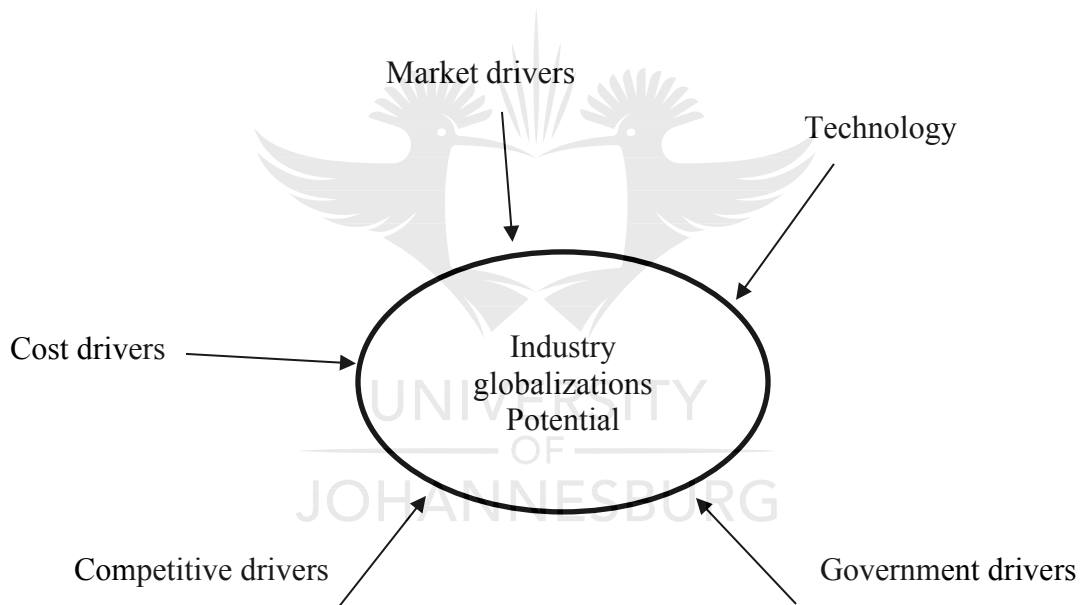


Figure 2.1: Drivers of globalization

Source: Hultman et al., 2012: Global Sourcing Development

### 2.1.2 IMPORTANCE OF GLOBALIZATION

Globalization is known as the expansion of local economies and businesses into a broader international market place (Ferguson & Mansbach, 2012). Most countries have benefited from globalization because the economies of the world are linking up through the expansion of

international trade in services and also in primary and manufactured goods. The process of linking economies has been made possible through the use of portfolio investments like international loans, purchase of stocks and through direct foreign investment, particularly in organizations like Procter and Gamble which is a multinational organization. Recently multinational organizations operating in a global market are selling their products to consumers in other parts of the world, which reflect little or no difference to the home products. Some even go as far as establishing production plants in the foreign country for economic purposes because sending finished products would be expensive and unaffordable (Scholte, 2000).

- **Diverse population:** The world has become diverse; business trends have become broader, as people are migrating from various countries around the world. Consumers migrating are spreading feedback and testimony about satisfied products, perspectives and customs. Loyal consumers who have migrated to another country but are still willing to retain and buy products that they are familiar with foster the importance of globalization to organizations in order to retain such loyal consumers. Organizations are now moving toward countries with new and open markets to penetrate their population, thereby creating a market niche. For example, Procter and Gamble are moving their market and products to Asian countries who record high populations which indicate more demands and more consumers (Mckinsey Global Institute, 2015).
- **Competition:** Organizations are now moving towards global markets in order to remain relevant; thereby the need to compete in such an environment arises. For an organization to retain its position in the market even if they want to avoid the globalization movement, the need to compete will foster globalization. If the competitors of such organizations expand globally, the organizations will also need to follow suit in order to survive in the business environment (Scholte, 2000).
- **Economic development:** Globalization has also fostered economic development in various countries. The rate at which organizations are operating in a particular country has further increased the income of such a country. The standard of living in such a country will also be affected positively by globalization, which will further encourage more investors into such a country. The development can either be qualitative or quantitative in nature. Economic development will further encourage freedom and quality



education and reduce corruption, increase life expectancy rates while reducing adult literacy, increasing job opportunities and the support of innovation. Economic development in a country will also create greater attention to cultural and human values.

- **Improving the democratic space and human rights:** Globalization is important because it has been used as a process of improving democratic space and human rights. Globalization has indirectly and directly pressured governments to operate an effective, open and accountable public administration while strengthening the capacity of the media. Globalizations has also fostered countries to practice a sustainable capacity to administer and carry out free and fair elections while increasing the participation of women in politics (Asongu, 2014).
- **Fostering peace and stability:** Globalization is important in today's business world because the effect of globalization can influence governments positively. Countries are now making efforts and laws to ensure that they are a peaceful and stable environment for investors. Globalization is essential to peace and stability, and hence to governance (Asongu, 2014). Globalization can further stimulate intra-ethnic competition in a particular country for scarce resources. In the cultural aspect, globalization easily spreads new ideas, innovations, technology, tools, attitudes, and social networks, which have direct impact on the peace and stability of a country.
- **Multinational corporations and foreign investment:** Globalization is important while multinational corporations and foreign investment are the key forces in globalization. Multinational corporations (MNCs) are those organizations that have embraced globalization. These are the influencers of globalization while foreign investment or investors are also influencers of globalization, but they may not necessarily be manufactures of products and services. MNCs are the major key channels of globalization; they are the strength of the global value chain, which links and organizes production across countries while exchanging capital, goods services and knowledge across countries. Foreign investment (FI) is a necessary evil for the creation of MNC, therefore the need for reliable and higher quality of foreign investment statistics are vital for policy making and globalization tracking (Asongu, 2014).

- **Ability to outsource talent:** Organizations are now presented with a wider range of skilled workers. Outsourcing of talent has offered more reliable strategic solutions to easing production cycle pressures, while in the process it has also helped the organization to respond to increasing competition through the leverage of expertise. Organizations are effectively using outsourcing of accelerating innovation, thereby increasing business efficiency. Organizations have recognized the need to streamline the supply chain and accessibility to specialist knowledge and equipment (Keely et al., 2001).

### 2.1.3 CHALLENGES OF GLOBALIZATION

Globalization has been defined as the process of interaction through technological innovation combined with global influence (Ferguson & Mansbach, 2012). Globalization as a universal trend affects every nerve of the organization: the effects are felt from the human resource management to logistic management and marketing, among others. Expansion of international market in recent times has been attributed to the increase in the integration of national economies. Thus, globalization is important and has helped shaping the business environment. However, is also faced with challenges such as the following:

- **Ethical business practices:** One major challenge of globalization for organizations in today's environment is the practice of ethics within a particular country (Belk, 2000). For example, HnM faced a racist backlash when a hoodie surfaced online with a printing coolest monkey in the jungle on a black kid. Such a campaign brought about a crisis in South Africa (SA), which led to protests and vandalism of some stores in SA. The organization had to shut down most outlets within the affected locations and tender an apology to the people. Most challenges are mostly encountered in the area of labour, product safety and security, environmental stewardship, corruption and regulatory compliance. In some countries without strong laws backing business, bribing and corruptions are often practiced by officials who are meant to control the operations of organizations. Due national and international laws are put in place to crack down on existing corrupt practices, but some organizations are pressured to get along with locally accepted practices. Most MNCs understand the need to maintain ethical standards while operating in any country (Braman & Statan, 2000).

- **Organizational structure:** The ability to incorporate new regions efficiently and effectively within the value chain and corporate structure is another major challenge of globalization (Calitz, 2002). Capital investment is required for international expansion along with development of specific strategic units (SBUs). Organizations are now dealing with cultural diversity, which in return can affect the organizations structure. Culture, religion, and ethnic diversity in the present operations of global business have also impacted challenges on globalization because organizations need to train and employ personnel with knowledge of the environment in order to protect their organization from future crises, while also protecting employees from discrimination. Globalization can further challenge an organization's structure if the management of such organizations are not fully equipped or ready to operate in a global market. Globalization can further challenge organizations by affecting the planning strategy of such organization, while affecting the leadership strategies.
- Some organizations will need to employ a global manager to effectively manage the operations within such countries in order to remain competitive globally. A manager needs to be sensitive to different cultures, with interpersonal and efficient communication skills while having a geocentric mindset.
- **Public relations:** The image and branding of an organization in a global market are a critical component of an organization. How consumers perceive and accept a brand is a major challenge of globalization. An organization that is successful in a particular country with a certain image and branding must not assume the same will happen in another country. For example, in the case of Toyota Power Windows, the Toyota car manufacturing company had to recall over 6.5 million cars on October 12 2015, based on the power windows, for which the company explained that workers had used inconsistent lubricants on some cars windows, creating the possibility that such window power switches could short circuit, overheat and cause fire. Such action affected the branding and image of Toyota and the cost of recalling the products, loss of loyal customers and the global affect will cast a stain on the organization. Organizations must also have a wide range of cultural knowledge that will allow such organizations to easily determine their target audience.

- **Leadership:** For an organization to face certain global challenges its leadership must be taken into consideration. Sometimes it becomes difficult for organizations to find and hire effective organizational leadership with the appropriate required skills and knowledge to approach a given geographic market successfully. According to Adamson et al. (2004), managers must display skills of strong business knowledge, must be aware of and sensitive to cultural differences, standards and most show courage, commitment and integrity. They further state that anyone can be a leader, but a leader with a great sense of work ethic is required for organization's competitive advantage because managing a larger group of diversity will pose such challenges if not fully equipped with the required skills. For an organization to achieve and retain its position in a global market, hiring an attractive and talented manager with adequate intercultural competence is a vital step in developing an effective and efficient global strategy.
- **Legal and regulatory structure:** Organizations encounter global challenges of legal and regulatory structure, because every country operates according to its unique laws and regulations. MNCs should ensure they have access to the required and adequate expertise, which will render the services of obeying the laws in the country and complying with regulations. It is important that organizations operating in a certain country understand the legal and regulatory climate in which they operate, and the laws regarding the products and services they intend to render before entering into the market. Adequate information about the laws and regulation of a certain country can favor the organization's business and its strategic decision-making process while understanding how and where to expand globally, as well as enabling strategic and operational planning in order to ensure profitability, thereby achieving organizational goals. Human rights laws have always had a central role in the international laws in areas such as cultural rights, environmental rights, minority rights, and data and privacy protection. While countering terrorism, access to justice and the interface between human rights laws and international humanitarian law, particularly in the changing nature of armed conflicts, organizations most adhere to all laws governing business locally and internationally. Technology has also impacted the enjoyment of human rights either positively or

negatively; now organization can easily gather information of consumers illegally through social media (Dinstein, 2004).

- **Infrastructure:** For organizations operating in a developing country, they can encounter the challenges of adequate infrastructure globally for effective operations. Infrastructure has been recognized as a major ingredient in a country's economic success. Infrastructure can affect the globalization of an organization because it is a necessary condition for achieving higher globalization while reducing the effects of poverty. Investors are easily attracted to countries with ready-to-use infrastructure to reduce cost and time. Adequate infrastructure in a particular country such as good roads, bridges in the case of logistics, well-equipped international airports and sea ports, as well as hospitals will help organizations determine the ease of doing business within that organization. Organizational structures can also be included such as a stable government, property rights, a judicial system, banking and financial systems, and basic social amenities which will all foster the growth of globalization. Additional cost will be shouldered by the organization in countries with poor infrastructure, which will make the operations of the organization difficult and slow.

#### 2.1.4 ADVANTAGES AND DISADVANTAGES OF GLOBALIZATION

In recent years, one major factor that has rapidly increased the world economies is globalization, though in the present environment it cannot ensure the achievement of worldwide economic equilibrium, stability or environmental security. However, its advantages are in immense capabilities which have impacted the trading development and also created access to new market for organization.

The following are the advantages of globalization:

- **Market opportunities:** Globalization has increased the rate of various opportunities to countries and organizations in different sectors. Poor or under-developed countries are also enjoying the opportunities opened up by globalization owing to access to new technology, direct investment, lower cost of quality goods and high mobility of all production factors. Globalization further increased the rate at which immigration is handled in various countries; owing to globalization information on visas and other means of immigration is easily accessible. Globalization has made it easier for smaller

organizations to operate in a global market while benefiting from higher sales, improved efficiency and reduced cost (Anderson & Kovacic, 2009). Technology has also given smaller organizations the ability to compete and operate in a global market. Globalization has further fostered the means of organizations' partnering with foreign organizations while seeking outside advice with availability of required resources.

- **Job opportunities:** Globalization has increased the need for skilled personnel. Organizations are now using the qualifications and skills of their employees as a means of competitive advantage, therefore individual with the necessary and required skills are given the opportunity to be employed. Globalization has also fostered the eradication of poverty in some countries and reduced the rate of child labour, while increasing the rate of literacy (Lanza et al., 2009). Foreign MNC tends to pay better wages generally to their personnel which is also an added advantage for skilled individuals in such countries.
- **Standard of living:** Countries that embrace and encourage globalization have benefited by growing fast economically and socially, thereby increasing the standard of living of their citizens. Through effective globalization countries have experienced tremendous changes like technology and a high rate of immigration, therefore reducing product monopoly. Globalization has now increased the number of efficient marketers giving citizens a choice of variety. It has also increased the security stability of some countries, which has now improved the standard of living by reducing the rate of crime (Lanza et al., 2009).
- **Economic development:** Globalization has provided net benefits to individual economies around the world in which it has operated by enabling more efficient and single markets, increasing the market competition, limiting military conflicts and spreading wealth. Globalization fostered the growth of technology and innovation, encouraged foreign direct investment (FDI), and increased the rate of interdependence, the equity of distribution and national sovereignty (Anderton & Carter, 2001).
- **Peace and stability:** Globalization are important in today's business world because the effect of globalization can influence governments positively. Countries are now making efforts and laws to ensure that they are a peaceful and stable environment for investors. The recent global process towards advancing the United Nations Development Agenda

beyond 2015 has further increased the understanding and knowledge of interdependence among development, peace and stability and human rights (Anderton & Carter, 2001). The open working group (OWG) has proposed 17 sustainable development goals (SDGs) to promote peaceful and inclusive societies for adequate development.

The following are the disadvantages of globalization:

- **Western dominance:** Globalization has indirectly given some countries domination over others because the western developed world still has a stronghold that controls the international order and how capital flows from one country to another.
- **Loss of cultural identity:** In some countries such as Nigeria, many youths have abandoned their cultural heritage to embrace the western world. The change has also affected the mode of dressing and addressing one another. For example, the Yorubas in the 60s and 70s would always prostrate themselves to greet their elders and parents. However, in the present day, it is difficult to see this among the youth; the lifestyles of the western world have taken over the culture of many countries.
- **Unbalanced distribution of benefits:** One of the major disadvantages of globalization is that gains are not distributed equally both between and within countries. Income inequality is also accelerating, and insecurity is increasing especially for unskilled labour. In some countries even the skilled immigrants are finding it difficult to have job security. The citizens that reside in the urban areas are most affected when the prices of food are increased, but usually gain from employment in export industries.
- **Increased rate of corruption:** In some parts of the world where strong business laws are not in existence, the rate of corruption has increased. People now smuggle contraband goods into the country without any regulatory body to crack down on such activities. The rate at which money laundering is being operated through globalization is alarming. For example, in Nigeria some government officials will use money meant for the masses to acquire private homes in a destination country in the pretense that is for the state or for government purposes.
- **Exploitation of developing country:** globalization has increased the rate at which MNC and government are stealing from a country unnoticed, through unrecorded capital flights or documentation or shifting profits illegally. Some MNC make huge income from a

developing country, then in return repatriate back home, using such income to develop its own country more. Some MNC report voice prices on their trade invoices in order to move money out of developing countries, a practice known as trade Mis-invoicing usually the goal is to evade taxes but some time it is also a means of money laundry.

## **2.2 LOGISTICS**

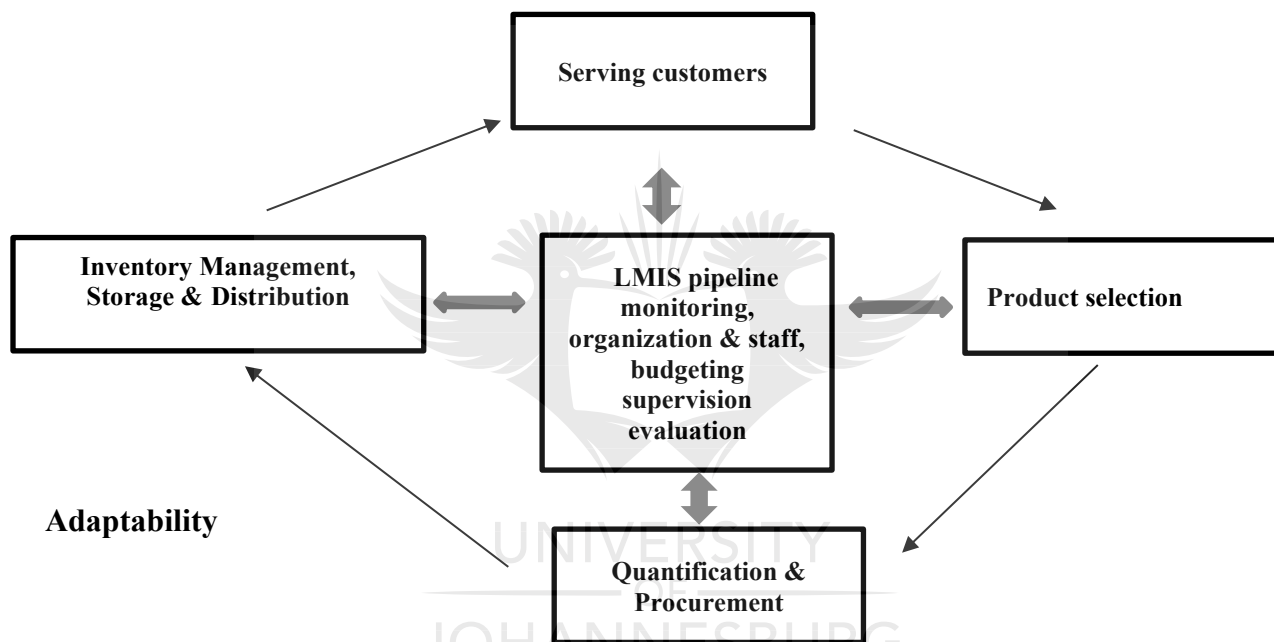
Logistics is a scientific aspect that has to do with procuring, maintaining and transporting material, personnel and facilities from a destination to another. The etymology of the word 'logistic' in the Greek language means speech, word, reason, oration, ratio and calculation." For an organization to compete in a global economy, an efficient logistic management is considered as a strategic priority. Logistics as a process is seen or defined by individuals differently based on what perception or function is required by such individuals. The importance of distribution has fostered organizations involving in logistics, but they define in different ways. Some qualify it as procurement and supply, supply chain management, or demand chain management.

Logistics as a process is dynamic in nature; its functions are required to be flexible and change based on environmental constraints faced by the organization and the nature of demands imposed upon it in respect of the environment in which the organization operates. It is a process that involves materials, either raw or finished ones; management, either internally or externally; and distributions as shown in Figure 2.2. These aspects indicate that supply chain covers a larger and broader scope in organizations which includes the supply of raw materials for productions and delivery of finished products to the final consumer (Robinson, 2012). As seen in Figure 2.2, Logistics activities can also be considered as the operational component of supply chain management which includes procurement, inventory management, transportation and data collection and reporting (Hamilton & Webster, 2009). Supply chain management, which is often replaced with logistics, is a process that includes all logistics activities which involve the coordination and collaboration of employees, operational branches, and functions. Logistics, on the other hand, tends to focus more on usually specific tasks within a given organization (Ramazani & Allahyari, 2013).



The aims and goals of every organization operating in a global market are not just making sure that products get to their final destination, but to ensure that every consumer has commodity security (Steger, 2009). Consumers experience commodity security when each consumer is willing and able to obtain products at any given time, while using the products, and in return express satisfaction. An effective logistics system is concerned about commodity security, ensuring that final products are delivered in a good and acceptable condition, and at the expected time.

### Policy



### Adaptability

Figure 2.2: Logistic cycle

Source: Angulo et al., 2004: Supply chain information sharing in a vendor managed inventory partnership

More activities in the logistic cycle include the following:

- Serving customers
- Quantification
- Procurement
- Product selection
- Inventory management storage and distribution.

### **2.3 LOGISTICS MANAGEMENT**

Logistics management is the planning, implementation and control of the efficient, effective forward and reverse flow and storage of goods, services and related information between the point of origin and the point of consumption in order to meet customer requirements which was defined by the Council of Supply Chain Management Professionals (CSCMP). Logistic management must implement a fine-tuned logistic strategy because the supply chain is constantly changing and so are the logistic processes (Ahmer, 2013). Once an organization can develop and implement a formal logistic strategy, such a strategy will add flexibility to the decision-making process. Such a strategy enables the organization to predict service disruptions, thereby empowering the organization to ensure that services are at a peak level. For the success of logistics management (LM), the process requires heavy emphasis on activities of integration, cooperation, coordination and information sharing throughout the supply chain, from suppliers to final customers (Kurihara, 2013). For organizations to respond to the challenges of integration, modern businesses need sophisticated decision support systems (DSSs), which can be based on business mathematical models and solution techniques, together with advanced information and communication technology. In recent times owing to the advancement of innovation and technology, computer-based logistics systems can make a significant impact on the decision process in an organization.

Logistics management is a process that has taken inter-organizational boundaries and used these terms interchangeably while supply chain management is a set of approaches utilized to efficiently integrated supplier, manufactures, warehouse, and stores so that merchandise is produced and distributed in the right quantities, to the right location, and at the right time in order to minimize system-wide cost while satisfying services level requirement (Simchi-Levi et al., 2000). Logistics management is a strategy based on formation, planning, material flow control, warehousing, inventory, work in progress, finished goods and adequate information from the stage of obtaining raw materials to the stage of consumption, to meet the needs of customer satisfaction. Logistics management can be defined as that part of supply chain management that plans, implements and controls the efficient, effective forward and reverse flow and storage of goods, services and related information between the point of origin and the point of consumption in order to meet customers' requirement (Pesut, 2009).

### **2.3.1 MANAGEMENT**

Management is an act of getting things done through the effort of others. Managers are those who ensure the achieving of organizational goals productively, with and through others, clearly disseminating responsibilities for execution through the four fundamental management skills (Boxall, 2013). Management has to do with directing, controlling, planning, disseminating or overseeing organization, events, ideas or good and services. This is a very important aspect of any organization for efficient and effective attainment of organizational goals.

Management, according to Drucker (2003), is a creative and systematic flow of knowledge that can be applied to achieve quality results by using humans as well as other resources in an effective way. As per Sidikova (2011), change is what takes us out of our comfort zone and it is inevitable; organization should be flexible to change both externally and internally. Change comes in an organization in many forms; in a global market change is consistent, management should be willing to adjust to environmental changes at every possible time. Technology introduction and aging boomer populations are all factors that can affect management (Kute & Upadhyay, 2014). Management will go through tremendous change in order to grow and expand while competing in a global market. Asghar (2010) states that rapid development in technology advancement, high expectations of customers and ever-changing market situations have compelled organizations to constantly reassess and reevaluate how they operate and to understand, adopt and implement changes in their organizational model in response to global changing trends. Effective management is a strategic resource to gain sustainable competitive advantage in this age of globalization. In the hope of extracting the greatest value from innovation, organizations have adjusted their management structures (Ndahiro et al., 2015). Work processes and the cultural use of information technology is now shifting from a supportive role to a more strategically oriented role in organizations (Orlikowski, 2006). As per Olubayo (2014), management builds and rebuilds their existing IT systems in response to needs and market change to enable them to compete globally. Management need to ensure that well trained, skillful and efficient staff are employed in the organization.

## **2.3.2 LOGISTICS MANAGER**

Managers are those who ensure the achievement of organizational goals productively, with and through others, clearly disseminating responsibilities for execution through the four fundamental management skills (Boxall, 2013). To effectively manage employees, a manager needs to comprehend the rights of management. If a manager has a direct relationship with the employees, it places the manager in a special position of getting facts and giving adequate reports of such employees without bias.

Logistics managers are those personnel that are in charge of planning, how to get products that are required for shipment while forecasting the best and most efficient means of transporting those goods. A logistics manager can also be seen as one who is in charge of a supply chain, warehousing and storage of products that are managed by them.

### **2.3.2.1 ROLES OF LOGISTICS MANAGER**

The roles of the logistics manager can differ from one organization to another, depending on the internal organizational structure, the type of communication channel, the products and services rendered and the profiles of consumers to whom such services are rendered.

The following are the roles of logistics manager:

- Logistic managers are usually tasked with the role of resolving issues or challenges that arise in the course of operations, such as weather delays, theft and damage, or geopolitical situations;
- Managers communicate and convey the desires and organizational expectations to the employees;
- Managers arrange and distribute assets, delegating duties to employees;
- They develop operating strategies, plans and procedures;
- They are responsible for maintaining safety in the workplace;
- Logistics managers prepare strategic plans for the organization;
- They lead and design, create, configure the parameter setting of the entire supply chain;
- They create frameworks and dialogues that determine performance targets along the supply chain;
- They are responsible for driving systems and monitoring the reports of the entire logistic operations against target market; and

- Logistics managers investigate conceivable outcomes of organizational progression and employ the right approach, initiating diverse programmes and encouraging employees to make necessary contributions. Sometimes they play the human resource role by hiring and firing employees, depending on necessity (Stephen, 2001).

### **2.3.3 SYSTEM THEORY OF LOGISTICS**

According to Harrington (2002), logistics is the way of achieving total performance of an organization business by integrating some effective logistics management activities that are performed together to attain lower cost.

Baker & Cannesa (2009) reiterated that organizations will understand that a functional logistics system is all about organizing the establishment because the total results of all the system is bigger than its individual bits. It must pinpoint various cost arrangements that an organization can adopt in order to secure a beneficial logistics structure as a whole. The dynamics logistics capabilities are a firm's means to unite, strengthen and rearrange its internal and external skill to address the fast-growing environment. Teece et al. (1997) determined the correlation of logistics management to an organization's logistics capabilities or potential by showing that the performance of firms is related to dynamic logistics capabilities, important valuable factors in logistics capabilities which are viable in competitive advantage and must be met. It must be established from the firm's operational and dynamic abilities, and they must be combined to attain the firm higher-level achievement (Barnley & Clark, 2007; Abrahamson & Mat, 2011).

### **2.3.4 LOGISTICS MANAGEMENT PRACTICES AND FIRM PERFORMANCE**

Supply chain management enables all firms to procure, store, and deliver goods through productive and functional logistics management in logistics practices that enable the goods transportation from the initial place to the final point (Lysons & Farrington, 2013). Logistics practices in business activities contribute to achieving utmost customer service at the least possible cost, enable topmost goods quality, and offer ease in the market modification. In a manufacturing setting, logistics is used to move merchandise, to assist a market development

philosophy with a low lead time, and to achieve a better execution of a production front. Logistics operation through market strategies enables the concept of having the right merchandise at the right destination combined with the right marketing in the right place, and all show the way to customer satisfaction (Pienaar & Vogt, 2006).

It means that logistics management practice boosts a firm's performance and promotes a firm's value by satisfying of customers' needs, minimal cost in supply, and reduction of profitless inventory. Sandberg & Abrahamson (2011) argue that logistics chain operational and functional activities remain between the marketing task and the production role and perform a subsidiary role of firm tactics that lead towards higher performance. Therefore, logistics chain practices form a broad logistics activity which extend from the raw materials to the final consumer and output enabling tools. Firms' higher-level performance can be achieved by positioning its lead logistics practices with business tactics and measure against fixed performance intention (Keebler & Durtsche, 2001).

### **2.3.5 CHALLENGES OF LOGISTICS MANAGEMENT PRACTICES**

A study by Vogt and Pienaar (2006) mentioned the challenges imposed on firms such as how logistics combine with the production and outcome of the market to achieve the firm's target. The description of the market means selling and manufacturing something, and it comprises of the schedule of manufacturing, schedule of demand, and functionality of the two functions. Therefore, manufacturing and market outcomes are in the form of expanding revenue against lowering cost. Hence, for a firm to be profitable, it must eradicate a lot of waste in the logistics system which brings about the excessive rise in price of goods, and production costs in general administration. The World Bank Group (2014) reiterated some firms logistics practices that are experiencing difficulties while bringing products and services to end customers. Logistics performance can be enhanced by reforming relevant agencies involved in logistics and creating investment in logistics substructure. According to Wisner, Tan & Leong (2011), the level of customer satisfaction is decided by the measure of customer service, disagreement faced and how to avoid a recurrence, the technique of providing the exact commodity, in the exact volume, in the exact shape, at the precise setting, at the exact time, for the precise customer and at the exact price. Therefore, logistics management endeavors must entail customer satisfaction when

bringing products and services to the customers. However, it poses considerable challenges for firms.

### **2.3.6 EMPIRICAL REVIEW**

Rushton, Alan, Croucher, Phil, Baker & Peter (2014) reiterated how poor logistics management can affect several strategies and activities in a business. The study revealed that bad logistics management leads to increasing running costs and a decline in customer service. However, Wisner et al. (2011) mentioned that for the supply chain system to continue producing, costs/price management and restraint must be a current concern while consumers must cope with the products and services they are procuring.

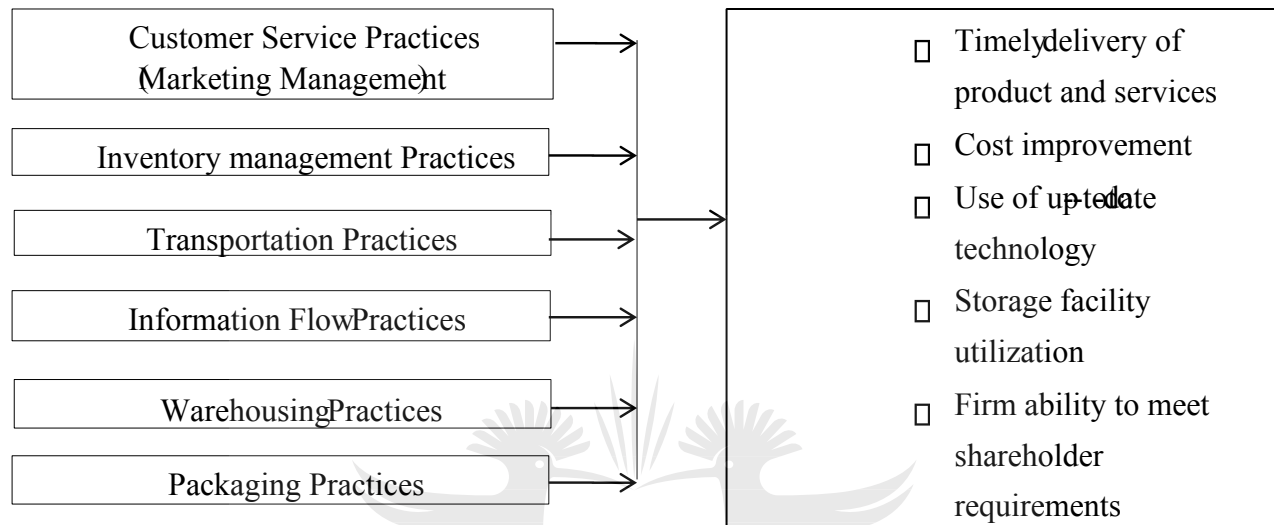
Therefore, Olavarrieta & Ellinger (2004) argued in their finding that an organization must merge its supply resources and organizational learning to obtain a superior advantage in its performance. They further mentioned that organizations must possess flexibility, sustainable competitive advantage and strength to survive and succeed in this present unsettled and active market place. Bailey, Lisa, Sugden & Wilson (2005) further highlighted that incessant global competition is altering the environment and keeping up with the trend is the problem facing most companies today. The study reiterated that a fewer limitations in trade barriers leads to a reduction in the costs of transactions. In the reaction to this increased competitive pressure, domestic companies are forced to upgrade their performance to cutting-edge processes and product enhancement.

As described by the Japan Institute of Logistics System (2011), logistics is a form of management strategy that enhances organizations' superior performance and means to gain profits with a reduced cost of production. The logistics system enables organizations and firms to boost their performance edge around some practices such as a very high level of customer responsiveness. Onyango et al. (2009) reiterated the effect of structural adjustment which is directed to energy, water, transport and the ICT sector. The aim is to establish competitiveness in commercial segments of energy and crude oil in order to entice private sector financing. The result shows that liberalization has helped the crude oil industry in attracting a number of outcomes in the form of increased operational efficiency, advancement in the standardization of goods, and high pricing. The conceptual framework of logistics management practices in firm

performance which highlights the independent variables and dependent variables is shown in Figure 2.3.

Independent Variables

Dependent Variable



Source: Adopted from Mwangangi (2016) with modification

Figure 2.3: Conceptual framework

### 2.3.7 IMPORTANCE OF LOGISTICS MANAGEMENT

. Logistics management is important because it involves the process of different factors such as transportation management, freight and inventory management, material handling and other activities.

The following are the importance of logistic management in an organization:

- Logistic management is important in an organization because it grants access to special information pertaining to the consumers and the organization.
- It is an easy means of collaboration between organizations, like a link between two organization or countries
- Logistic management helps the organization to improve productivity when the need arises, based on the data generated.



- Logistic management is the process that grants or facilitates access to suppliers and consumers at a given time
- Logistic management also handles the process of contacting with supporting institutions.
- Logistic management also enables organizations to have easier access to public resources.
- Logistic management is a simpler method that can be utilized by organizations to benchmark (Rahman, 2011).

### **2.3.8 CHALLENGES OF LOGISTICS MANAGEMENT**

Logistics as a process is dynamic in nature; its functions are required to be flexible and change based on environmental constraints faced by the organization and the nature of demands imposed upon it in respect of the environment in which such an organization operates. It is a process that involves materials, either raw or finished ones, management either internally or externally, and distributions. The challenges of logistic management can be seen as logistic integration, facility location and network design, transportation and vehicle routing, material handling and order picking, customer services, product design, logistic of production and operation, warehouse management and distribution and organizational structure.

An effective organization's logistic management needs to identify the challenges facing the operation of that organization. For an organization to be successful, it has to know its strength, weakness, opportunities and threats (SWOT).

### **2.3.9 ACTIVITIES OR FUNCTIONS OF LOGISTICS MANAGEMENT**

The transportation management, distribution management, management of third-party logistics (3PLs) are identified as logistics activities and their management is vital to the supply chain execution and the organizations as well (Rahman, 2011). According to Yildirim (2009), transport logistics is an indispensable and important part of the process of economic competitiveness that ensures important distribution for manufacturing, as well as effective and efficient transport which connects businesses to global markets.

Hence, the functions of logistic management can be categorized as the following:

1. Inventory management
  - a) Raw materials and finished goods stocking policies
  - b) Short term sales forecasting

- c) Product mix at stocking point
  - d) Number, size and location at stocking point
  - e) Just in time push and pull strategies.
2. Alliance between customer service and marketing
- a) To determine customer needs and wants for logistic services
  - b) To determine customers responses to services
  - c) To set customer service levels
3. Transportation
- a) Mode and transport service selection
  - b) Freight consolidation
  - c) Carrier routing
  - d) Vehicle scheduling
  - e) Equipment selection
  - f) Claims processing
  - g) Rate auditing
4. Information flow and order processing
- a) Sales order – inventory interface procedures
  - b) Order information transmittal method
  - c) Order rules (Rahman, 2011).

## **2.4 INTERNATIONAL LOGISTICS**

A company's continued existence may rely upon how effectively it taps into the global marketplace. Today, organizations must contend in an array of areas and markets. Organizations must facilitate the endeavors of different business units with a specific end goal to meet their general vital targets. The present game of global strategy appears to be progressively a session of coordination, gifting dispersed production spaces, R&D labs, and marketing activities to genuinely cooperate (Bocken et al., 2014). Two specific regions of activity that have seen sensational development are that of worldwide sourcing of raw materials, parts and semi-finished products, and in the dispersion of completed merchandise. One study of Fortune 500

multinational organizations demonstrated that 64% source crude materials and 72% source completed merchandise came from foreign sources (Buckley & Casson, 2016). This accentuation on fundamental logistics has incited a lot of research (Bowersox et al., 2010). Logistics is the way toward moving, storing and handling materials, modules and finished products, and related information from the starting point to the point of utilization in a way that meets or surpasses the client's prerequisites for least add up to cost. Its major sub-components are transportation, inventory drafting and administration, warehousing, taking care of materials management, and logistics information frameworks. In a few industries, the aggregate cost of these logistics operations constitutes the single most expenditure of operations (Rimienė & Grundey, 2007). The definition of logistics is exceptionally wide. It is simple to see that logistics affects each part of a firm. Along these lines, it would be straightforward to characterize logistics as tactically vital to an organization. Indeed, in a benchmarking study, it was discovered that leading firms in Nigeria such as P&G, Unilever, PZ Cussons, Nestle, 7up, Nigerian Bottling Company (NBC), Nigeria Brewery, DHL, FedEx and Fan Milk see logistics as having key import (Bowersox & Daugherty, 1987; Meredith & Mantel, 2011).

Traditionally, the logistics operation of an organization was taken care of locally. Nevertheless, Bartlett and Ghoshal (1987) have demonstrated that in a worldwide economy, manufacturing and distribution are not done in a solitary area. However, logistics prerequisites can vary significantly as an organization moves from a domestic (i.e. US) market to a global one. Table 2.1 surveys a portion of these (Zucchella, 2001). While the information framework of the supply chain can be, at any rate in western nations, generally effectively managed, the spryness of the physical supply chain remains an issue. While research exists that accords with general logistics intricacy issues, the results of that exploration are not generally straightforwardly pertinent to arranging a vigorous international store network. In this manner a gap exists between the objectives of supply chain dexterity and the realities of a company's outer vulnerabilities.

**Table 2.1: Domestic vs international logistics**

FEATURE	DOMESTIC	INTERNATIONAL
Cost	Some 10.5% of US gross national product with a goal of under 10% by 2000	Some 16% of GNP, with total global expenditures likely to climb to \$2 trillion b 2000

Transport mode	Predominantly truck and rail	Predominantly ocean and air, with significant intermodal active
Inventories	Lower levels because of short order lead-time requirements and improved transport activities	Higher levels because of longer lead times and greater demand and transit uncertain
Agents	Modest use-mostly in rail	Heavy reliance on forwarders, consolidators, and customers brokers
Financial risk	Minimal	High because of differences in currencies, varying inflation and little recourse for default
Trade policies	None	Heavy influence of public policy in matters of domestic content, currency control, quotas and the like
Cargo risk	Minimal	High because of longer and more difficult transit and cargo handling, and varying levels of infrastructure development
Government agencies	Primary involvement in hazardous materials, weight, safety laws, and some tariff requirements	Participation by many agencies in customs, commerce, agriculture, and transportation
Administration	Minimal documentation requirements: purchase orders, bills of lading, and invoices	Significant paperwork (US Department of Commerce estimate of the paperwork cost of an average shipment=\$250)

Communication	Ability to rely on voice- and paper-based systems; growing use of electronic interchange	Need to look beyond costly, often ineffective voice and paper systems; movement toward electronic data interchange; need to adopt common standards
Cultural differences	Relative homogeneity, requiring little product modification from market to market	Numerous cultural differences, requiring significant product adaptation in various markets

Source: (Prater, 2000)

Table 2.1 shows the domestic versus international logistics specifically. Past research has considered the expenses and troubles of organizing topographically scattered supply chains that are innately less nimble and, in this way, make the firm defenseless against rivalry. The key issue is that the firm's global supply chain is frequently ill-equipped and slow reaction of organizations in reacting to ways of dealing with logistics leave them helpless against change (Sullivan, Barthorpe & Robbins, 2011). The purpose behind this absence of skill is that enthusiasm diminishes with the supply chain's length and many-sided quality. This is because of the more noteworthy many-sided qualities engaged with planning different groups and information streams and additionally the physical elements of transporting merchandise over long distances (Rushton, Croucher & Baker, 2014). This complexity is hard to diminish because of the circumstances that involves many-sided qualities that are often external to the firm. The key issue presented in these case studies is that of operational trade off. These well-to-do firms have acknowledged the realities of the global market place and influenced concessions so as to effectively operate their logistics frameworks.

### 2.4.1 LOGISTICS OUTSOURCING

Outsourcing is another key component in logistics. Generally, organizations built up their own particular inner logistics abilities and extend them as required. Numerous organizations are growing long-haul partnerships or outsourcing agreements to help specific parts of their operations (Porter & Kramer, 2011). This effect is not simply on manufacturing or general operations, but in marketing also (Mathyssens & Van lair Bulte, 1994; Levitt, 1993). According to Bottani & Rizzi (2006), research has likewise demonstrated the process of achieving competing edge in firms willing to outsource their logistical service. Some of the processes includes:

- have a more optimistic approach concerning outsourcing of logistical service;
- place a more prominent emphasis on nature of service and administrative quality while choosing outside service merchant;
- view service provider connections as key unions
- have a more progressive approach toward the decisive potential of incorporated logistics service companies.

Goldsborough (1992) in a research demonstrated that organizations outsource or develop unions for the following reasons:

- To boost budgetary performance by discarding assets;
- To lessen head count and focus on core business;
- To control logistics;
- To increase quantifiable value to merchandise;
- To improve consumer service to open new markets;
- To simplify structures improvement; and
- To pick up the advantage of steady resources

How outsourcing fit into an organization's approach is illustrated in Figure 2.4.

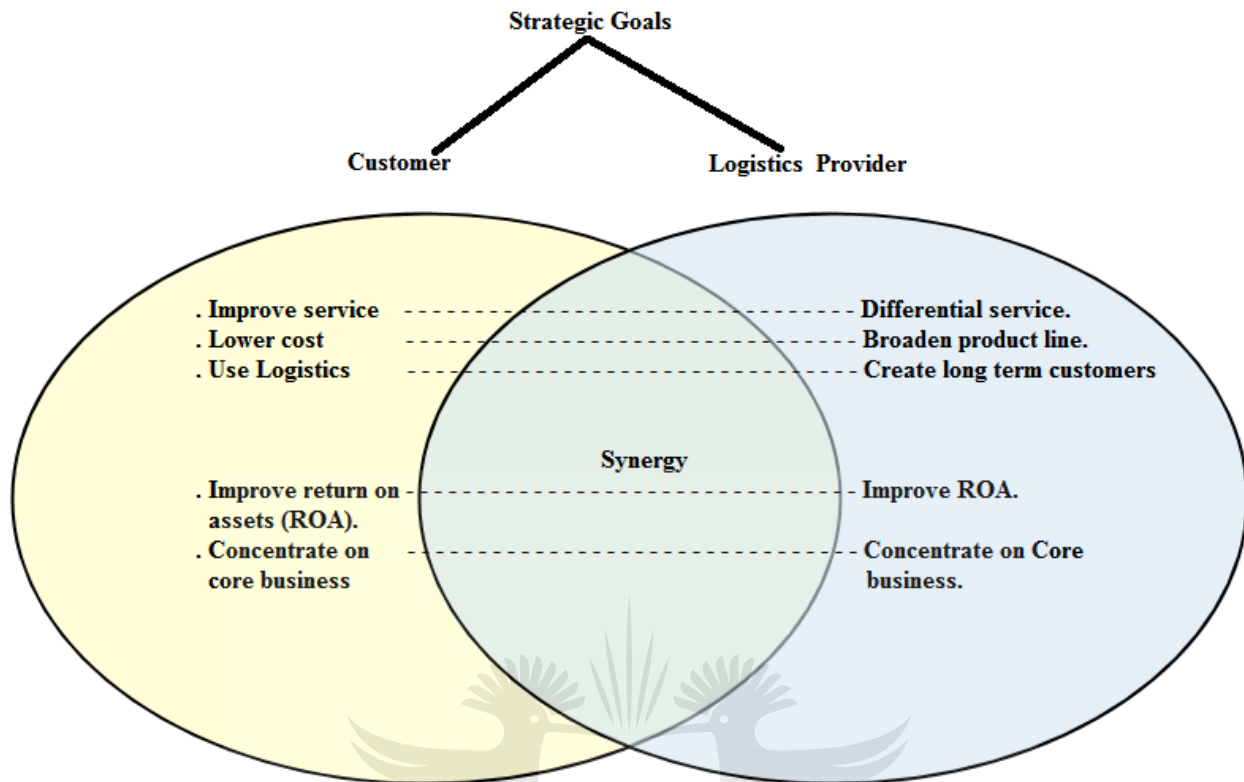


Figure 2.4: Synergy: The essence of outsourcing.

Source: (Prater, 2000)

## 2.5 EFFECTS OF GLOBALIZATION ON LOGISTICS MANAGEMENT

Globalization is known as the expansion of local economies and businesses into a broader, international market place (Ferguson & Mansbach, 2012). Most countries have benefited from globalization because the economies of the world are linking up through the expansion of international trade in services and also in primary and manufactured goods. Logistics management can be defined as that part of the supply chain management that plans, implements and controls the efficient, effective forward and reverse flow and storage of goods, services and related information between the point of origin and the point of consumption in order to meet customers' requirement (Pesut, 2009). The aim of this research is to identify the effects of globalization on logistic management. Globalization and logistics management are inseparable with a complementary relationship: the former emerged owing to the prosperity of the latter, which drives it to a better future. The relationships between the two variables reflect their mutual

support and influence on each other. Globalization of logistics management has a mutual influence in the developing process of an organization. Globalization has impacted logistics management in the process of aiming to produce more international logistical procedures through the decreasing of logistics costs and increasing services standards while improving profits and adding value (Kong, 2010). Logistics management efficiency affects globalization levels through the impact on time cost. Evaluation of globalization behavior and logistic levels has provided evidence for the promotion of international logistics management efficiency by decreasing the lost costs, according to Keane & Feinberg (2007).

Effective logistics management practice has facilitated trade and economic benefits of countries and accelerated the intended development of globalization. As per Asongu (2014), globalization has shown an inverse relationship on logistic management, which indicates the time costs and possibility of trading in a global market, which states that the lower the cost becomes, the higher the possibility of efficient trading, meaning when the cost of logistics is lower, the rate at which organizations will operate in a global market will be higher internationally and locally. Asongu (2014) identified and analyzed data on globalization and logistics from 108 countries and proposed six main factors that can influence international logistics management on a national scale. Such factors are also considered as drivers of globalization on logistics management namely customs efficiency, infrastructure, international shipping, service quality, the ability to track cargos, and punctuality (Chigona & Licker, 2008). There are different factors affecting globalization of logistics management at different levels, therefore there is a clear relationship that exist between globalization and logistics management (Ferguson & Mansbach, 2012).

The impact of globalization on logistics management is strong and essential. It has been felt to the extent that governments are now making policies that are essential for market acceleration. These means that the government cannot change 'manage' national economies, but in order to survive in their office, they have to increase their ability to drive national policies in a way that can be adapted to the pressures of transnational market force. Accurate and effective planning of logistic activities is an important method of realizing both cost and efficiency advantage for countries. According to Chatterjee & Tsai (2002), the importance of logistics in the process of



globalization includes boosting the modernization of economies, followed by the constant reduction of trade costs, tax/tariff structures and the opening of closed economies. Logistics management operations of a country have been an enduring focus for economic development; countries are now building good roads, airports and sea ports to aid the survival of globalization (Thomas & Griffin, 2000). Globalization and its related global activities now require the development of logistic management capabilities, which are supported by both the infrastructure and the managerial aspect (Ho, 2004). Globalization has in recent times imposed more complex, geographical dispersed and flexible supply chains that require adequate and advanced effective logistic management systems.

### **2.5.1 IMPORTANCE OF GLOBALIZATION ON LOGISTICS MANAGEMENT**

The impact of globalization on logistic management is strong and essential; it has been felt to the extent that governments are now making policies that are essential in market acceleration. This means that the government cannot change manage national economies, but that in order to survive in their office, they have to increase their ability to drive national policies in a way that can be adapted to the pressures of transnational market force (Drucker, 2001). The importance of globalization on logistic management cannot be over-emphasized, because without globalization, logistic management will just be an aspect of an organization with little or no impact on the organization (Geiersbach, 2010).

The following has been identified as the importance of globalization on logistic management:

1. Globalization has impacted logistic management in numerous ways but mainly, it has increased the rate of integration with global market and how supply chain operates;
2. Globalization is important in logistic management activities because it has also fostered adequate and efficient use of national transport assets to generate revenue for the country and the organization as a whole;
3. It brought about more competitive exports on goods and services, while lowering the cost of importation;
4. It has adequately increased the level of employment opportunities; and

5. It has also provided countries with frameworks for policy-makers through the identification of key logistic areas for investment of public resources (Anderson & Kovacic, 2009).

### **2.5.2 CHALLENGES OF GLOBALIZATION ON LOGISTICS MANAGEMENT**

The following can be considered as challenges faced by logistic management through globalization:

- Currency fluctuation
- Government laws and policies
- Technology advancement
- Competitive market
- Language and cultural barriers
- Import duties or tariff

### **2.6 INVENTORY MANAGEMENT PRACTICES**

The inventory management actual application is providing for laborious and downstream effects that can be noticeable in the supply or logistics chain network. It is important in managing the operating costs and functional capital market (Johnson & Templar, 2011). Another study by Lysons & Farrington (2012) reiterates the need to provide customers with minimal costs, forecasting the future demand for all categories of inventory, and required customer service levels. Therefore, an extensive measurement of efficient and effective inventory implementation depends on some indicators and the firm's current level of inventory in order to target the right quantity. The identified inventory indicators include inventory lead time, the frequency of stock return, safety stock, stocks in a given time, and type of stock cover.

#### **2.6.1 INFORMATION FLOW PRACTICES**

Information flow in the information and communication technology can only be functional and productive by upgrading the organization logistics practices through real-time data on planning, observation, organization, and controlling process. Azevedo, Ferreira, Joao & Leitao (2007) reiterates that the start of information technology in logistics provides connections within the business and its activity with customers, suppliers, and the distribution method. Hence, the

application of software, hardware, and technology transfer in logistics information must be adapted to enhance the communication and serve the logistics system systematically (Nowakowska & Grunt, 2007). The studies conducted by Mourtiz (2013) & Marshall (2004) have emphasized the information flow benefit within the supply/logistics management chain. It is done by identifying distinct parties within the firm's network and finding a way to improve the business contacts. The benefits of information flow include increase in safety of stock, inventory reduction, decrease in cost, reduction of uncertainties, enhanced resource utilization, better tracing and tracking, expanded network, negotiate better contracts, find less expensive transportation modes, efficient and precise reporting, and better understanding of the various types of cost to serve customers (Yang & Maxwell, 2011).

The information flow must not be directed to suppliers alone but also on the customers' ability to source and determine what they need or require in a shorter ordering time. New effective information flow enables firms to make better planning decisions in their operations such as improved utilization of resources, supply and logistics chain costs minimization and better responsiveness to customers' needs (Lee, 2000; Mentzer, 2004).

### **2.6.2 WAREHOUSING PRACTICES**

Warehousing takes care of the cost-effective method/practices in logistics by delivering goods at a fair price, in perfect quantity and condition, and on time. The practices include delivering the right product in the right amount in logistics through warehousing configuration, detailed picking and dispatching, space allocation, stock design, and stock arrangement (Richards, 2011; Ballou, 2003). Pienaar & Voght (2009) reiterated that the success of warehousing operational functions depends on active and functional customer service. Therefore, the three warehousing operational functions include the storage function, utilization of technology in warehousing functions, and effective means in receiving and transferring of customers' orders.

### **2.6.3 PACKAGING PRACTICES**

Packaging is a coordinated system which comprises activities responsible for storing, protecting and designing a product for efficient and functional distribution, retailing, consumption, recovery and recycling to meet end-user value (Ballou, 2003). Goods are designed and packaged to meet

the need of sales branding and safeguarding the goods to reach their final destination in the right order. Packaging aids logistics through transport, handling of the goods, and the detailed design of the packaging can boost minimal logistics costs (Pfohl, 2004).

## **2.7 SUPPLY CHAIN MANAGEMENT**

According to Brindley (2005), supply management is the planning of activities such as inventory, manufacturing, shipping, and technology among the users in a supply management chain to reach the best functionality for the demand of the market. It covers and coordinates all traditional activities such as market promotion, source of funding, up to date product development, and customer service. The traditional activities help to integrate organizations that plan their actions, work together to allocate goods to marketplace, and happen within the region of a single organization.

## **2.8 FIVE MAJOR SUPPLY CHAIN DRIVERS**

The following five major supply chain drivers with the right integration of efficiency and acceptance allow a supply chain to increase its throughput while also reducing inventory and running costs (Cohen, 2005).

### **2.8.1 PRODUCTION**

Production services serve as the strength of a supply chain in manufacturing, assembling and accumulating of products in the warehouse and factories. Production is the first driver of supply chain management the activities of which cover quality control and equipment protection.

According to Sheikh (2013), warehouses and factories can be built with excess capacity, for convenience of organizations to quickly respond to customers' orders. The warehouses and factories perform a series of different operations required to make a manufacture line from fabrication of different parts to coupling of parts. According to Dell (2009a), Dell's factory has five production lines for desktop computers, two for laptops and a server line. All the lines are flexible and can be changed according to demand. The process starts in the kit area, moves to the build area, then may go to the quality control line for defects that need to be attended to. The rate of responsiveness versus efficiency in production raises some questions which include a)

What product should be manufactured? b) What is the right amount to be manufactured? c) What is the target market? d) When should the product be manufactured?

### **2.8.2 INVENTORY**

According to Chang (2004), the reason for holding huge amounts of inventory in organizations' supply chain is fluctuations in customers' orders. Inventory is the second driver in supply chain management, but the cost incurred in storing of inventory must be reduced to achieve a greater level of efficiency. The inventory in organization supply chain includes type of cycle inventory, type of safety inventory, and type of seasonal inventory. For example, Hewlett Packard (2009) discovered through inventory tools that it was holding little inventory for orders with distinct packaging, which had strong demand, and large inventory for low variability, and large volume of packaging operations. The orders in the supply chain consist of an interval of a certain period in which the supply chain increases the inventory intermediary and introduces a new approach in lowering of inventory cost and improve customer satisfaction.

### **2.8.3 LOCATION**

Location is the third driver of supply chain management and the most vital factor in supply chain management because a perfect location in strategic decision planning promises unending plan for huge business success. In selecting a business location, it is advisable to consider factors which cover the type of infrastructure, availability and necessity of customers and suppliers, and the necessity for skilled and non-skilled workers. Toyota motor manufacturing location is an example of a driver contributing to supply chain because they have fifty-one international manufacturing facilities operating in low-labour cost countries such as India, China, and South Africa. Furthermore, the various manufacturing operations are being carried out in countries like Germany, the USA, and Mexico with the best available facilities. However, all the operations and tasks are controlled by a centralized system from Toyota's headquarters in Japan.

### **2.8.4 TRANSPORTATION**

The fourth determinant in supply chain management is the transportation modes. They are involved in moving a product from one place to another in a faster or slower mode. The faster

mode such as airplanes are expensive compared to the slower mode of transport such as rail and ship. Recently, most organizations prefer receiving orders by Internet or catalogues in delivering goods as fast as possible through faster modes (airplanes). The e-transport is another fast mode of transport which transfers a type of product such as music and pictures. The transportation questions such as how to transport a product and when to move a product are very important when controlling transportation processes from a central location other than controlling from many branches. E-based management of customer demand allows customers to check, confirm and even reassess order attributes multiple times before dispatch. E-based management is widely used by FedEx which perform various roles such as the verification of goods ordered, type of procedure for dispatch, financial arrangement and operational reporting that can reduce running costs. Hence, it delivers reliability to customers by allowing them to view the passage of the order, receive dispatch alerts as they take place and enjoy confidence in the security of their freight.

### **2.8.5 INFORMATION**

Information sharing is a vital commodity in supply chain management because companies are able to take correct decisions in business strategies by improving on the performance of other supply chain indicators (Gattona, 2009). An increased level of acceptance in information can be implemented when organizations collect analyses and share up to date data from the other supply chain drivers. Information can only play a beneficial role in supply chain management if it can correlate the daily operations and predict upcoming future requirements. In the past, lack of information in popular multinational organizations in Nigeria gave rise to many issues with distributors by ordering excess volume of popular products, because the market order was less. The information sharing mode employed has been able to solve their distribution issues with distributors and retailers, thereby securing a strong competitive advantage over their competitors, maximizing profits and finally making future distribution of products flexible (Gattona, 2009).

### **2.9 IMPACT OF GLOBALIZATION ON SUPPLY CHAIN MANAGEMENT**

The global market environment has made supply and demand more difficult to forecast as there is more dependence on different companies spread over distances. The global market comprises

of complex networks which made the supply chain difficult with an increased quantity of suppliers, customers and industries throughout the world. Hence, this has made it difficult for industrial managers to retain an adequate level of command over their operations and has also increased competition for low cost goods from international markets (Dicken, 2003).

The globalization process combined with the emergence of up-to-date markets for goods and services has created both opportunities and risks for organizations, more customers and up-to-date markets, and huge scale of competitors. This means more collective effort in the environment makes it possible for organizations to minimize cost and concentrate on these important competencies to compete more profitably in the rising global trade. A developed market comprises a broader range of competitors and organizations that search for more functional ICT, plan to provide best quality products, and boost their measured advantages in the global trade in order to minimize cost. The globalization process is accompanied by a great deal of uncertainty. Organizations are now looking for up-to-date methods, plan to ease the risk, and take charge of unforeseen factors. The full knowledge of the risks enables companies to plan ahead of issues that may arise and the ability of companies to take charge of the challenges. However, organizations cannot control all external forces or uncertainties, but they can start by making logistics and supply chain risks mitigation a vital part of their organization's prudent planning process and revisiting central processes (Kerzner, 2018).

## **2.10 RECONFIGURE**

Market demand forces organizations to reconfigure their supply chains and increased pressure on schedule to delivery requires organizations to be in close contact with their consumers, not necessarily in terms of physical length, but in terms of time: twenty-four-hour schedule demands. In present times, many multinational companies have reconfigured their supply chain such as technology advancement, extended their focus on market demand, increased global rivalry, and experienced growth in global shipment transport systems. This shows that organizations need to reconfigure their distribution line structure in order to meet requirements or demands. The increased global rivalry has forced many organizations to move their distribution centres and industrial operations in order to minimize cost and increase their competitive edge.

According to Shah (2009), logistics postponement highlights a strategy or plan which helps to obtain flexibility and quick response to changing demand. It means that interchangeable components are manufactured according to forecasts, and then built and packaged at a downstream end in the supply chain, nearer to the user. This means that single allocation center is involved in the centralization of a catalogue, until the actual order is collected. At this point, the customized finished products are transported directly by rapid distribution to the users.

## **2.11 INTERNATIONAL PROCUREMENT**

According to Monczka et al. (2008), purchasing refers to a procedure by which a venture or firms endeavors to procure materials or items with the end goal to accomplish their objectives. During the time spent acquiring the possession, ownership of merchandise will be exchanged from the seller to the purchaser. The activity of buying incorporates inquiry, order, order tracking, accounting and supervising of the order, getting merchandise, and making the installment. Global purchasing identifies with a business exchange between a purchaser and a supplier situated in another country. This kind of procurement is regularly more composite than purchasing within the country. Longer material pipelines expanded tenets and controls, money changes, traditions prerequisites, and a large group of different factors, for example, dialect and time contrasts must be dealt with by firms (Trent & Monczka, 2003). Global purchasing refers to the usage of worldwide assets; hunting down a deal with the higher quality from anywhere throughout the world. On the part of the supply chain management, global purchasing expects organizations to set up an international chain of production with the end goal to make a balanced purchasing plan and procure high quality products at a reduced cost (Cooke et al., 2004). Also, it is a successful method to quantify and administer the effectiveness of obtaining forms as it limits the aggregate purchasing expense.

With globalization of economy, the competitiveness among organizations requires all the businesses to improve the level of T, Q, C, S (time of innovative work; quality of items; cost control; fulfillment with service) so they can work their business effectively in the market (Dodgson et al., 2008). As opposed to purchasing locally, the global mode of purchasing has these attributes (Fan et al., 2007). There is an intensified scope of purchasing because the extent



of purchasing operations covers the international field and they no longer simply center around the assets accessible in one country; they can procure their assets from anywhere throughout the world. In this way, it is more practical for the organizations to get their optimal assets and items with a lower cost in light of the plenty of potential sellers. Expanded risk of global procurement dependably includes a sequence of purchases, organizations as a rule purchase the materials or products on a bigger scale, which requires more noteworthy fiscal exchanges. Bigger scale exchanges are exposed to higher risks because of money variances. Besides, the cross-border exchange results in complex strategies and procedures, which open the organization up to extra existing potential dangers. In diminished purchase value, every single conceivable asset from the entire world can be considered, with a balanced cost through the method of relative expense. The requirement for a precise paradigm in supplier choice means the suppliers under the global purchase originate from various parts of the world, they hold different models and measures. Thus, it is extremely worthwhile for organizations to create efficient and institutionalized criteria and conditions with the end goal of choosing a supplier that is reliable. Stable channels of purchase involve the concept of supply chain management in which business utilizing international procurement collaborates with suppliers globally. Hence, the seller and buyer are building up a relationship of vital collaboration. Consequently, this business with a global procurement system shapes a generally steady acquiring channel (Schilling, 2010).

## **2.12 OPERATIONAL EFFICIENCY**

According to Robeson (1994), interior operations of logistics refer to efficiency and, in most cases, planned ultimate proportion of the ordinary level of contributions to the genuine level of yields. In particular, it is the proportion of assets used against the outcomes inferred (Mentzer & Konrad, 1991). It is viewed as the capacity to give the coveted item/benefit at a level of cost that is worthwhile to the client (Langley & Holcomb, 1992). It is the capacity of the logistics operation to oversee assets shrewdly in a more extensive sense. Hence, the meaning of efficiency is the proportion of how well the assets are used. The ability of a firm to convey items or resources to its clients in the most profitable way conceivable nevertheless guaranteeing the high standard of its items, support and services is operational efficiency. It is frequently accomplished by streamlining an organization's fundamental procedure so as to further adequately react to

consistently changing business sector in a profitable way. A company needs to limit excess and waste while utilizing the assets that contribute most to its prosperity, using the best of its workforce, innovation and business forms in order to achieve operational efficiency. The reduced interior costs that out-turn from operational output allow an organization to accomplish higher overall revenues or be more effective in markets that are highly competitive (Kerzner & Kerzner, 2017). Operational efficiency helps a company's abilities and execution. It indicates the company's capacity to limit misuse of data sources and augment asset usage to convey quality, less expensive items and resources to their clients. It is a valuable measure used in administering the resources obtainable (Oral & Yolalan, 1990; Schwab, 2017). Despite the fact that operational productivity is driven by operational parts of supply-chain management, technology utilization, human resources management, quality control management and so forth, it is likewise a component of both open discernment and consumer loyalty (Grimson & Pyke, 2007; Scheraga, 2004).

### **2.13 INTERNATIONAL PROCUREMENT AND OPERATIONAL EFFICIENCY**

It is possible to show signs of an improved knowledge of the exact cost of any service or product by getting the procedures required with procurement (Tompkins et al., 2010). It is effortless to pinpoint sectors where it is performing admirably, and where there is requirement for development when the acquisition task is competently organized. Monetary measures disregard the dynamics of market and expanded unpredictability in procurement of merchandise and enterprises (Luo & Tung, 2007; Lardenoije et al., 2005). The global procurement capacity advancement and its impacts on an organization's productivity rely upon two factors, namely the financial worth and the efficient chances. Particularly when the worth of purchase is high, any chance to save time ought to be used.

Administrative patterns and separation of work change the procurement operation efficacy, thus influencing task effectiveness. The procedures and methods of procurement have a connection that is close to other roles in the company and on their effectiveness as well. For instance, upgrades in quality issues and on the transportation reflect on the total expenses on the part of production and logistics. Lessening the aggregate costs can be seen as diminished product

quality. Cost efficient procurement does not suggest that the product quality would diminish (Chang & Wong, 2010).

## **2.14 CONCLUSION**

This chapter is separated into 14 parts, namely globalization, logistics, logistics management, management, systems theory of logistics, logistics management practices and firm performance, effect of globalization on logistics management, importance of globalization on logistics management, inventory management practices, supply chain management, impact of globalization on supply chain management, international procurement, operational efficiency, international procurement and operational efficiency. The chapter has been able to show globalization as a complex procedure in logistics management with wide-reaching impacts on both developed and developing countries. Globalization has a lot of gains and benefits on its own. It is truly a multifaceted phenomenon which covers a great diversity of trends in the economic and logistics ranges. It is dynamic and impulsive, although not entirely disordered because of its positive and negative effect of logistics management; while supply chain management, on the other hand, provides a large number of unique sets of market demands, operating challenges, and decision-making of individual competitiveness of the market. It was finally concluded that firms in the supply chain must individually assess information regarding actions in any five areas of supply chain drivers as previously mentioned in the chapter such as production operations, inventory storage, and determination of location, transportation modes, and information sharing.

The next literature review will discuss globalization and logistics practices in both France and Italy. The effect of globalization on logistics management will also be discussed.

## **CHAPTER THREE**

### **AN OVERVIEW OF THE EFFECT OF GLOBALIZATION ON LOGISTICS MANAGEMENT IN FRANCE AND ITALY**

#### **3.0 INTRODUCTION**

In this chapter, literature is reviewed to determine the problem statement and objectives of the study. Both the theoretical and conceptual survey and point of view are investigated in regard to the effect of globalization on logistics management in France and Italy.

#### **3.1 FRANCE AND THE STATE OF GLOBALIZATION EFFECTS ON LOGISTICS MANAGEMENT**

##### **3.1.1 GLOBALIZATION OF SUPPLY CHAINS AND FISCAL DRIVERS OF LOGISTICS OUTSOURCING IN FRANCE**

We live in a worldwide economy. The global market is developing at a phenomenal rate. This is because of several reasons. To start with, political solidarity has enabled organizations to move into new markets in the Far East, Asia and Eastern Europe with decreased fear of future political repercussions. Moreover, trade assertions, for example, North American Free Trade Area (NAFTA) reduce exchange constraints and give a level of educated property safety. Lastly, overall specialized benchmarks regardless of whether forced by measure bodies or true market guidelines have started to consolidate keys of innovation that couldn't unite. Thus, these issues have established markets globally. The worldwide market has generally been the war zone of vast multi-national companies (MNCs). Nevertheless, the previous twenty years have seen the advancement of another worldwide manufacturing state. Firms of all sizes presently contend internationally with a specific end goal to acquire new superiority. Paradoxically, small and medium-sized enterprises (SMEs) contend head-to head with bigger firms. For instance, US-based SMEs are progressively dynamic in global markets. In a survey that was carried out on all US firms with physical facilities in Europe, the global operations shifted from direct exportation to location of facilities (Prater & Ghosh, 2006). It is issues such as these, for example, that have driven foreign governments to express enthusiasm for drawing in foreign SMEs. The French government is exceptionally keen on drawing in US SMEs to France as a method for diminishing their nation's unemployment ratio.

According to a survey that was conducted by the Lorraine Development Corporation (a French agency) (1994) that were in the process of expanding overseas or who had just expanded overseas. Few international "dwarves", only 12% of responding firms, did not export or manufacture abroad; of the few international "giants", only 6.5% have international operations representing more than 0% of total sales, Europe (38%), NAFTA (35%), and Asia (27%), preferred European investment destinations (360 companies responding) 28%, Benelux (27%), France (23%), Germany (20%), 75% of U.S. companies are willing to expand investment in Europe. Of these, 33% have immediate plans to expand, 40% will expand their own facilities, Inside vs. Outside, while over 50% plan on owning and controlling their own operations. However, only a small minority will have a joint venture or outsource their operations. Exceptionally compelling was the way that the vast majority of the SMEs in this underlying review were not remotely inspired by outsourcing any piece of their value chain. Nor were they intrigued by long haul vital partnerships or joint ventures. Both of these issues are generally talked about in the operations management writing as particularly positive things for business to do while growing abroad. This pointed out that there was a well-off wellspring of research in regard to the contrasts between SME operational issues and those of large multinational firms.

### **3.2 SMALL TO MEDIUM ENTERPRISES AND INTERNATIONAL MARKET PLACE**

This development of SMEs into the global commercial center implies that as they succeed, they grow, hence constraining changes in their strategies, structures and competitive priorities. Although some research has examined global SME issues and foreign direct investment, nearly all studies have concentrated on big multi-national companies or small firms that export directly (Chetty & Campbell, 2003). Research on the mastery of key and operational parts of the globalization procedure of SMEs as they develop globally is practically missing in the contemporary literature. Utilizing empirical information, light is shed on a few key operational issues significant to the globalization of US SMEs in Europe. There are a few motivations to center around Europe. Initially, for the US SMEs, Europe has been the most prominent area for abroad expansion as a result of the relative similarities in business sectors, language, and culture in relation with other parts of the world. Second, the general globalization procedure of US SMEs can be viably contemplated by concentrating on US SME globalization in Europe on

account of the more drawn out history of US firms in Europe contrasted with other parts of the world. Third, concentrating on Europe additionally keeps the study manageable and functional since the collection of data on a global basis for U.S. SMEs is difficult. The outcomes give some knowledge of the parts and connections between a company's worldwide affairs, global operating technique, global supply chain system and information technology ability.

These are considered for small, medium, and large firms with a specific end goal to deduce an understanding of the movement of these connections as firms develop globally. One of the key discoveries of this model is the manner in which a company's global supply chain structure is a dynamic framework that is affected by other center capacities of the company. This prompts additionally examining issues identified with a company's international logistics capacity.

### **3.3 LOGISTICS TO SUPPLY CHAIN ADMINISTRATION IN FRANCE**

Through a centuries-old convention of trade, France consolidates an advantaged terrain location with involvement in logistics developed throughout ages via an extensive number of organizations. France's lengthened past is affirmed through its current position currently, also the French logistics segment stays observing unhesitatingly to the future to guarantee the improvement of organizations that pick France to run its operations (Kotler & Gertner, 2002). According to DRP (2012), 'logistics', 'integrated logistics', 'global logistics', 'the extended enterprise', 'supply chain management (SCM)', 'the customer-supplier chain', and 'global satisfaction all refer to a complex activity that hires in excess of eight hundred and eighty-seven thousand individuals in France and six million five hundred thousand in the European Union. Although current logistics has military roots, toward the finish of the twentieth era it had turned into a complete and significant task of business administration. Its significance can be inferred from the way French organizations give 8 per cent to 12 per cent of trade's income (€120 billion) towards logistics. Thus, logistics accounts for 8% of Europe's GNP (€800 billion)

#### **3.3.1 TOPICAL IMPROVEMENT**

Much has been achieved because of the critical development of logistics through the past thirty years. Part of the primary motives to clarify the improvement of the logistics role is the globalization of exchange among three axes, namely NAFTA, the European Fiscal Zone, as well as the Asian nations. Globalization implies that dealers and customers can now be found

anywhere on the planet; thus demands synchronized regulation of the movements of products and information. The developing variety of goods and the reduction of their lifespan are making the union of trades more complicated. In the meantime, trades must be flexible and adapt to the rapidly outdated nature of catalogues and extensive changes in demand. Time is an additional limitation in view of the continually increasing needs of clients, who request customized merchandise with ever shorter delivery times. Businesses therefore need to curtail their planning, manufacture and conveyance organization timescales.

More recently, exponential improvement in the management of data streams because of EDI and the Internet, have empowered the different participants in the chain of logistics (dealers, manufacturers, distributors, logistics solution providers and clients), to impact progressively and optimize each phase in the procedure. Logistics along these lines turns out to be more intersecting, worldwide, expanded, collaborative, and mindful of the client's needs. A collaborative approach allows merchandise to be monitored starting from its blueprint phase through to its return (at the starting point of advanced stream logistics to overturn logistics, utilizing integrated logistic support (ILS), also permits streams of merchandise and data amongst dealers and manufacturers to be supervised (upstream logistics) and last clients (B2C) (downstream logistics) to be streamlined. Nevertheless, headway in the capacities of logistics tools and methods is not adequate to guarantee the viability of a supply chain. This requires objective organization of space and time. This mix of important preferences is what countless transnational enterprises have come to seek in France (Djerbi & Ayoub, 2011).

### **3.3.2 FRANCE, A COLOSSAL LOGISTICS PLATFORM**

Being the European region's Atlantic coastline and also a highway amid Northern Europe and the Mediterranean Bowl, it is to be expected that France inhabits a key position in universal logistics. Its systems of land, air, and water and marine transport network are constructed round this objective. The planned extension of the cargo area of Roissy Charles de Gaulle airplane terminal, the improvement of Train a Grande Vitesse (TGV) rapid train links, or the motorways construction programme are only a couple of illustrations showing France's resolve to go with the development of transportation essentials. The extent of global trade in France bids organizations an assurance that a logistics provider or partner will dependably be found to build up their scheme. This accessibility of expertise is additionally replicated in the training bestowed

in the division. Through introductory or work-related tutelage, France trains a great number of logistics experts annually, starting from forklift drivers to logisticians, as well as information technology system developers. Putting France at the center of one's logistics business is to pick a nation that is herself vital to logistics (Takao, 2012).

### **3.4 FRANCE VITAL BENEFITS AND DOWNSTREAM LOGISTICS**

The focal point to be considered is downstream logistics since it is specifically connected to a company's business blueprint. The extent of France's local marketplace and its direct affairs with the European fiscal area and the Mediterranean Basin join with additional economic benefits to brand France a logistics focus of excellence. Situated amongst manufacturer and wholesaler, downstream logistics is the supply chain introductory connection. 'Last-mile' downstream logistics takes charge of flows between the wholesaler and consumer. E-commerce is creating a logistical administration amongst manufacturer and distribution companies (Rushton et al., 2014; Dutz, 2005).

#### **3.4.1 FRANCE'S SITUATION IN EUROPE CENTRAL**

At the level of Europe, the area decided for the center of logistics ought to permit fast contact with the best conceivable number of clients. An expansive number of global ventures wishing to give their European clients ideal administration charges and a high level of reaction have picked France for their logistics policy in Europe. France's focal point at the core of a marketplace of 380 million people and a GNP of \$916,000,000,000 of every two thousand (much more than that of USA and twice that of Japan) is a certain favorable position. As indicated by a current record by the McKinsey specialist firm, France is the European nation that offers the best incentive for cash when conducting business and trading activities. Commerce and logistics necessities are similar. Different examinations reaching comparative inferences demonstrate that logistics charges in France are extremely modest when contrasted and compared with the European average. In France, transportation costs remain realistic (Levitt, 1993; Damart & Roy, 2009). Its geographical position and its associations with an all-around created motorway network and the TGV high-speed train grid with entrée to the subway imply that France is in a perfect world arranged so that the level of administration needed by clients can be met. These elements, jointly with the nature of the workers, remain vital components in the choice of warehousing foundation



in France (Takao, 2012). "We were searching for a key area in Southern Europe that would enable us to get providers' shipments from the UK, the Netherlands, France, Spain, Portugal, and Switzerland. Investigation of transport costs drove us to pick Lyon as the perfect, and most economical, focal area" (Philippe, 2012).

### **3.4.2 INTENSITY AND UNWAVERING QUALITY**

The labour force is competent, with an hourly charge that is 15% to 40% less than in the nations of Northern Europe. As indicated by the World Competitiveness Yearbook 2002, the French workforce is second for efficiency preceding Italy, Germany, Spain and the UK. Land costs remain appealing and foundation and development costs are low. France's high-tech infrastructure is second to none. The main nation of Europe that provides a 100% computerized telecommunication system is France. Fast Internet and EDI (Electronic Data Interchange) are exceptional across the board, with in excess of 110,000 ventures utilizing them. Foreign investors likewise value France's communal segment infrastructure. The American group valued "the value of the workforce and the labor costs eminently more competitive than in Germany" (Dosch, 2012).

### **3.5 FRANCE, MULTI-MODAL POINT OF PASSAGE TO THE EUROPEAN UNION**

Whatever the transportation way selected to dispatch products to the European Union, France gives passageway that are in fact superb and amazingly proficient in taking care of imports and exports.

#### **3.5.1 VIA OCEAN**

On the Atlantic and Conduit coastlines:

- Le Havre, the biggest French seaport for vessels, which represents 60% of traffic. Its Port 2000 expansion will empower the biggest vessels to be provided for, whatsoever the current or the vessel's trace.
- Rouen, near Paris, is focused on mass cargoes: wood, oats, and composts.
- Dunkerque is experiencing rapid development and took care of one hundred and fifty thousand TEU vessels in 2001. It is the most rail-oriented of European harbors, with 49% of cargo in haulage conveyed by rail, contrasted with 40% by road and 11% by ocean/marine.

- On the Atlantic coastline, there are numerous ports that have some expertise in mass freights: Bordeaux, La Rochelle, Nantes Saint-Nazaire, Lorient, Brest, Cherbourg, and in the North, Dieppe.

On the Mediterranean coastline:

- Marseille-Fos, the biggest harbor in the Mediterranean, is connected with the North European neighborhood not just by a dense system of highways and rail, but additionally by the Rhône-Saône waterway framework. Marseille port authority (PAM), confirmed ISO 9002 by Lloyd's of London has been building up a programme since 1998 to have the capacity to provide for ships of 8,000 TEU at any appointed time and achieve a yearly handling of 1,000,000 TEU. To dispatch their products to or from these harbors, enterprises can bank on primary vessel workers, for example, CMA-CGM (Compagnie Maritime d'Affrètement - Compagnie Générale Maritime), Delmas (the global frontrunner in North/South networks), and Cargosud (Paixão Casaca & Marlow, 2005).

### **3.5.2 VIA AIR**

Being in the third position in Europe, Paris Charles-de-Gaulle and Orly air terminals both handle 20% of the aggregate air cargo in the European Union. Six hundred companies, which collectively utilize in excess of fifty-five thousand workers (of which twelve thousand are in logistics) have based their activities there on account of their area in the core of the Paris Basin, the district of Europe with the most astounding GDP. The US-coordinated firm FedEx has developed its biggest center out of the USA at Paris Charles-de-Gaulle airplane terminal, with 77,000 m<sup>2</sup> of warehousing and a total of 2,000 individuals worked there in 2006. The CEO of FedEx, Frederic W. Smith (2012), said, "Paris CDG airplane terminal is a standout amongst other managed air terminals in Europe and is at the geographical focal point of the continent."

### **3.5.3 VIA OCEAN, RAIL AND ROAD**

A total of 950,000 km of highways (comprising 9,300 km of boulevards) are a portion of the finest maintained and minimum congested in Europe, with road traffic density of 30 automobiles/km contrasted with 44 on average in the EU and 65 in Germany

- Rail conveyed in excess of 55 billion ton-kilometers in 2001, of which over 20% was by combined road-rail transportation, is a piece of the pie more prominent than the 14% European normal. France is at the focal point of the European Commission's cargo passageway schemes, using the Belifret Expressway that connects Luxembourg, France, Belgium, Spain and Italy. As the fate of rail cargo is multi-modal, SNCF Fret and car maker Lohr have built up a unique procedure, Modalohr, that enables filled trucks to be stacked quickly and independently. This system was tried on the Alpine rail expressway between Savoy and Piedmont between 2002 and 2006.

- Ocean: The Port of Paris and the Seine, the Rhône-Saône framework, the trenches of the North and the Rhine, represented in excess of 58.7 million tons of cargo and about 7 billion-ton kilometers in 2001. In France, the Logiseine groups transportations on average has 32,000 TEU holders yearly amid Le Havre and Paris Gennevilliers by means of waterborne cavalcades of 132 to 264 TEU. Rhône Saône Conteneur (a subordinate of CMA-CGM) is mixed up by the advancement of a 500,000 m<sup>2</sup> "magmaparc" at Port of Pagny sur Saône in Burgundy, created by Gazeley, a subsidiary of Wal-Mart. French skill in water and trench transportation is additionally perceived on foreign watercourses, in the USA or South America, as exhibited by Touax, formed in 1853, that works on the Mississippi and in Amazonia, and CFNR (Compagnie Française de Navigation Rhénane) which works on the Rhine, the Moselle, and the Danube, conveying in excess of 13 million tons yearly (Notteboom & Winkelmanns, 2001; Maes & Vanelslander, 2011; Diziain, Taniguchi & Dablanc, 2014).

### **3.6 3PL, 4PL, LLP PLATFORM CONTRACTORS**

The pattern in which companies concentrate on their essential movements has additionally influenced logistics. In this capacity, companies have allowed a genuine retail for profit arrangement to increase in the segment, specifically in the area of platform administration. In spite of the fact that logistics is an always critical part of maintaining a business, it likewise demands permanent assets. Keeping in mind the end goal to withdraw from possessing an unclear collection of properties and to streamline their profit on expenditure, companies are progressively subcontracting their supply chain. Their conventional associates, for example, transportation organizations, have in this way expanded the services they offer and have turned out to be genuine logistics associates, branded as 3PL (Third Party Logistics) suppliers.

Operations from enormous logistics policies which allow them to also profit from scale economies, 3PL suppliers oversee their clients' catalogues, accept their requests and package products (Bajec, 2008). Third party logistics suppliers can take an interest in the administration of company's streams in detail at every phase in the sequence, be it upstream to oversee dealings with providers, fit back the manufacture sequence, or downstream to optimize dissemination of merchandise. But although 3PL suppliers are assuming an expanding part, their scheme requires significant investments and logistical assets. 4PL, or fourth party logistics suppliers, an additional topical phenomenon, are associated with only supply chain scheduling, relating knowledgeable and computing assets to characterize and upgrade them. They choose sub-contractors and embrace accountability for the service they provide. The French organizations Baliseo.com, PEA, or Freelog Consulting, that counsel established logistics companies, are dynamic in this particular area. Somewhere between these two methods are the LLP, or lead logistics providers, that assume responsibility for their clients' logistics by joining their personal resources, which is the 3PL part, with the administration of a system of associates characterized by them, which is the 4PL role (Monczka, Handfield, Giunipero & Patterson, 2015).

### **3.7 E-LOGISTICS**

Despite the fact that e-trading has paved way for new potential enterprises for undertakings, it has in addition planned capacity to the final client, whose orders at that point impact the producing company's business (Albaum, Albaum & Duerr, 2008).

The development of the Internet has fashioned profound variations in customer-supplier dealings, in both B2B and B2C, by giving significantly extra capacity to modern cyber clients, who presently hope to acquire items more speedily than previously and to their particular requirements. Despite the fact that acquisition happens in a virtual world, customers' worries are faultlessly genuine. Specifically, on-line purchasers will not acknowledge the smallest disappointment in order satisfaction, be it with respect to conveyance times or the state of the merchandise. Another sort of logistics has showed up, namely e-logistics.

Cyberspace website machinists did not quickly understand the significance that should have been designated to this logistical help, directing all their concentration toward safe imbursement strategies, their webpage's designs, and the inventory of merchandise advertised. The Director of the Irepp (Postal Trends Research Institute) Mr. Soriano, has mentioned that new companies at

first took care of logistics with extravagant strategies, and by non-remittance, not considering the genuine logistics charges associated with this recently developed allocation system, either in view of a procedure to procure new clients, or in light of poor evaluations of these expenses (Hands, 2017). Fourth party logistics (4PL) suppliers recognized as infomediaries, for example, Freelog or Baliseo, have shown up in the e-chain to help e-vendors in choosing their partners and the utmost proper kind of logistics amenities. E-marketplaces have likewise connected themselves with logistics.

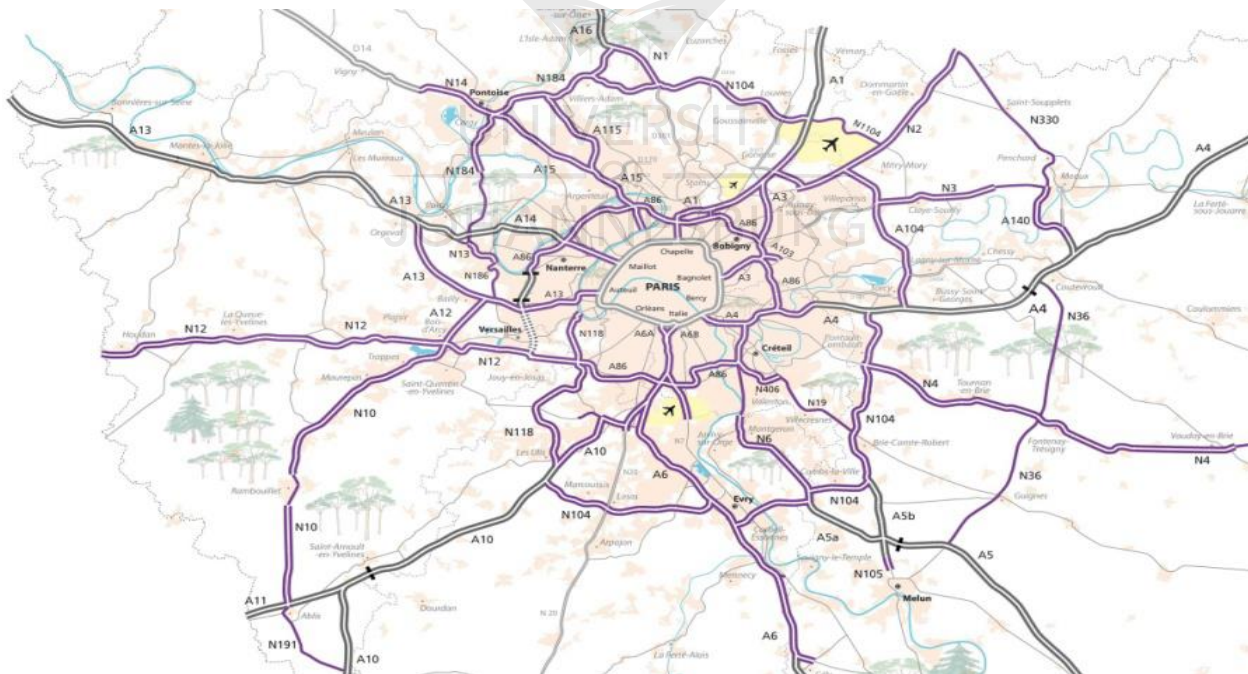
### **3.7.1 E-LOGISTICS OPERATORS**

In France, the main dispersion clusters, for example, Auchan, Carrefour-Promodès, Casino, Cora and Galeries Lafayette, have beaten these logistical limitations utilizing different strategies, opening Websites, for example, Ooshop.com, Houra.fr or Telemarket (the best French bazaar website), and utilizing their involvement and understanding of conventional logistics. Customary mail system administrators, for example, La Redoute/Redcats, Camif, Les 3 Suisses, or Yves Rocher's lesser Distri-home, possessed the capacity to profit by their involvement in conveying/delivering to clients' houses. La Poste, with its 14,000 branches and 90,000 postmen, has turned into a well-valued associate for e-trade administrators. Aside from its existence in France, La Poste can likewise rely on its European divisions (Denkhaus, Birkhart, and Interspe in Germany, Parceline and Interlink Express in the UK and Ireland), and also on INSA in the USA. It likewise has alliances with Geodis, FedEx, and the Italian, Portuguese and Greek post offices. Established 3PL suppliers are building up an e-logistics specialization. Geodis, positioned as the fourth largest cargo company in Europe and the first in France, has entered into a union with France Télécom and its e-trade website, Télécommerce. Mory Group has established a corporate-venture with Elia (Team-on-line), a computer program (software) seller having some expertise in transport, to provide a logistics solution suitable to online based deals, while Heppner has an agreement with US start-up Raise, a web-based business specialist organization. A total of 90% of Staci's business starts online (Morganti, Dablanc & Fortin, 2014; Schliwa, Armitage, Aziz, Evans & Rhoades, 2015; Neto, Bloemhof-Ruwaard, Van Nunen & Van Heck, 2008).

### 3.8 URBAN FREIGHT FLOWS AND THEIR IMPACT UPON PARIS TRUCK MOVEMENTS, FREIGHT FLOWS AND LOGISTICS SPRAWL

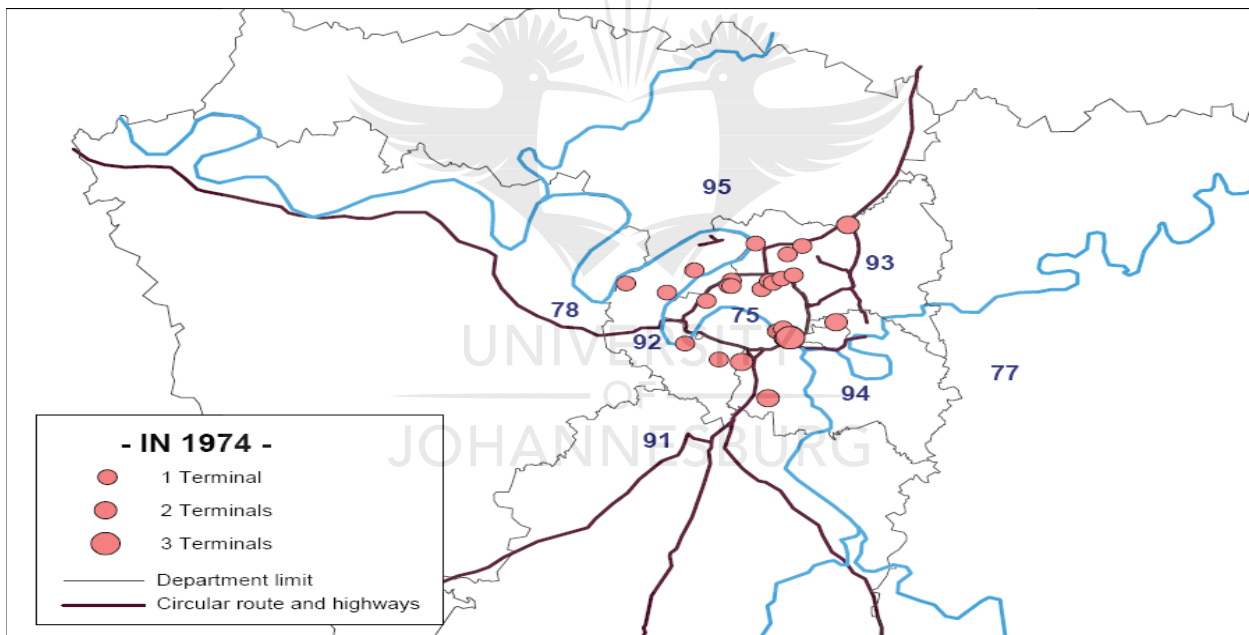
In excess of 80,000 trucks leave or enter one of the 17 highway toll courts encompassing the dense zone of Ile-de-France every day (Dablanc, 2013). The city of Paris is surrounded by three ring highways (Map 1), all of which (counting the most unwritten one, called the Peripherique, delimitating the city of Paris) are utilized intensely by trucks, even universal ones that are simply crossing the Ile-de-France. Conveyance trucks experience issues getting to the city due to roadway clog. However, once inside the city's limits, vehicles run more effectively in the boulevards of Paris than a couple of years before. This is because of the fruitful metropolitan strategy of auto utilizing decrease (- 27% vehicles-km/hour by and large somewhere in the range of 1999 and 2008, as indicated by the city of Paris information). The business vehicles expanded as a result: from 9% to 14% of all vehicles by and large. A further important component of provincial and urban cargo transportation is called 'logistics sprawl', the cargo offices' migration and conveyance that focuses on faraway rural areas (Dablanc & Rakotonarivo, 2010). Logistics sprawl has been vital.

**Map 1: Main radial highways and ring-roads surrounding Paris**

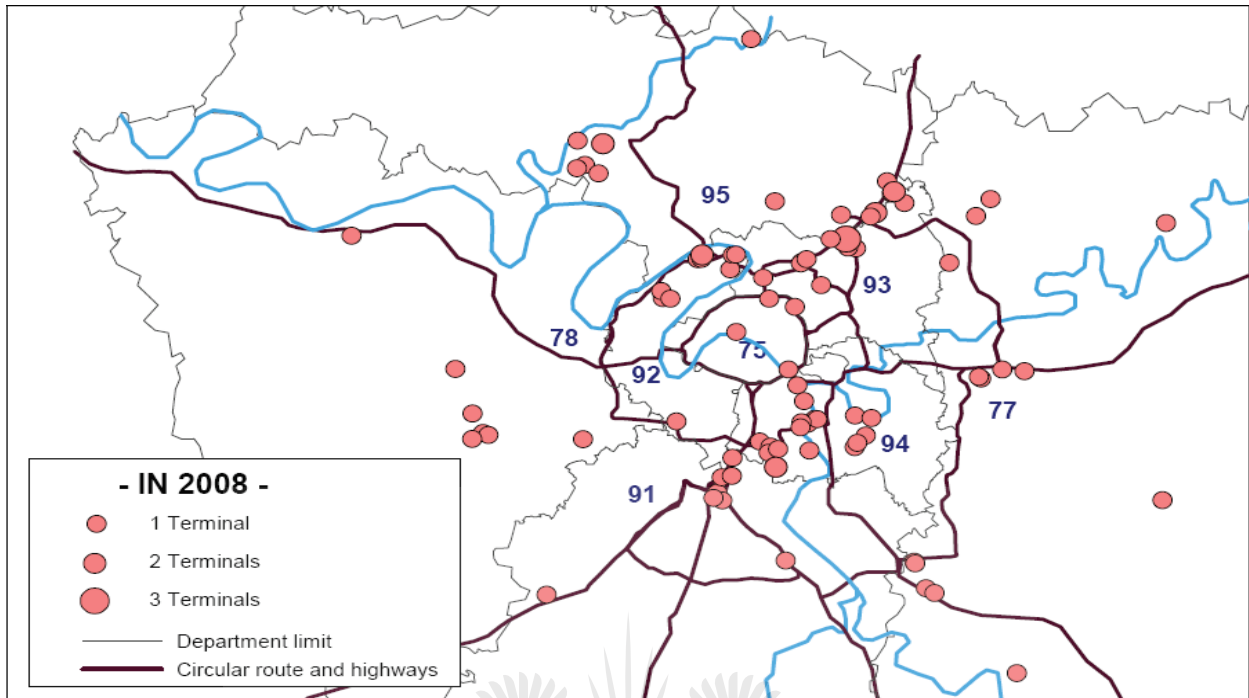


*Source: Courtesy of Direction des Routes IDF, 2006*

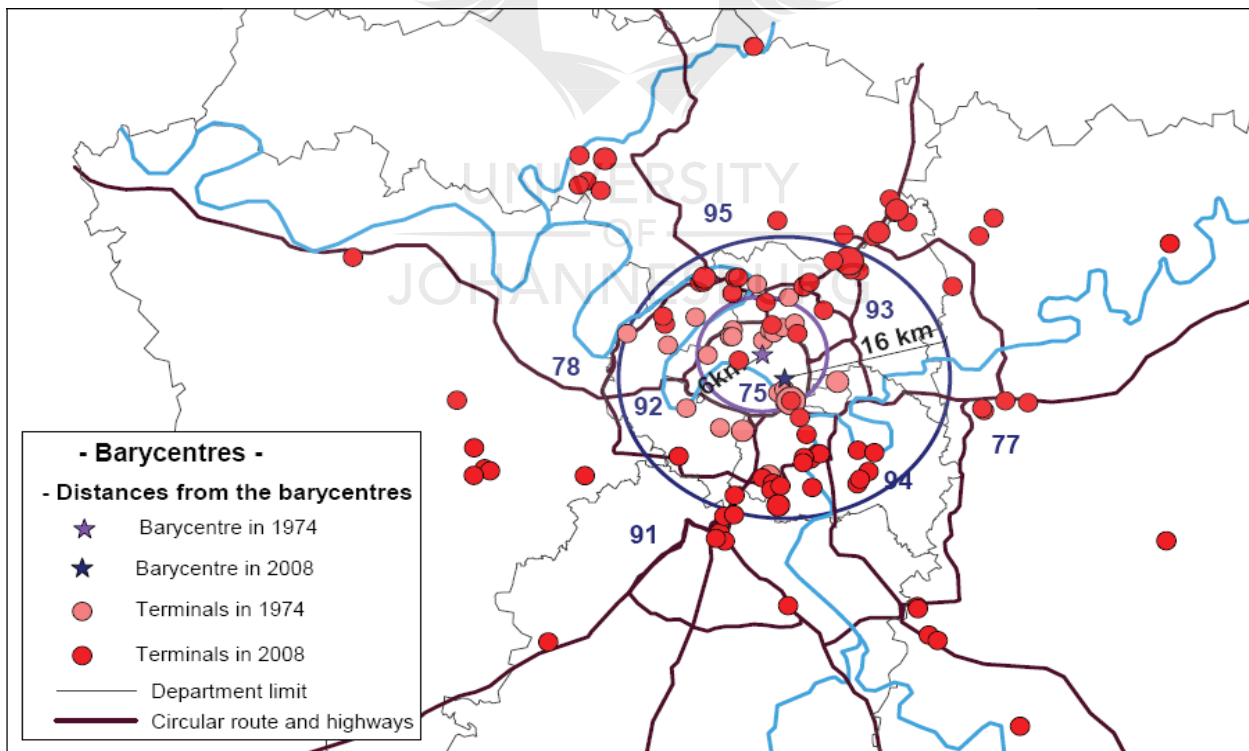
Over the past thirty years, terminals that were utilized for cargo transport and logistics operations during the 1980s have vanished from Paris and nearby regions (Maps 3 and 4). Economic pursuits generally have not scattered as much as logistics offices. This has expanded distances for conveyance trucks to achieve goals, including a considerable measure of vehicle kms to the regional movement. In the case of less-than-truck-load and package transportation, it was figured that in excess of 16,000 tons of CO<sup>2</sup> are consistently are produced by logistics sprawl (Dablanc & Rakotonarivo, 2010). The business and mechanical densities into consideration in Paris and the Ile-de-France area, it can be calculated that around one million conveyances and pick-ups are consistently made. In excess of 33% of these happen in the city of Paris, i.e. there are around 350,000 pick-ups or conveyances happening each day in the Paris Boulevard. More accurate information about these streams will be accessible when the Urban Goods Movement overviews for Paris and the Paris district are finished.



**Maps 2 and 3 – Logistics sprawl: location of LTL and parcel transport terminals between 1974 and 2008 in Paris**



**Map 4: CO2 Impact assessment of logistics sprawl**



Source: Dablanc & Rakotonarivo, 2010.



Autonomous retailing, including neighborhood comfort stores, is still vital in Paris. These neighborhood stores are provided three to ten times each week. There is diversity among suppliers, with an overwhelming utilization of own account vans (or private autos), a considerable number of them going to rural wholesale stores or the Rungis wholesale market for near the Orly air terminal (eight kilometers south of Paris, see Map 1). Rather than business focuses, independent stores and chain retailers have a tendency to have less uninterrupted conveyances, a bigger offer of combined shipments, with bigger and better-stacked vehicles. Truck stack (LTL) tasks, bundle and express transport administrations have a critical offer of Paris cargo around one fourth of aggregate conveyances and pick-ups. This industry utilizes small to medium-sized trucks or enormous vans and depends on combined transport visits withdrawing/departing from cross-dock terminals in rural territories. A sub-segment of the bundle transport business is home conveyances. The e-shopping marketplace represents 6% of all retailing in Paris in 2009.<sup>5</sup> La Poste, the French national postal administrator, and express transporters, for example, DHL, dominate the main market, yet new players are emerging: Morin, Ciblex, Star's administrations. Building sites conveyance is a key portion of urban cargo due to the tonnage they produce (up to 30% of all tons conveyed) and resulting damages on the road. Building sites' supply is famously wasteful. Half-baked conveyance plan and different suppliers prompt a high number of conveyances, general issues, and queuing with the locals. Open-air food markets (on squares and avenues' walkways) are extremely popular in Paris. No information exists on the genuine volume of cargo streams produced yet these business sectors require particular endeavors by metropolitan officers to clear on-road parking spots the prior night, so sellers' vehicles can stop. Neighborhood markets are very effective in minimizing the natural effect of customers' trips (as customers typically walk). Be that as it may, neighborhood and territorial truck activity to serve these business sectors can be considerable, and these trips are broadly effectively combined.

## **3.9 ITALY AND THE STATE OF GLOBALIZATION EFFECTS ON LOGISTICS MANAGEMENT**

### **3.9.1 BRIEF HISTORY OF GLOBALIZATION OF LOGISTICS IN ITALY**

The logistics and transportation business have undergone a logistics revolution (Hanlon, 2006) beginning in the 1950s. The business demonstrated critical variations that can be routed to the ensuing core phenomenon: (i) customer-aligned budget; (ii) web-based data system; (iii) drop in transportation charges; (iv) EU traffic blueprint; and (v) economy globalization. Customer-aligned budget (i) is not just routed to mass utilization, but in addition to large scale manufacturing and mass circulation of customer products (Strasser, 1998). The customer-aligned budget has, accordingly, encouraged an expanded assortment of prototypes in administration of material, which has expanded the many-sided quality of logistics procedures in manufacture and exchange. Prior to the invention and accessibility of the PC and telecommunication, the geographical distribution of a complicated procedure was too difficult to arrange (Yuan & Gay, 2006). The web-based data system (ii), created in the 1990s has radically improved and lessened the trading of data. Furthermore, web-based postal order trades have reinforced package delivery services. Moreover, over the most recent five decades distinctive innovation advancements in cargo forwarding and management, for example, containerization (Steenken & Stahlbock, 2004; Capineri, Leinbach & Gips, 2006), and the progression procedure created by the EU, have likewise added to lessen the transportation charges (iii) (Gunasekaran, Patel & McGaughey, 2004). Specifically, in the 20th century, the expense of moving products has reduced by more than ninety per cent and this decrease is continuing. Hence, the normal/usual? price of transportation a ton a mile has dropped from 18.5 pennies in the 1890s (in 2001 dollars) to 2.3 pennies in 2004 (Glaeser & Kohlhase, 2004). According to Vahrenkamp (2010), the Traffic Rule (iv), the advancement of which truck activity has preferred, has significantly expanded the truck fleet and the movement streams in the EU. Just in ten years, starting from 1990 to 1999, in EU member states, the road traffic expanded by seventy-six per cent.

Lastly, there has been a strong effect on logistics by the globalization of the economy (v) Globalization is at present-day a ‘vogue’ that indicates to foundational and intensifying internationalization of business subdivisions, global interchanges and versatility, varying

operation patterns and conducts of lifetime, vital places of cosmopolitan companies in global marketplaces, and moving of modern exercises everywhere throughout the world (Veen-Groot, Nijkamp & Bergh, 2001). Globalization has, at that point, been refined by the earlier mentioned points (customer-aligned economy, the web-based data structures, the reduction in transportation charges, the EU traffic blueprint), and in addition by the decrease of products, administrations, individuals and capital boundaries, the progression of universal exchange and the selection of free market standards by an extensive variety of nations (OECD, 1997). Specifically, the structure of the creation forms, before packed in few plants, ended up divided in various plants and in various nations, at any rate as long as the expenses for logistics and redesign don't overpower the negligible favorable position. Another model of generation was spreading the already coordinated beneficial exercises which are split and spread over a global system of creation destinations (Arndt & Kierzhowsky, 2001). Accordingly, the expanding exchange streams do not only incorporate final merchandise; in addition, intermediate and unfinished products are conveyed starting with one nation, then onto the next for the final processing purpose (Schivelbusch, 2014). In this unique circumstance, transportation and logistics assume a crucial role in interfacing the distinctive importation, exportation of markets and the portions of manufacturing framework, which are far reaching on the world markets (Hopp & Spearman, 2011).

### **3.10 FOREIGN DIRECT INVESTMENT (FDI)**

Foreign direct investment is the point when a distinct or business claims 10% or an individual in one nation invests into business located into another country. On the off chance that a shareholder owns fewer than 10 per cent, the International Monetary Fund describes it as a major aspect of his or her merchandise portfolio. By and large, FDI occurs once a shareholder boots up foreign commerce endeavors or secures foreign commerce capitals, with setting up proprietorship or managing interest for a remote organization. Foreign direct investments are known from portfolio dividends in which a shareholder or a financier objectively purchases an asset of an overseas-based companies. A 10 per cent proprietorship does not give the stockholder a governing engrossment. It allows influence over the establishment's management, operations, and strategies. Thus, governments follow who invests in their country's establishments. In 2017,

world-wide foreign direct investment was \$1.52 trillion, as per the United Nations. The FDI is lower than 16% from 2016's record of \$1,800,000,000,000. The reduction was because of a 27% fall in developed nations. Assets and expenditures generally came back to normal points in the US after rising in 2016 (Amadeo, 2018). The FDI is one of the three types of internationalization which can be selected by the organizations in a globalized period; the others are worldwide exchange and partnership endorsements (Ietto-Gillies, 2005). Specifically, universal exchange, comprising importation and exportation, is the greatest recognized passage received by a company opposing the universal condition, since it infers little contribution and risk level for the internationalized company. A partnership endorsement, a further developed and risky procedure than global exchange, is mostly embraced by small and medium-sized ventures (SMEs) on the grounds that it is of small – average term and does not need principal expenditure (non-equity system). Actually, it comprises in contracts (authorizing, licensing, coalitions and subletting) on the improvement, dissemination, as well as make/manufacture of definite products to be traded in the remote marketplace. FDI, rather, speaks to the most pronounced and restricting means to go in the remote markets, since it needs a critical principal expenditure via Greenfields or unifications and procurements and suggest a medium-long haul commitment. FDI is the primary instrument received by average companies that plan to split/share/divide the capital of a remote company in the long run with at least one or supplementary associates.

### **3.11 GROWTH OF OUTWARD AND INWARD FOREIGN DIRECT INVESTMENT IN ITALY**

The globalization of the financial resources, with the customer-aligned economy, the web-based data system, the decrease in transportation tariffs, the EU traffic Blueprint, has cultivated an expanding demand and, subsequently, supply, of logistics exercises. Within the bounds of a nation, the interest can either be locally fulfilled by state organizations, or by remote organizations, which challenge particular internationalization systems. It occurs that nations who have a divided, little assessed logistics area, as for instance Italy, turn out to be increasingly appealing for remote investors. Italy has enticed, in recent times, an expanding/increased amount of remote logistics FDI, predominantly starting from the costliest EU nations and assembled in high respect and demonstrates a generally set number of outward FDI.

### 3.11.1 OUTWARD LOGISTICS FOREIGN DIRECT INVESTMENT IN ITALY

According to Mariotti & Mutinelli (2009), Italy has remained a "multinational devotee" as a result of its lesser proportion of outward direct investments compared with the other industrial and developed nations. According to UNCTAD (2007), in 2006 the rate proportion between the outward FDI and the GDP was around 20% (Mottaleb, 2007), a divided part of the EU mass media and unequivocally lesser than the primary proportion of the nearest associates (i.e. Germany with a ratio of 34.5% and France with 48.3%). The fundamental driver of this circumstance is the predominant small proportion of Italian companies that do not permit taking the budgetary and human resource required for remote ventures. This mean interval is greater in the logistics business than in different segments: 60% of the logistics companies are single-individual organizations and 16.2% have two workers (Vercellini, Somigliana, Viganò, De Matteis, Barbara & Fedele, 2010). As per the REPRINT-ICE database, in 2009 the logistics outward FDI are a low rate (6%) of the aggregate Italian outward FDI as shown in Figure 3.1, yet they represent 23% of outward FDI in the administration area. As related to alternate enterprises, Italian outward FDI are encouraged in discount (49%), trailed by production firms (28%), administrations (13%) and construction (5%). In any case, in recent times the ventures of the Italian logistics companies have developed rapidly. Since 2000 to 2006 the number of representatives in the remote associates of the logistics Italian MNE expanded by 64.3%, whereas in a similar period the ventures attempted by the Italian assembling MNE diminished (Mariotti & Mutinelli, 2009).

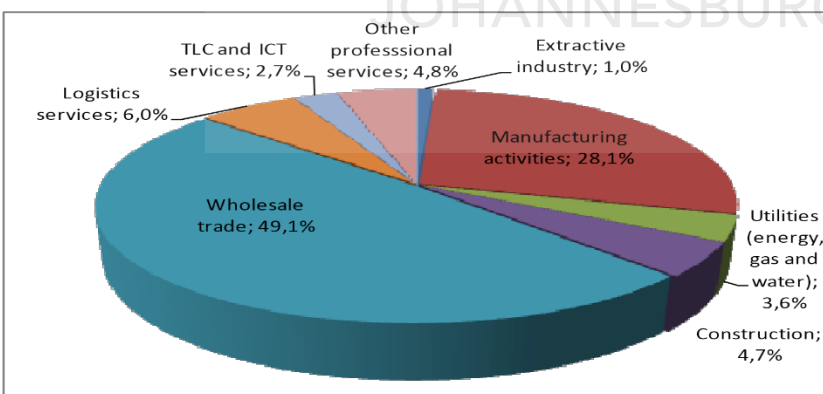


Figure 3.1: Italian outward foreign direct investment by expenditure industry

Source: explanation on REPRINT-ICE index (2009).

The LogINT index demonstrates that in the Italian logistics sector, toward the start of 2010, the number of outward foreign direct investments (817) was greater than the quantity of internal FDIs (372). Also, as it will be expressed in the following section, Italy is less attractive to FDI than other nations. The 817 outward FDIs have been attempted by 165 Italian MNEs. Ever since the logistics business is exceptionally diverse (Fawcett, Waller & Bowersox, 2011; Carbone & Stone, 2005), a division of the investigation in various sub-enterprises should be carried out as shown in Figure 3.2. The ventures for the most part concern the distribution exercises (42% - NACE I63.40.1 code), followed by the incorporated logistics and multi-purpose transportation segment (19% - NACE I63.40.2 code) and via ocean transportation (21% - NACE I61.10.0 code). In this manner, approximately 70% of the ventures are owned by the 63 NACE sub-company ("supporting and supplementary transport schemes of travel organizations"), that includes having a greater value attached to the exercises other than simply transportation. The inordinate level of interest in the oceanic transportation can be supported by the critical increment of this vehicle mode, which has happened in the most recent eras as a result of the globalization procedure and, especially, the developing exchange trades among European nations and Asian countries.

Reviewing a national pattern, the bigger portion of outward FDI originates from the most costly territories of Italy (33% from North-West and 32% from North-East), next is the Centre (22%) and South and Islands (13%). Specifically, Lombardy locale, in the North-West, which is the area with the most surprising GDP per capital produces 20% of the ventures; it is followed by Tuscany (18%) and Emilia Romagna (13%), respectively in the Centre and in the North-East, where distinctive critical modern areas are found, and by Campania (10%) in the South, in which the Head office of the Italian utmost imperative worldwide companies is found, working in the ocean transportation (Grimaldi Group).

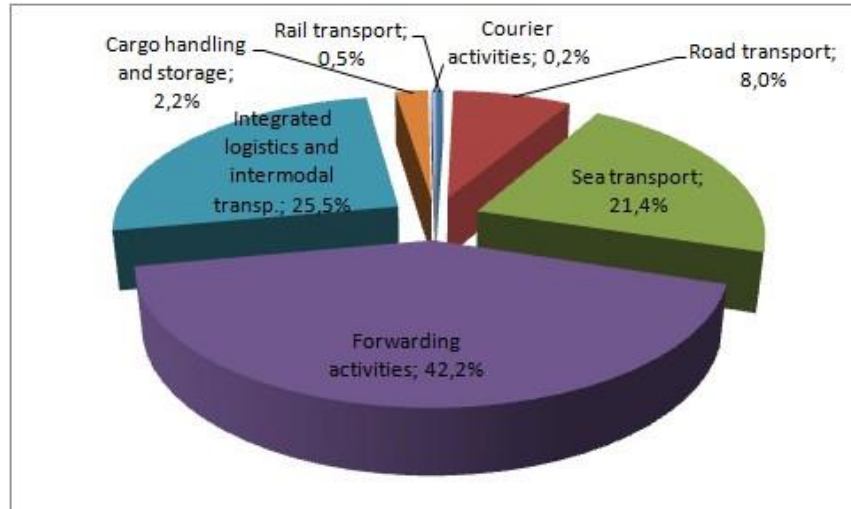


Figure 3.2: Italian outward logistics FDI, by investment sub-industry

Source: LabELT, 2010.

### 3.11.2 Inward logistics FDI in Italy

Italy demonstrates less appeal to internal FDI in comparison with the other developed nations. As described by Mariotti & Mutinelli, (2009), this is primarily because of the inferior nature of the limitation elements' reserve and of the outward economy's reserve. Italy has a constrained stream of internal FDI, predominantly in the innovative area and in the ambitious administrations. Research by Keck & Low (2006) and Mariotti & Piscitello (1995) revealed that the less attraction appears to be related to a few nationwide official qualities, for example, the lowest quality of administration's effectiveness and of the capacity of the legitimate procedure to satisfactorily implement the civil rights of property. Recently, the utmost powerful areas of internal FDIs have remained: (I) logistics (+25.2%), utilities (+54%), and the other expert administrations (+22.7%). In particular, administrations demonstrate a higher development rate than alternate divisions regarding the number of firms, workers, turnover and worth attached.

The ongoing increment of internal FDI in logistics and expert solutions is because of the new economy's subcontracting and public infrastructure embraced by the more advanced nations. In the meantime, the expansion in internal FDI communicates the extra concentration of the distant logistics suppliers, in contrast with the Italian companies. Remote logistics Multinational Enterprise had a tendency to beat domestic companies in the period 2002-2005 regarding income

and efficiency. Remote logistics Multinational Enterprise support areas in the central territory of the nation, and are inclined to be dynamic in the advanced qualities including sub-parts (Brouwer & Mariotti, 2009). In the year 2009, enterprises in Italy attracting a critical amount of internal FDI are production (33%), administration (25%), and wholesale (39%) (Figure 3.3). Logistics and transportation represent the 23% of internal FDI in the administration area and 6% of the aggregate FDI (ReprintICE index).

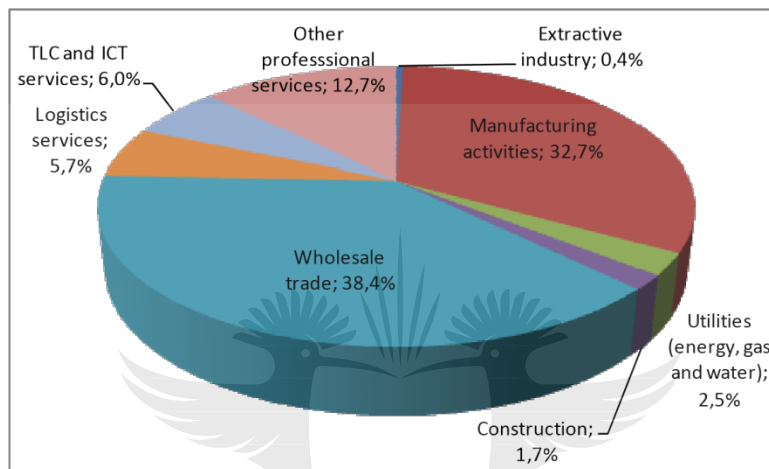


Figure 3.3: Italian internal foreign direct investment by venture industry

Source: REPRINT-ICE (2009)

The systemic order of the logistics industry in Italy and, particularly, the massive crush of the organizations, attracted universal worldwide companies that basically provide high value-added solutions (incorporated logistics, courier and global forwarding schemes). In addition, small and medium enterprises do not build up the exact important developments to offer a multifaceted scope of administrations, ready to fulfill the clients' interest. Besides, the extensive remote financing firms on the region can supply the expanding request of the Italian assembling companies that work in the worldwide marketplace. Therefore, remote multinational enterprises via an expanding amount of acquisition, greenfield and merger speculations, possesses huge portions of the overall industry.



### 3.12 Policies and drivers of inward FDI in Italy

Recently, the globalization of the market place and the synchronous progression procedure of various transportation administrations, for example, street transportation or the postal conveyance, have expanded the opposition in the logistics business. In this way, Europe has been attracted by the new on-air characters originating from the emerging nations. According to Carbone and Stone (2005), the endeavors in expanding or in safeguarding the market control and in achieving an adequate scope to adapt to the excessive interest in transportation, information and communication technology framework proficiency has been amassed by the logistics companies. A few organizations frequently follow the procedure of generating different types of internationalization of their customers that have arrived into new markets or broadened theirs in the customary marketplaces; different companies have selected a secured method. As expressed by Gorton et al. (1998), the primary inspirations of this final procedure are: (I) avoiding being dominated; (ii) keeping others from assuming the control of the objectives; (iii) staying away from further collective materials in the business from spiraling up excessively.

Both the flat and the vertical mix can be driven by the aggressive surveys; in the main instance, the point is to infiltrate fresh topographical markets and to productively broaden the vehicle series, controlling real movement streams on account of logistics (Carbone & Stone, 2005). The reason for existing is to infiltrate fresh markets and keeping in mind the end goal to gain new skills in the second instance. The principal kind of investment is prompted by geological expansion while the second one by business expansion (Heaver, 2002).

**Table 3.1: Fundamental drivers and inspirations of FDI reconciliation methodologies**

1) Aggressive objectives	1a) Expanding marketplace or governmental influence
	1b) Guarding share of market
2) Productivity change	2a) Measure of economies analysis
	2b) Possibility economies analysis
	2c) Exchange rates decrease

3) Additional drivers	3a) Rule
	3b) Innovations and detailed capacities access
	3c) High profit on investment

About productivity change, procurement can be inspired by the exploration of scale and scope economy or by the exchange rates decrease. The economies of extension and scale are vital in every one of the businesses portrayed by fixed costs of an inflated rate, in which the logistics segment is mostly concerned in the arrangements or foundations or the automobiles for transportation or activities in warehouses.

**3.13 INCORPORATION APPROACHES OF THE LOGISTICS FOREIGN MNES IN ITALY**

As indicated by LogINT index in the retro 2000-2010, the greater part of internal FDI in Italy regarding cargo transportation is similar. This case shows a worldwide drift: in the year 2009 70.3% of worldwide logistics financing was built in a similar industry of the funding Multinational Enterprise (Maggi & Mariotti, 2010). In particular, the horizontal integration (HI) changes the 56% of the expenditures, while vertical and combination integrations (separately, CI and VI) change the 26% and the 18% of the ventures independently.

Fig 3.4 demonstrates that the major kind of assumptions (parallel) is extremely broadened in various logistics sub-businesses, yet for the most part about the NACE I.63 and I.64 codes (73% of the aggregate), particularly, forwarding activities (25%), incorporated logistics and multi-purpose transportation (20%), and courier activities (12%). The parallel combination in transportation division mostly pronounce roadway (13%), next is via ocean (8%) and rail (5%). Concerning the vertical combinations, the level of the NACE I.63 industry is greater than in alternate classifications (88%); at the appointed time, the multinational enterprises have mostly put resources into forwarders (42%), followed, with a significant principal, by integrators and multi-purpose administrators (18%), and companies working in other assisting transportation

schemes (15%). The combination ventures, for example, the parallel ones, are further expanded: the forwarding schemes are once again the introductory business of investments (27%); however, for this situation the next one is road transportation (21%), and the last freight storage and management (20%).

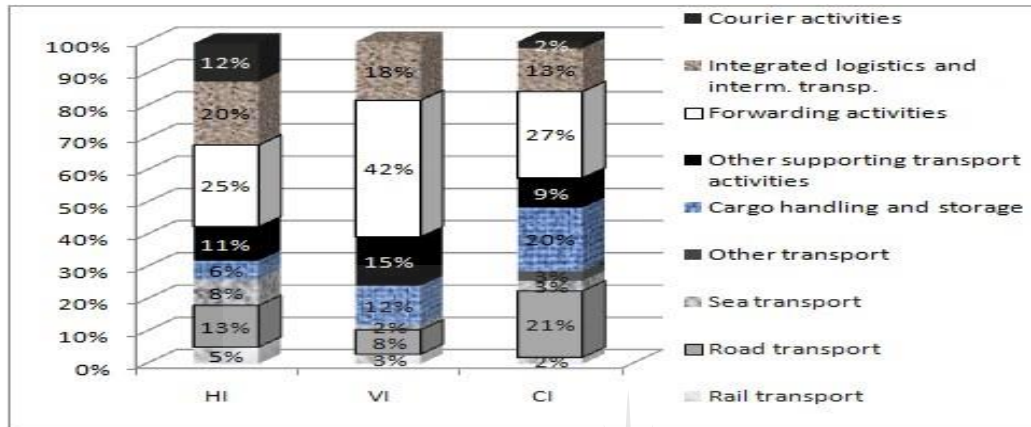


Figure 3.4: The mix systems by venture sub-industry

Source: LogINT index, LabELT, 2010.

The primary section (40%) of the mix incorporation is made through the banks or other monetary and realty mediators, while the 30% originates from the production firms (sustenance, metal, apparatus and electric merchandise, transportation hardware, compound and pharmaceutical items) and the 22% has been included by the extraction, creation and allocation of energy (mostly crude oil) MNE (Figure 3.5). Commerce and development and different business administrations come next with the 6% and 2% respectively.

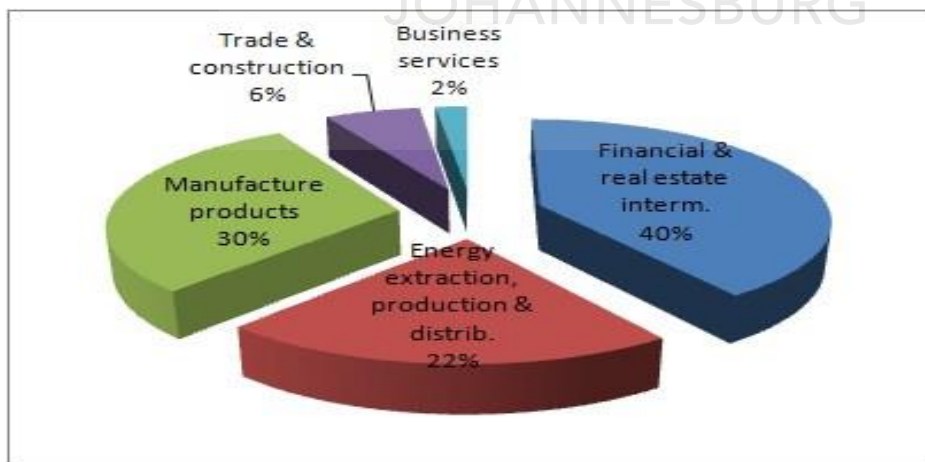


Figure 3.5: Dispersion of the combination mixes by MNEs' businesses

Source: LogINT database, LabelT, 2010.

The greater part of the FDI monetary financiers deal with the connected systems of NACE I63.4 (multi-purpose providers, forwarding and incorporated logistics), normally revived by the inquiry of an investment profit amount that is high. The monetary remote ME which has established the higher quota of ventures in Italy, is the AAGM and English 3I Group. The logistics part of TNT was procured by the first, named Ceva Logistics, coming to the 20% of the publishing allocation market in Italy (Maggi & Mariotti, 2011). Almost all the speculations in Lombardy are owned by the second one, procuring diverse companies providing storehouse, transportation and different logistics solutions. The expenditure of the production multinational enterprise is more dispersed amongst the diverse logistics sub-ventures, yet NACE I63.4 code wins. The above-mentioned ventures are frequently the consequence of a by-product of the commercial companies' interior logistics unit and are for the most part spurred by the inquiry of scale economies. For instance, the Electrolux Group of Sweden controls Electrolux Logistics Italy S.P.A and different companies that offer forwarding, management and storehouse affairs. Two different German MEs in foods (Theobald Mueller Ag & Dr. August Oetker Kg), and also Nestlè of Switzerland made an insufficient funding mostly in the NACE 63 commerce yet additionally in oceanic and cargo road transportation.

### **3.14 EFFECTS OF MANUFACTURING INTERNATIONALISATION ON LOGISTICS EMPLOYMENT**

#### **3.14.1 APPLIED SYSTEM**

The internationalization procedures embraced by the production sector/industry have a greater effect on logistics ventures, as expressed in the outline. The venture keen on vast worldwide retail promotions realizes not just additional management, but also on organization and power. In addition, the increase of tasks, initiative and creativity that are normally consolidated at the head office, for example, exploration, logistics, evolution and so forth (Blomström, Magnus, Fors, Gunnar, Lipsey & Robert, 1997). In particular, the effects of the diverse internationalization systems (exchange, collaboration assents and FDI) on the logistics business can be condensed as follows: (Altinay, 2004; Cariou, Ferrari & Parola, 2015). To start with (1), an expanding substantial portion of merchandise and individuals' streams have to be overseen by

transportation and different logistics activity. The above-mentioned streams are formed by: (i) the importation and exportation of transitional and finished merchandise; (ii) the maneuver of transitional merchandise being conveyed from one nation to the next for processing purposes; (iii) the streams of products and individuals amid the distinctive generation and conveyance of remote associates of the MEs. Particularly, in connection with this last cited fact, when a vertical FDI is embraced by a multinational enterprise, it regularly moves partly-manufactured items to the host nation that will be re-imported back to the nation of origin. This builds the streams of products. An effect on the administrations of logistics may likewise be created by a flat FDI in light of the fact that the MNE supplants the entire cycle of manufacture in a remote nation. They may keep on purchasing the crude materials or moderate merchandise by similar providers situated in the nations of origin, in this way broadening logistics ventures. Also (2), the need to interface far off areas which contains complex quality of the logistics administration has been expanded by the high number of input and output markets. Also (3), it has also broadened the acquisition, manufacturing and dispersal systems, prompting a defence of the logistics hubs (Thakker, 2016).

The above-mentioned effects (1, 2) increase the interest in logistics administrations, instigating two extra impacts (3, 4). The business of logistics is rebuilding (3): the logistics companies are getting to be bigger and are varying their cache, proposing an expanding amount of 'incorporated' and great value-added administrations, capable of running the whole inventory network or a huge piece of it (Yeung et al., 2006). Lastly, the work requests of laborer's with practical experience in arranging, overseeing and supervising the logistics exercises are expanding (4). The impacts of internationalization on the logistics service are identified in the manner by which the logistics administrations are overseen. Apart from the type of trading and procurement, transportation agreement with manufacturing companies have been included to the remote clients and providers. This is in addition to the relationship of reciprocally or substitution among the distinctive internationalization methodologies. In respect of the principal matter, the impact on business may happen inside the internationalized manufacturing companies in a few different methods. At the point when logistics is overseen in-sourcing, or within the logistics providers, there should be an occurrence of co-sourcing (joint administration of logistics

administrations). In the first instance, the internationalization impact on the logistics' business is enhanced in view of the expanding transitory importation and exportation streams. The effect on logistics is not desirable since the merchandise that had already been sent out is currently formed directly in the host nation, in the second instance.

### **3.15 LESSONS LEARNT**

This chapter discussed the mode of logistics globalization in French and Italian multinational companies. The economy globalization, jointly with the customer aligned economy, the web-based data frameworks, decline in the costs of transportation, and the EU traffic blueprint have cultivated an expanding interest for logistics operations. In a nation, the interest can either be fulfilled locally, by state organizations, or by remote companies, which fits into the nation by particular internationalization procedures. The Italian logistics sector needs development of the logistics business that principally works in transportation and in other curtail value connected facilities have attracted a growing number of international companies, basically originating from the Western part of Europe. The particular players have procured high retail dividends in the logistics ventures which are associated with globalization, i.e. courier, forwarding and administrations overseen by the third-party logistics (3PL) and fourth party logistics (4PL). The peremptory request for logistics has likewise been expanded by the internationalization of the industrial companies in Italy, which have encouraged the internationalization of the most creative logistics administrators in Italy. These logistics companies began putting resources into the equivalent foreign territories based on their client's personal preference, the supposed "pursue the client" methodology. In 2010, about 165 multinational enterprises in Italy attempted 817 outward FDIs for the most part towards the Western part of Europe (45%) and Central East Europe (16%). However, the proportion of outward FDI on GDP in Italy is still low, particularly in comparison with other vicinal European nations.

### **3.16 CONCLUSION**

This chapter discussed the mode of logistics globalization in France and Italy, and evaluates their policies. The next chapter researches literature related to the effects of globalization on logistics management in South Africa and Kenya and current trends adopted by these countries in improving the logistics sector in their respective countries.

## **CHAPTER FOUR**

### **AN OVERVIEW OF GLOBALIZATION EFFECTS ON LOGISTICS MANAGEMENT IN SOUTH AFRICA AND KENYA**

#### **4.0 INTRODUCTION**

Literature is revised to identify the objectives and problem statement of the study in this chapter. Both the conceptual review and perspective and theoretical are explored with respect to the effects of globalization on logistics management in South Africa and Kenya.

#### **4.1 GLOBALIZATION EFFECT IN SOUTH AFRICA**

Globalization is the word used to describe developmental policies in a trade as well as minimizing transportation costs and information and communication technology transfer. Its importance includes economic growth, employment rise, and distribution of income between nations and cities, poverty alleviation, human right, and labour rights. Globalization is a compelling force in the way businesses are operated and it can be connected with other contemporary study such as neoliberalism and knowledge of the economy (King & McGrath, 2003). It is highlighted by Loots (2001) that the association between globalization and industrialization in nations is complex because of its challenges and opportunities by investing in industry and the sales of manufactured goods. Furthermore, the globalised economy started in South Africa during the political instability when trade played an important factor in the economy despite the state of the nation's industrial sector at that time. The restrictive measures on trade during the apartheid era of the 1980s were significantly removed from domestic and international trade in the 1990s (Roberts, 2000). This implies that after the apartheid era the South Africa government started embarking on rapid trade policy reforms to boost the economy that had been stagnant during the political insecurity. The trade liberalization embarked upon by the South Africa government in the 1990s brought about a series of improvements in the successive economic performance index. Gondwe (2001) finds that liberalization of globalization has led to impressive economies, trade, development and fast investment returns

performance in countries and has also increased both the trade and economic growth by 8.3 % and 5.3 % respectively.

Globalization is the main source of productivity or capacity through growth in trade which in turn leads to extensive inflows of foreign direct investment such as the inclusion of new ideas and technologies, rise in productivity, improved logistics management, access to markets, training, higher labour wages, job creation, and improved economic growth in South Africa. Despite globalization being the main source of capacity, its adverse impact can be felt in some sectors e.g. the textile and clothing industry. The textile and clothing industry in South Africa serves as a source of income and livelihood for about 127,000 people who are employed in the industry. The industry contributes about 0.6 % to South Africa's gross domestic product and about 20 % employer of labour than the automotive and component industry (DTI, 2007). However, globalized economy introduction has brought low price imports of textiles into the country, thereby bringing competition into the uncompetitive clothing industry. It is the small business owners that are mostly affected; they are unable to secure the necessary investors or revenue for them to procure state-of-the-art machinery which will increase production volumes for survival (Roberts & Thoburn, 2004) unlike the large organizations which responded quickly to globalization by securing investment in procuring machinery and manufacturing processes. Securing investment for these large companies brought about the huge volume of productivity and clothing sales up to 18 % in the 2000s with low levels of employment (Bezuidenhout, Khunou, Mosoetsa, Sutherland & Thoburn, 2007). In addition, important policies that could provide various functions to the South Africa textile and clothing industry in heightening economic growth are the following:

- Advancement of the country's Internet to ensure organizations are not excluded in the competitive global market;
- Investing in policies promoting skills and training;
- Economic strategies and policies that can be executed to help small businesses; and
- Efficient and effective global marketing strategies.



#### **4.2 EFFECTS OF GLOBALIZATION POLICY ON LOGISTICS MANAGEMENT IN SOUTH AFRICA**

The globalization of the South African economy introduces new policies in the way in which firms have to conduct their businesses. The South Africa economy comprises a global interconnection of resources, suppliers, product markets, and business competition (Shokane, Stanz & Slabbert, 2004). NT (2005a) indicated that analyzing the effect of globalization policies on logistics and supply chain management is essential as well as the policies of the actual growth in measuring the globalization performance index such as open trade and foreign direct investment. Competitiveness policy was designed by the Growth, Employment and Redistribution policy (Department of Finance, 1996) to respond to stagnant growth, rising inflation and unemployment. The policy highlighted that macroeconomic stabilization was essential for economic growth, efficiency, trade competitiveness, employment, and income redistribution. The vital components of the policy included the following:

- Minimal fiscal deficit to contain public and service debt obligations, counter-inflation and accessible resources for investment;
- Flexibility exchange controls in line with the need to keep the interest rate stable at a competitive level;
- Cut in tariffs to accommodate input prices and facilitate firms restructuring, compensating partly for the exchange rate decline;
- Tax encouragement to new investment in competitive and labour- absorbing projects; and
- Privatization of state assets to optimize domestic resources.

Therefore, the South African government in the year 2003 adopted a logistics and supply chain management policy to change the obsolete procurement, distribution and planning practices. The value of logistics and supply chain management policy, according to NT (2005a), are the following:

- Promoting similarity in the function of logistics and supply chain management processes throughout the government;

- Simplifying the order in an interpretation of government's procurement legislation and policies; and
- Completing the cycle of financial management improvement by taking full responsibility and accountability for logistics and supply chain management relevant functions.

The logistics and supply chain management processes are put together based upon some values such as open and effective and efficient competition, ethics and fair dealing, accountability and trade reporting, and equity. These values help in achieving the eventual goal of consistency in procurement processes, good governance and economic development (NT, 2005a). The framework for the logistics and supply chain management values system creates economic development, according to Van Gruenen & Van Nniekert (2010) such as the following:

- Demand management;
- Acquisition management;
- Logistics management;
- Disposal management; and
- Risk and performance management.

Altman and Meyer (2013) mentioned that these policies were designed to allow South Africa's competitiveness in a global economy. It was supported in manufacturing policy terms by a bid to shape manufacturing exports and to move up the logistics and supply value chain into higher capital intensive and knowledge based intensive sectors.

#### **4.3 THE ROLE OF GLOBALIZATION ON LOGISTICS MANAGEMENT IN SOUTH AFRICA**

The pursuance of globalization plays a valid role in lifting economic growth in any country. The unification and competitiveness of the world economy such as trade and finance have reached a tremendous level, causing rapid changes in information and financial flow, trade relations, alleviating poverty, and employment generation for the nation. Therefore, globalization has to be fully studied and implemented in logistics management growth for market competitiveness.

Supply chains go after one another and not products, goods or organizations, according to Christopher (2016). This means that reverse logistics is a vital tool in creating a competitive advantage for business owners in South Africa. They only need to create a smooth passage for the product from the source to the final destination and also the product flow in the opposite direction. Top organizations in the developed world have realized that to achieve competitiveness in their business, methodical approaches to place utility, logistics and supply management, and globalization must be developed. In this global economy world, logistics management tends to bring people and markets together through sourcing of raw materials, goods, and supplies which are essential when it comes to goods assembling and warehousing goods, and in moving the finished goods to the market. Ballou (2006) reported that the direct contribution of logistics to the economy, logistics and courier services account for around 9 % of the global gross domestic product. For example, Germany has about 2.6 million people and about 7 % of the domestic manpower is hired/employed? in the logistics industry. Therefore, logistics is a determining factor of economic growth, income generation, and employment. The logistics sector has been shaped in recent years by globalization spread which brings about competitive pressure in logistics companies due to constant demand for products.

As a result of this development, only those companies that are able to fulfil given requirements such as flexibility and quick response to the order of business such as productivity, on-time service delivery, low goods pricing, security in delivery, and degree of service have a chance to survive in this present competitive business environment. According to the South Africa Logistics Performance Index (The World Bank, 2014), logistics service providers and cargo owners play a vital role in the competing global economy. It was discovered that the Logistics Performance Index of South Africa has decreased to 34th out of 160 nations in 2014 from 23rd out of 155 nations in 2012. However, South Africa is still doing well if compared to some developing countries such as China but is far ahead of some countries such as Russia, India and Brazil. The World Bank LPI (2018) shows that the World Bank has been constantly updating the logistics comparative performance surveys of most nations since 2007. The following six components which identify the most vital aspects of the current logistics environment were analyzed in the 2018 Logistics Performance Index:

- The efficiency of the customs;

- Quality of infrastructure;
- Ease of arranging competitively international shipments;
- Quality of logistics services;
- Tracking and tracing of consignments; and
- Timeliness.

The surge in the growth of South African logistics primary and secondary sectors are the determinants that contributed to the performance of the South African economy, especially regarding the exchange rate, inflation rate and interest rate, balance of payments, budget deficits and human resources which directly impact the cost performance of the logistics organization and the domestic economy as a whole. The entire costs of logistics evaluation were R393 billions of South Africa’s GDP in the year 2012 and it was evaluated to be R423 billion and R470 billion in the years 2013 and 2014 (State of Logistics Survey, 2014). Table 4.1 shows the comparison of South Africa’s logistics performance index components between the years 2018 and 2016.

**Table 4.1: South Africa’s logistics performance index components between the year 2018 and 2016**

<b>Indicators</b>	<b>2018 Rank</b>	<b>2018 Score</b>	<b>2016 Rank</b>	<b>2016 Score</b>
<b>Customs</b>	34	3.17	18	<b>3.6</b>
<b>Infrastructure</b>	36	3.19	21	<b>3.78</b>
<b>International Shipments</b>	22	3.51	23	<b>3.62</b>
<b>Quality logistics Services</b>	22	3.19	22	<b>3.75</b>
<b>Tracking and tracing</b>	35	3.41	17	<b>3.92</b>
<b>Timeliness</b>	34	3.74	24	<b>4.02</b>
<b>Total</b>	<b>33</b>	<b>3.38</b>	<b>20</b>	<b>3.78</b>

Source: World Bank 2016, 2018

Table 4:1 shows that South Africa’s logistics performance index has decreased to 33<sup>rd</sup> out of 160 countries in 2018 from 20<sup>th</sup> out of 160 countries in 2016. The six indicators of South Africa’s performance index examined by the World Bank were somewhat constant when comparing the

scores. In most instances for the logistics performance index, customs ranked 34<sup>th</sup> in 2018 compared to 18<sup>th</sup> in 2016, infrastructure ranked 36<sup>th</sup> in 2018 compared to 21<sup>st</sup> in 2016, international shipments ranked 22<sup>nd</sup> in 2018 compared to 23<sup>rd</sup> in 2016, quality logistics services ranked 22<sup>nd</sup> both in 2018 and 2016, tracking and tracing ranked 35<sup>th</sup> compared to 17<sup>th</sup> in 2016, and timeliness ranked 34<sup>th</sup> in 2018 compared to 20<sup>th</sup> in 2016 (LPI, 2018). It was discovered that the 2016 and 2018 ranking of quality logistics services remain the same, while other performance indicators of 2018 ranking dropped drastically as opposed to 2016 rankings where the overall ranking is 20<sup>th</sup> out of 160 countries. This data suggests that other countries are improving their logistics management competencies faster than South Africa.

#### **4.3.1 Challenges involved in implementing globalization in logistics management in South Africa**

The efficient and effective global supply chain is the major concern of logistics operators in South Africa because it plays an important role in economy and market competitiveness. Logistics management can be determined by various factors in the business environment, such as the types of information and communication technology, management skills, operational management of the infrastructure, openness of human resources and flexible policy to business and trade. According to Jordaan (2001), the goal of business owners is to become competitive in the global economy by attracting foreign investors, applying state-of-the-art information and communication technology tools and manufacturing goods and services that can pass through the industrial markets. The factors that add to competitiveness as highlighted by Jordaan (2001) are the following:

- Market-based economic policies;
- Government support for a competitive economy;
- Restructuring of financial and capital markets;
- Provision and maintenance of infrastructure;
- Improving existing technology; and
- Human capital development.

Ambe and Wess (2012) indicate that the South African government has adopted logistics and supply chain management processes that are governed by policies and legislations. Despite these policies and legislations, there are still several challenges that interfere with the logistics and supply chain management implementation. The following are the main challenges that interfere with the logistics and supply chain management implementation:

- Non-compliance with SCM policy and regulations;
- Inadequate planning and linking demand to the budget;
- Inadequate and inconsistency of risk management in SCM;
- Inadequate monitoring and evaluation of SCM;
- Lack of proper knowledge, skills and capacity; and
- Ethics and conflict of interest (Ambe and Wess, 2012).

#### **4.4 BRIEF HISTORY OF LOGISTICS GLOBALIZATION IN KENYA**

The basic component in the multinational companies' (MNCs') plan of functionally incorporated universal policy and methodology and the implementation of strategy is international logistics and acquiring capacity. A firm ought to have understanding of the business sectors in which it works as a customer or purchaser, since conceivable changes in asset or supplier markets can influence choices identified with the company's market promotions, manufacturing, and incorporation techniques. The consideration of MNC's supply epitomizes risk and opportunity and may, accordingly, impact net salary streams, both in the short and long run. Aboelmaged (2010) gives experimental proof to expecting that the MNC's universal logistics and procurement procedure impacts and is affected by its technology procedure, research and development and item classifications. The continuous procedure of more prominent monetary association among nations known as financial globalization is reflected in the expanding measure of cross-border buying and selling of products and services (Berger, Allen, DeYoung, Robert, Genay, Hesna and Udell & Gregory, 2000). It is crucial for service providers to build up a creative logistics and make use of worldwide assets to enhance quality, and convenience of administration arrangement. For the organizational goals to be accomplished, several theories to anchor their

policies and plan the way forward can be looked into. As per Hesterly and Barney (2008), The resource based view (RBV) is a model that considers assets to be critical to firm performance and prevalent logistics. In the event that an asset shows VRIO characteristics, the asset empowers the firm to pick up and maintain upper hand." RBV is a way to deal with accomplishing advantage that rose in the 1980s & 1990s, after the real works distributed by Wernerfelt, ("The Resource-Based View of the Firm"), Prahalad and Hamel ("The Core Competence of The Corporation"), Barney, J. ("Firm resources and sustained competitive advantage") and others. This view contends that associations should indicate inside the organization to learn the wellsprings of upper hand as opposed to taking a look for it. As per RBV defenders, it is substantially more achievable to utilize outward chances exploiting existing assets as opposed to endeavoring to secure new capabilities for each unexpected chance. Logistics and assets are given the real job in helping organizations to accomplish higher institutional accomplishment in the RBV model. Competitive edge implies better execution than different rivals in a similar industry or better execution than the average of the industry.

Every organization must have no less than one favorable position to effectively contend in the market. It can mean anything that an organization situation compared with its rivals if its logistics approach is strong. On the off-chance that an organization cannot recognize one or simply does not have it, before long contenders outdo it and the business will be forced to leave the market. A firm that has a decent logistics approach and practical upper hand is equipped for outdoing its rivals over a significant period of time. An edge can be accomplished by a firm over its rivals in these successive two ways: a) by merging them inside the organization. Cost or separation advantage can be accomplished by a firm when it creates (valuable, rare, difficult to imitate and organized) VRIO assets, through inventive procedures or distinctive capabilities and merchandises; b) Through outer changes. Whenever PEST (political, monetary, socio-cultural & technology) factors change, numerous opportunities can seem that, whenever seized upon, could give numerous advantages to a firm. An organization can likewise enjoy an advantage over its rivals when it is competent to react to outer changes quicker than the other firms.

Commonly, the subdivision of an organization's logistics and procurement task comprises of tactical and operational procedures, since the needs in these two regions are totally unique (Wilensky, 2015; Monczka, Handfield, Giunipero & Patterson, 2015). Basic leadership and strategy development by administrators enable it to be more comprehensive to incorporate those observations. The research is driven by the fact that a few writers have used distinctive methodologies in their examinations of government relations, yet MNC are abandoned. A compact and testable hypothetical framework is yet to be built up. There were around 1298 authorized customs specialists working in Kenya and around 828 listed logistics companies (Kenya Revenue Authority site), with DHL, Kuehne + Nagel Ltd and DB Schenker driving the market in particular order by 2014 (Seuring, 2013). Cargo Forwarders are positioned utilizing a consolidated general median dependent on their individual rankings for gross income, sea TEUs and airfreight metric tons. These organizations are leading in logistics and they supply resources from in excess of 2,000 areas in more than 100 nations, including Kenya.

#### **4.4.1 GLOBALIZATION OF MULTI-NATIONAL LOGISTICS FIRMS IN MOMBASA COUNTY**

The city of Mombasa is endowed with a significant number of logistics companies based there. This is because the Mombasa Port which is the main Kenyan seaport and likewise known as the passage to link the East African hinterland is located there (KPA's site).

A logistics firm is an organization that gives solutions to its outsourced clients or logistics solutions for a segment or the whole of its supply chain management capacities. Suppliers of logistics generally have practical experience in incorporated activities, transport and warehousing services that can be scaled and modified to clients' needs based on economic situations, for example, requirements of the unconditional request and delivery facility for their materials and goods. The business of logistics is multi-faceted because it is influenced by various components. The world's economy has been changed by globalization. This consistent development in world economies has expanded industry's interest colossally for the fast and auspicious conveyance of products (Kotut & Mugambi, 2014). Various bodies control the current logistics tasks, in particular, Kenya Ports Authority - for port activities, Kenya Maritime Authority - for oceanic transport, Kenya Revenue Authority - for customs authorization, National



Transport and Safety Authority - for road inland haulage, Rift Valley Railways - a concession set up for the conveyance of freight utilizing rail. Mombasa hosts various logistics multi-national organizations situated there. These include DB Schenker, Kuene + Nagel, DHL, Bollore Group, Damco Logistics. The biggest dividends of the market are being enjoyed by these prime logistics companies. They solve their customers' logistics problems in port authorization, road transportation, warehousing and railage. The logistics benefits and novelties that accumulate by executing the logistics advancements in the 21st century have been adopted by these firms.

#### **4.4.2 EFFECTS OF GLOBALIZATION ON KENYA PETROLEUM FIRMS LOGISTICS MANAGEMENT PRACTICES**

As indicated by the Kenya Energy Regulatory Commission (2014), the principle well-spring of business vitality in Kenya is petroleum fuels. Kenya substantially imports crude oil products and has a refinery owned and overseen by the Kenya Petroleum Refineries Ltd (KPRL), a cross-country oil pipeline of 800 km from Mombasa to Nairobi and Western Kenya. It has terminals in Nakuru, Nairobi, Kisumu and Eldoret operated by the Kenya Pipeline Company and the Kenya Energy Regulatory Commission (KERC). In 2006, the Energy Act No. 12 of 2006 was instituted, giving the Energy Regulatory Commission (ERC) authority to likewise manage oil and sustainable energy divisions included power (Luogon, 2015).

The refined products and unrefined petroleum importation are coordinated by the Ministry of Energy through an open tender system (OTS). The winner of the OTS dispenses refined products, dependent on international freight involvement. Importation of crude is controlled by prime oil firms Government of Kenya (Lattimore & Kowalski, 2008). KPRL is owned by government and Shell/BP and Chevron/Texaco on a 50 per cent premise. The other well-spring of Kenya's oil-based commodities is imported, of which 70% are led through OTS. The rest of the 30 per cent is left to the circumspection of authorized shippers. In contrast to OTS under the unrefined petroleum, freight cooperation depends on the interest of authorized shippers (Kiveu & Ofafa, 2013). The unrefined oil imported is prepared at the Mombasa oil refinery plant and sold in the local market from that point. Because of the advancement of the oil area in 1994, the importation of raw petroleum when contrasted with refined oil has lessened as a result of the opportunity to import oil either in the form of refined or unrefined. At the level of retail, there are

numbers of backups to remote based and community-based organizations of diverse sizes who have outlets through which oil-based commodities are sold specifically to the customers.

Foreign market firms' branches are by far the biggest players in the sub-segment regardless of the advancement of the business which took the channel of more key players in the market Petroleum Institute of East Africa into consideration (PIEA, 2000). The highest market share at 16.8% is owned by Total, Kenol/Kobil claims 12.8%, Vivo claims 11.9%, Oil Libya possesses 6.11%, Hashi claims 5.9% Gulf possesses 4.7%, while the NOCK and the rest are being shared by the other smaller players (Wanjogu, 2013).

#### **4.5 COST DRIVER OF GLOBAL PROCUREMENT IN KENYA**

As indicated by Hultman, Hertz, Johnsen & Johnsen (2012), the fundamental factor of any firm's corporate objective is low-cost budget. Conveying services or goods at a lower cost, firms gain an advantage i.e. a cost identified with the nature of the service and goods that will be both attractive in the commercial center and will yield an adequate rate of profitability (Hemmatfar, Salehi & Bayat, 2010). Along these lines, production cost is instrumental for firms to produce modest services and goods. Porter's conventional system of low-cost competitive technique is related to this idea. The relative cost advantage hypothesis has been linked to cost as a driver of global procurement. The hypothesis recommends that a nation must have some expertise in those items that it can deliver moderately and more effectively than other nations (Buckley & Casson, 2016). As per Kattel & Lember (2010), prompts specialization will bring more, better and less expensive products to buyers (higher productivity). As presumed by the Heckscher-Ohlin model, the well-spring of relative cost focal points is the impact of various legacies of production factors. Thus, every country has a relative benefit "in the creation of items into which enter impressive measures of components plenteous and inexpensive" in this country and will appropriately specialize (Schumacher, 2013).

Thus, under expanding pressure to diminish costs, organizations have moved, and keep on moving, sourcing from suppliers of neighborhood to country-based low-cost suppliers (Hultman, Hertz, Johnsen & Johnsen, 2012). Nyanchoka & Namusonge (2014) showed that despite the fact that there is a proceeding with push for economies of scale, it is obvious that in Kenya, suppliers have not yet possessed the capacity to deliver hardware and other agrarian contributions at

prudent costs. Therefore, it builds the expense of item improvement in respect to market life thus the drive to source globally where there is an enormous pool of qualified suppliers, in an investigation to decide the global procurement drivers at tea development agency of Kenya.

The investigation hence speculates that if the entire amount of the price of an item and the procurement cost is adequately lower than the cost of a similar item fabricated in another nation, at that point the nation with cost problem will tend to import or obtain merchandise and ventures from the nation with lower costs.

#### **4.5.1 COMPLICATED LOGISTICS AS A FACTOR AFFECTING ADOPTION OF GLOBAL PROCUREMENT**

As argued by Zeng & Rossetti (2003), logistics operations form the basic circles of supply chains and supervise the streams of materials, data and money, which are the fundamental components of satisfying clients' requests. They proceed with that as markets, manufacturers and suppliers are being separated by monetary standards, greater distances and civilization, and a more critical role in the achievement of the supply chains is played by logistics. Hence, in accomplishing a world-class supply chain, the role played by logistics and transportation excellence cannot be overlooked. As per Magenda & Iravo (2014), logistics includes data, transport, warehousing, stock, packaging and handling of material. Hence, they argue that logistical administration incorporates the organization of frameworks and structure to control the stream of materials, work in process and completed stock to help specialty method with the general objective being to accomplish a focus on level of client benefit at the most minimal conceivable aggregate expense. Procurement must be flawlessly incorporated with alternate parts of logistic and capacities inside the company, for example, finance, warehousing, HR, and distribution (Musanzikwa, 2013). A logistical framework with clear communication lines, stream of timely documentation and continuous information about reactions to products and staff performance of tasks which is used as a basis for improvement encourages the procurement procedure. An investigation on global supply chain operations in developing nations by Msimangira & Tesha (2009) recognized logistics difficulties of adapting to long supply chains as one of the issues influencing international procurement frameworks.

Diverse nations utilize distinctive existing logistics and transportation auxiliary techniques which make complexity in international logistics (Msimangira & Tesha, 2014). Jacobs & Kuipers (2012) demonstrated that logistics in worldwide sourcing is liable to longer stock administration, transport delays and frontier-crossing methods. In this manner, worldwide transport, universal exchange and sourcing require learning of nations' supply chain systems with the end goal to set up consistent and proficient transport, and logistics execution (Msimangira & Tesha, 2014). Alluding to developing nations, Jacobs & Kuipers (2012) append that the absence of comprehensive logistics learning in low-cost developing nations may inconvenience procurement managers while actualizing international sourcing. This is because less developed nation suppliers might be shy of involvement with the most exceptional methodologies and are generally new in high standard demand. For example, succession conveyances merged with just-in-time, e-information exchange transmission and vendor-managed inventory services which are the capabilities of supply chain administration in deciding how much advantage an organization can get from international sourcing. Moreover, the poor-quality foundation of logistics in Kenya and other developing nations may impact the effectiveness of international sourcing (Jacobs & Kuipers, 2012).

#### **4.6 CONCLUSION**

The impact of globalization on logistics management as relates to the objectives of the study in sub-Saharan Africa (SSA) was assessed in this chapter. In addition, the study explored literature on the globalization of logistic management in South Africa and the effects of globalization on logistics management in South Africa and Kenya. The next chapter will assess and understand the corporate social responsibility of multinational corporations and their logistics activities in Nigeria.

## **CHAPTER FIVE**

### **AN OVERVIEW OF MULTINATIONAL COMPANIES IN NIGERIA**

#### **5.0 INTRODUCTION**

In this chapter, literature is reviewed to understand the corporate social responsibility of multinational corporations and their logistics activities in Nigeria. Both the perspective, conceptual and theoretical reviews are explored with respect to their company profiles, structure, global presence and logistics management practices.

#### **LOGISTICS IN NIGERIA**

The World Bank shows the measures of logistics performance in countries by its six vital dimensions of the Logistics Performance Index (LPI) such as international shipping, customs, logistics competence, tracking and tracing, timeliness, and infrastructure. The specific impacts of the indicators cooperatively result in total index and serve as an index for measuring how different nations and provinces perform in terms of trade facilitation. Thus, individual countries consider it necessary to purposely advance their logistics performance as it affects its competitiveness in terms of trade. The Nigerian logistics performance index score for the year 2018 was 2.53 and ranked 110 out of 163 countries (LPI, 2018). According to Onyemejor (2015), the poor state of infrastructure and lack of connectivity to economic centers affect Nigeria's logistics performance and international trade competitiveness. Also, a report by PriceWaterCoopers (2012) reveals that Nigeria's poor infrastructure has caused limited growth in the logistics industry. Furthermore, some factors such as time interruptions, blockages for global shipments, poor tracking and tracing competences, poor logistics value and capability are all industry menaces that considers growth projections for logistics and transport industries in Nigeria. Adding to this are substantial customs dealings, which are still a key stumbling block in the operative running of the Nigerian logistics system and add to commercial costs and risk for logistics services providers. There is an indication that Nigerian companies are currently challenged to reorganize their transportation and logistics management method to exploit efficiencies, customer satisfaction and profit margins. This means that it is recommended that logistics in Nigeria must be well combined and apply approaches that will be determined by consumer demand and replacement policy, regulated costs and updated efficiency, leverage

logistics to support, profitable growths and lastly, improve trading partners relations with active relationships (Obasan, Ogunkoya, & Hassan, 2016). Based on research conducted by Umar (2019) on the role of logistics in manufacturing firms' performance in some states in Nigeria shows that managers of manufacturing firms cannot wholly depend on the contributions of logistics to boost performance. It was therefore suggested that management in the manufacturing sector can find means of improving those outbound logistics activities they undertake, including drivers, such as IT to enhance performance, and consider outsourcing those outbound logistics activities.

### **SUPPLY CHAIN IN NIGERIA**

Supply chain has been gradually recognized as a confirmed method to attain sustainable revenue and growth in numerous organizations owing to firm competition in all businesses. In spite of main investments in the supply chain, organizations are struggling to attain competitive advantage (Kabossa & Sitalakshmi, 2014). This suggests that after capitalizing massively in components of the supply chain, several establishments are not gaining more returns on their assets. This is clear in the findings of many Nigerian companies as reported by Njoku & Kalu (2015). The authors revealed that regardless of the fact that Nigerian businesses invested profoundly in their supply chain components, it did not show considerably in their profits. This means that those businesses invested heavily in supply-chain; yet their investment is not translated into earnings or improved performance. Also, those businesses do not have the knowledge of suitable supply chain management components that can increase their performance. For example, the National Bureau of Statistics (2012) mentioned that the creation of food and beverage plants in Nigeria was considered to be very important to exploitation of local raw-materials, effective and capable supply chains and high value products that might offer satisfaction to customers. Unfortunately, over the years, a combination of high cost burden, electricity problems, inadequate knowledge of supply chains, high cost of fuel, poor performance of businesses, poor customer satisfaction, and poor infrastructure, amongst others, have led to the decrease of food, profits, beverage operations, and overall manufacturing. Thus, it is vital that education on variables that could improve supply chain and then result in enhancement in performance of the organization might assist in furthering the profit of businesses, especially in

Nigeria. Conventionally, supply chain under logistics was indicated as the movement of materials and goods, an outstanding support role that enables establishments put on their plans, but over time, the role became more strategic, that is, supply chain management became a means to advance vital results that drive firm performance with the emphasis on satisfying customers' requirements and satisfaction. According to Iroegbu et al. (2018), for Nigerian manufacturing enterprises to participate efficiently in the international market as important players, their products must be competitive in quality, low cost, reactive to present demand, and constantly available. Also, an effective supply chain management must be established in combination with chain partners, the application of lean and flexible approaches, and timely and accurate information which are all needed to progress organizational performance through supply chain. There must be a unified information system and e-commerce like POS, EDI, among others, connecting the associates of the business chain for more active spread of market information. A study by Adebayo (2012) to examine the level at which the Nigerian manufacturing firms are involved in supply chain practices was conducted as well ascertaining the outcome of those practices on supply chain performance. The result revealed that supply chain practices positively impact on Nigerian manufacturing firms' performance.

## **FACTORS AFFECTING LOGISTICS IN NIGERIA**

Many companies in Nigeria are met with several challenges, which constrain their delivery/logistics capacities. There is also the recurrent problem of the lack of financial and material logistics that are required to support operative service delivery. Adeyemo (2015) listed some of the main logistics challenges in Nigeria such as poor logistics infrastructure, impact of corruption and inconsistent fiscal policies, incessant insecurity and militancy, and information.

### **I. Poor logistic infrastructure**

According to the World Bank's Logistics Performance Index (LPI) 2018 ranking, Nigeria is ranked among the top-80 best performers in the world with scores of 256 and ranking of 78. Although the existing privatization of the Nigerian seaports has assisted in the decrease of inadequacies and enhancement in performance, there are still challenges from corruption, poor customs performance, and tedious and costly custom-clearing processes (Faajir & Zidan, 2016). Normally, inland waterways transportation has fewer attention in Nigeria and is less

industrialized. Developments and application of inland waterways in Nigeria will advance logistics to a huge extent, which describes the current efforts made by the government to dredge the river Niger by the Nigeria inland waterways. Air transportation in Nigeria with five international airports is challenged by the absence of good air transportation, poor management and outdated facilities. But there appears to be some encouraging signs as a result of laudable policy intercession, deregulation, recapitalization and globalization of air operations. Presently, there seems to be an increasing awareness of the value of rail transportation in moving of goods and services. For example, in Nigeria, this has led to some debates and support for construction of newer rail lines and coaches, also the concession of present ones to experienced private entities to manage.

According to Adeyemo (2015), the majority of bulk of cargo transported round Nigeria makes use of the road network system. The road network situations in most parts of Nigeria are largely quite patchy and rough owing to poor road construction and insufficient road maintenance. Furthermore, financial constraints and governmental challenges, amongst others, seem to weaken the effort to deliver good road networks.

## II. Impact of corruption and inconsistent fiscal policies

Frequent fluctuations in government policies and corrupt practices have basically hindered the logistics methods in the Nigerian economy as a whole (Akpata et al., 2016). The port and customs bribery which is linked to border interruptions leads to bigger cost of transportation and owing to differences in cross-border trade, there are massive variations in logistics costs and lead time.

## III. Continuous insecurity

The logistics and foreign venture challenges have been heightened in Nigeria with recent increases in crimes, kidnapping, terrorism, bombing, sea piracy and armed robbery (Adeyemo, 2015). The consequence of insufficient security is that establishments want added security plans to secure their logistics processes in places with poor security record. This is expected to attract higher insurance premiums from the insurance firms. All these added necessities have adverse cost and operations consequences.

## IV. Information



The key challenge concerning logistics information flow in Nigeria appears to be restricted to Internet bandwidth, undependable communication network connections, and inadequate knowledge of logistics information flow.

### **GLOBALIZATION OF LOGISTICS IN NIGERIA**

Since globalization involves trade liberalization, it shows that there is free and open movement of trade, money and investment across the global border. It reduces the barrier existing in international trade and creates worldwide market places, which, with the expansion in ICT, can be accessed by any person from any location. Therefore, it opens up a world of prospects for business and also connects them to market. The globalization of logistics allows Nigeria to export and import goods, capital and investment without restriction. Globalization impact on the logistics/supply chain of many enterprises in Nigeria is evident in the transactions in goods and final market (stocks and bonds). In recent years, the supply chain and logistics sector in Nigeria had been facilitated by the spread of globalization. Most of the production has been moved around the states owing to available transport network systems. Globalization will position Nigerian organizations in a highly competitive framework if the five basic components of supply chain and logistics management such as planning, source, make, inventory, delivery, warehousing, and return are implemented. The impact of globalization on logistics will enable Nigerian businesses to integrate information systems and processes through the supply chain to transportation, inventory control, and market forecasts. Therefore, the logistics chain management will become limitless and the flow of resources will not be limited to a certain place. At this point, Nigerian organizations logistics chain management will see a drastic reduction in the cost of transporting materials, cost of labour and ease of access to raw materials. Presently, enterprises in Nigeria operate in a very competitive environment and the only way to survive in these business environments is to invest in effective logistics arrangements, cost-effectiveness, product innovation, expertise and timely execution of contracts. However, the level to which these expectations can be met is to have a functional, effective supply and logistics chain management that can translate the strengths and vast opportunities into a competitive advantage. The aim of all Nigerian organizations is to maximize profit through the reduction in inventories, delivery time and cost of production while still maintaining quality service to customers. It has been reported in various articles how globalization and logistics chain management could determine the survival in various manufacturing industries of countries

such as the USA, China, and South Korea. However, there have been few reports on how globalization can aid performance of logistics in Nigerian organizations.

## **5.1 OVERVIEW OF MULTINATIONAL COMPANIES IN NIGERIA**

Multinational corporations are described as companies which function strategically on a worldwide scale with the center of operations in a developed country. It is any business that has effective activities in two or more countries consisting of distinct features and are usually big entities having a worldwide presence (Kim, 2000). They are the major drivers by which globalization influence is impacting businesses and enterprises in some parts of the world. Nigeria played host to many corporations long before independence and their presence in the country has impacted negatively or positively on the economy and environment in which they operate their business. Multinational companies have to compete with certain issues when entering into and maintaining presence in any host nation. For example, multinationals have to deal with Nigerian policies which foundation are still growing and some issues such as policy irregularities, infrastructural dimension, legal and regulatory climate, lack of transparency and accountability in terms of economic, social, and financial importance. Multinational companies carry the weight of making crucial business decisions when operating in the country. These strategic decisions might negatively or positively impact their future. Therefore, Nigeria government must ensure collaboration and ensure the growth of the business settings for both multinationals and local businesses. If not, multinationals will find new markets in another country to achieve the aim of maximizing profit. The different ways by which these companies enter the country include; freighting their products to test the market and to research whether their current products can achieve enormous market dividend regardless of logistics cost, quotas, and tariffs.

Presently, multinationals such as DHL, Mobil Oil, Shell BP, Fan Milk, FedEx, Nestle, 7up, and Unilever dominate the landscape of Nigerian economy, making them rich because of the sales they make in Nigeria. International business is the motive for multinational corporations, and both are upgraded by the spread of globalization. It has helped the corporations to perform their business activities more easily worldwide other than in their home nations/markets.

### **5.1.1 CORPORATE SOCIAL RESPONSIBILITY OF MULTINATIONAL CORPORATIONS IN NIGERIA**

A large number of multinational companies function within the Nigeria business environment which is divided into the various sectors such as service, logistics, oil and gas, and manufacturing. The operations of the companies are different; so is the diversity, theories, and implementation of the various number of corporate social responsibility (CSR) activities of various sectors. According to Ojumu (2007), CSR entails the donations a company makes to society through the centre of business activities, its social investment, and philanthropy programmes which can boost its profitability, reputation, and sustainability. This means that the assurance of companies in strengthening community growth, development, and willingly removing practices that are not in conformance with public concern. In Nigeria, corporate social responsibility activeness is on the increase with many companies enforcing various CSR themes which are primarily changes towards corporate philanthropy. A small percentage of the companies view social responsibility as a vital part of corporate social responsibility and complete yearly sustainability report. The terms commonly used to describe corporate social responsibility include corporate citizenship, philanthropy, community involvement, charity and sustainability. Presently in Nigeria, Fan Milk, Nestle, 7up, Nigerian Breweries, and Unilever, among others, have initiated one form of corporate social responsibility or another in cities and communities. They get the need to give back to society a share of the profits they have created from the same host community. Today, the efficiency in the process of CSR is achieved when the companies estimate the impact of their operations on the host community and further improve the current plan or design that will ensure minimum negative impacts of their actions on the host communities. Therefore, multinational companies operating in Nigeria are required to determine variables for unification into their operations with the intention of connecting the expectation gaps among shareholders, stakeholders and the consumers. A pronounced corporate social responsibility programme should have a considerable impact on the management of the workforce and manufacturing process and ensure a balance between the ecosystem and the economy.

### **5.1.2 LOGISTICS ACTIVITIES OF MULTINATIONAL COMPANIES IN NIGERIA**

The common logistics activities are gaining a great deal of attention from multinational companies in Nigeria by outsourcing some of their activities such as transportation. Outsourcing of logistics services has enabled the companies to reduce lead time, improve market profit, allowing them to focus on other parts of their production. Outsourcing of various activities by multinationals optimizes the role of logistics of such companies, which therefore leads to many developments and other possibilities. The various logistics activities outsourced by multinational companies such as Fan Milk, Nestle, 7up, Nigerian Breweries, and Unilever, among others, to meet customer demand and satisfaction include warehousing, procurement, inventory control, transport, and distribution. The most frequently outsourced activities in these companies are transport activities which help to reduce costs through lower shipping charges, better manufacturing planning through increased transport visibility and reduced in-transit inventory, and better customer service due to on-time delivery of products. This means that transportation logistics is vital in the operation of multinational companies because it is required all over the supply chain, being the connection between the supply chain members. Multinational companies realized that demand and supply have become international processes less lead time, and that it is vital for their operations in the distribution process for customers and their global presence.

### **5.2 REVIEW OF PROCTER AND GAMBLE**

Procter and Gamble is a company popularly called P&G, a multinational consumer goods company, with its headquarters suited in Cincinnati, Ohio, USA. It was founded by William Procter and James Gamble in 1837.

P and G is a company well known as a world leading consumer goods manufacturer, which operates on an enormously complex supply chain, with over 70,000 suppliers worldwide of which Lagos outlet is included. For nearly two centuries, P and G have remained leaders of consumer goods by their constant re-evaluation and innovation. In 2015, the company redesigned its distribution network by effectively overhauling their supply chain, which in return saved the company the cost of \$1.2 billion. Procter and Gamble products include food, beverages, cleaning agents and personal care products, for example, Pampers, Always sanitary pads, Bounty, and Olay skin care.

### **5.2.1 COMPANY DESCRIPTION**

Procter and Gamble is an organization of which its core strategy is innovation. It established a control tower to enable the company manage logistics effectively. The process enables the organization to manage the flow of products and distribution across various regions. It also makes use of a good communication system to manage the flow of products. P & G is an organization known for its strong global market presence. In 2009 its total sales from the international market accounted to 61%. Its strong market strategy focuses on understanding consumers' needs, effective marketing and brand building techniques. It manages over 23 brands, 12 of which are presently the number one as global market share leader in their respective categories (Procter & Gamble, 2017).

### **5.2.2 GLOBAL PRESENCE**

Procter and Gamble is an organization known for its global presence in the international market. It operates in over 80 countries, thereby offering products and services in over 180 countries across the international market. It operates on a system whereby sales are divided in four segments, which are North East Asia, Western Europe, North America and Developing Market. Presently 61% of its sales are generated from international sales. Recently the organization took a further step by penetrating into the developing market which includes markets in Latin America, Central and Eastern Europe. The organization has continued to maintain its strong focus on market share. It focused on achieving a growing structurally sound business, which has enabled them to grow but not just for the sake of growing. That has further fostered the organization to maintain a solid strategy that adds value for future growth. The organization operates on understanding consumers by interacting with over 5 million consumers in 60 countries across the world. The organization needs to gain insight into consumer understanding which will foster innovation opportunities while working towards ways of serving them better.

Adjusting to cultural differences is another aspect the organization has operated on in the global market. Procter and Gamble is an organization that has been recognized as a preferred supplier and industry leader in a wide range of capabilities which include its organizational strategy, strong business fundamentals and innovative market programmes. They took advantage of its ability to operate on a larger scale in the global market, thereby sharing processes and procedures

among the categories in which they operate in order to retain their competitiveness. The availability of resources and opportunities has granted the organization the ability to expand into more international markets. P&G products have been recognized as a major fast-moving consumer good (FMCG). Procter and Gamble operates on a well-organized global scale, which has adequately grown its competitive advantage through sharing of knowledge, common systems and processes and best practice reapplication, an organization that views its global scale as one of its five core strengths because 61% of its sales are generated from the global market, which has been used as a process of driving efficiency and consumer value. Those five core strengths on global scales are seen as consumers understanding, scale, brand building, innovation, go-to market capabilities.

### **5.2.3 ROLE AND STRUCTURE OF PROCTER AND GAMBLE**

Procter and Gamble is an organization that operates a matrix structure. A global product structure was created to introduce change. Each product category was headed by a president, who in return reports all activities directly to the CEO. Profit and loss responsibilities were held by the country general manager and their regional managers. P and G functional organizations were also strengthened as a result of the new structure.

The senior vice-president headed a single supply function such as the manufacturing, purchasing, engineering and distribution in which logistic management falls. It was created to facilitate the end-to-end integration of P&G global supply function (Ahmer, 2013).

The organizational structure in P & G is a structure that is based on the organization's products portfolio, a structure that focuses on the needs of the business based on the function of the organization and the geographical consumer market goods. The structure helps to identify the lines of authority and command in implementing decisions and solutions to solve problems. P & G has ensured that its organizational structure stays relevant and effective to retain and ascertain current business conditions. The rate at which the global market is highly competitive has imposed more pressure on the organization to use its effective structure to efficiently manage and identify the strength, which is the SWOT analysis of the organization to solve problem adequately while responding to the challenges that may arise in the global market. The

organization put in place a structure that is based on product type divisional structure. These are product type divisions that influence decision-making of managers and the general business processes. The structure can be identified as the following with their characteristics arranged in the ranking of their significance in the organizations:

1. Product type division. The process involves product grouping, which is based on the product mix of the organization (4Ps ). Such products are
  - a. Beauty
  - b. Grooming
  - c. Health care
  - d. Fabric and home care
  - e. Baby, feminine and family care
  
2. Geographical division. These are areas of operations which are the major focus for characterizing the structure of the organization in such a hierarchy. This strategy enables adequate support for managing regional operations in the global market, while maintaining an effective consumer goods industry. Such divisions are
  - a. North America
  - b. Europe
  - c. Asia
  - d. Greater China
  - e. Latin America
  
3. Functional groups. This is a corporate structure, established with the sole aim of supporting the CEO and his employees. These structures ensure that the fundamental business or organizational functions are effective and efficient. The process reflects the level of management and the aspect of decision making.
  - a. CEO
  - b. CFO/ finance
  - c. Global health care

- d. Global fabric and home care and global baby and feminine care
- e. Global beauty
- f. Global grooming
- g. North America selling and market operations
- h. Human resources (Ahmer, 2013).

#### **5.2.4 MARKETING STRATEGY OF PROCTER AND GAMBLE**

Marketing strategy is known as the active comprehensive plans of all marketing goals, structured from market research. Procter and Gamble operate on several strategies namely

- Location: One of the major strategies operated is location; P&G stores are all located in designated areas, easy access to roads, offices and schools.
- Low prices on products, an essential marketing strategy operated by P&G. delivery discounted products with high quality while offering a variety of products to consumers.
- Customer: P&G understands that customers are the organization's means of growth, thereby treating customers as external shareholders, putting the needs of customers first, by dividing the market into smaller parts. Average income earners can easily buy P&G products.

Procter and Gamble operates as a global business unit (GBU), a process of selling and marketing operations. The procedure combines global scale benefits with several local focuses on consumers and retail customers in each country where P & G products are sold across the world. It has a portfolio in which products are organized in various global business unit categories. Such categories are in areas where P & G are operating in a leading market position and where the product technology delivers performance differences that are important to consumers.

#### **5.3 COMPANY OVERVIEW OF PZ CUSSONS NIGERIA PLC**

PZ Cussons was established in Sierra Leone as a trading post in the year 1879 by George Paterson and George Zochonis; then it was known as Paterson Zochonis. The company then expanded its business operations into its neighboring country, Nigeria, before the end of the 19th century. The first branch of Paterson Zochonis in Nigeria was opened for business at Lagos in 1899, followed by a branch in Calabar in 1903. Other branches were later established at



Oshogbo, Kano, Ibadan, and Ilorin in 1912. Paterson Zochonis's name was later changed to Alagbon Industries Limited in the year 1960 and it officially became a public company starting in the year 1972. Paterson Zochonis Plc was later renamed PZ Cussons Plc in the year 2007 in conformity with the Companies and Allied Matters Act. Owing to the company becoming a public company, its shares were added on the Nigerian Stock Exchange (NSE). According to Capital Bancorp Plc (2014), PZ Cussons Plc has sustained an impressive turnover growth momentum in the last five years, totaling N72.91bn with compounded annual growth rate of 3.86%. Currently, it has a shareholder base of over 76,000 with shareholders' funds amounting to the sum of N1.985 billion with a market capital of the sum of N119.1 billion. The PZ Cussons Plc are increasing efforts to invest in fortifying the logistics and supply chain management, upgrading the operative capability and customer experience, while reducing operations cost. At present, it has enjoyed a wide range of business successes in Nigeria for a long time and is primarily engaged in producing, sales and distribution of different types of consumer goods and home devices. It also has a joint venture with Nutricima Limited, then Harefield Industrial Nigeria Limited, and finally PZ Wilmar Limited to distribute their products. The range of products manufactured and supplied by PZ Cussons Plc for marketing is shown in Table 5.1.

**Table 5.1: PZ Cussons Plc product lines**

Personal Care	Home Care	Nutrition	Home Appliances
Venus	Elephant detergent	Nunu	Air Conditioners
Carex	Morning Fresh	Olympic	Microwaves
Premier cool	Zip	Coast	Refrigerators
Imperial Leather	Canoe Green	mamador	Washing Machines
Joy	Roberts Antiseptic	devons king	Freezers
Robb	Jet Detergent		Cookers
Cussons baby	Bulk Detergent		Water Dispensers
Stella Pomade			televisions
			DVD's

Source: PZ Cussons PLC (2018)

### **5.3.1 PRODUCT DISTRIBUTION NETWORK**

The PZ Cussons Plc effective distribution system ensures up-to-date delivery of its finished products and comprises 26 depots, two distribution centers, factories in Ikorodu, Aba and Ilupeju, and others strategically spread across major cities and towns throughout Nigeria. The company adopted a flexible logistics system and supply chain which renders quality service to consumers by dealing with thousands of distributors, suppliers, and further spending on current technological facilities, and systems that boost product standards. Its local suppliers include PZ Power Limited, then the PZ Tower Limited and finally the HPZ Limited and its international suppliers are firms in the PZ Cussons Group. Its sometimes procures the services of some agencies to help in marketing their products. Most of these firms have large multiple depots, warehouses, and distribution links by means of which they reach the markets. This implies that their distribution channel makes it available to customers quickly; also, in turn making it convenient for customers, and balancing what the company can manufacture at a particular period to market demand at minimal costs. The company also uses intermediaries' delivery trucks in transporting the products from the factory to the depots and distribution centers. Therefore, the transportation channels involve the manufacturers, wholesalers, and retailers. PZ Cussons Plc is also developing an integrated single structure across the country that will define new routes to market products to ensure distribution systems in local markets. An effective and efficient logistics chain in the company processes has led to improvement in operational efficiencies through extension into new routes to market and reduction of distribution costs (Capital Bancorp Plc, 2014).

### **5.4 HISTORICAL BACKGROUND OF THE NIGERIAN BREWERIES PLC**

Nigerian Breweries Plc is the biggest brewing company in the country which was founded in the year 1946 and began the production of Star Beer in its Lagos producing plant in the year 1949. The head office of the company is located at no 1, Abebe Village Road, Iganmu, Lagos. The next factory to be commissioned after the Lagos Brewery was the Aba Brewery which was commissioned in the year 1957, followed by the Kaduna Brewery in 1963 and the Ibadan Brewery in the year 1982. Nigerian Breweries Plc obtained their fifth and sixth brewery plants (Ama and Enugu) in the years 1993 and 2003 respectively. It is primarily concerned with demand and selling of alcoholic and non-alcoholic drinks. Some of these products include

HEINEKEN, STAR, AMSTEL MALT, LEGEND, MALTINA, FAYROUZ, GULDER, MALTINA, FAYROUZ, CLIMAX, GOLDBERG, MALTA GOLD, LIFE CONTINENTAL LAGER, ACE PASSION, STAR LITE, STAR RADLER, “33” LAGER BEER, WILLIAMS DARK ALE, TURBO KINGS, MALTEX, HI MALT, and BREEZER. The Company is a subsidiary of another company based in Netherlands, named Heineken N.V. which has 54.09% equity interest shares in the Nigerian breweries plc and is vital to the firm’s business dealings in Africa. In year 2011, the Nigerian Breweries Plc decided to expand into the global market place by acquiring ruling equity shares in two companies, Sona Systems and Life Breweries Company from Heineken. The Sona Systems Associates Business Management Limited has two production lines in the cities of Ota and Kaduna, while Life Breweries Company Limited owns a single production line in Onitsha. In 2012, the two companies were finally combined with Nigerian Breweries Plc, with other brewing facility in Kaduna, namely Kudenda Brewery was acquired due to the acquisition of Sona Systems. This means that three brands of products such as MALTA GOLD, LIFE LAGER BEER, AND GOLDBERG LAGER are now owned by Nigerian Breweries Plc because of the merger. In the year 2014, Nigerian Breweries Plc and Consolidated Breweries PLC combined their business operations with knowledge of the Securities and Exchange Commission. Therefore, the firm currently acquired three breweries facilities in Imagbon, Awo-Omamma in Imo State, and Makurdi in Benue State which adds up to 8% of the breweries as the result of the integration. Hence, the company can be referred to as an international business the beverages of which are distributed in Nigeria and overseas with about 26 depots across the country, 11 breweries and two plants for malting beverages. As the current major brewing company in Nigeria, some of its product export locations include the USA, the Middle East, the Netherlands, Asia, the United Kingdom and some parts of Africa. In line with the company commitment in supporting ancillary business, some of the raw materials needed such as labels, bottles, cans, crown corks, plastic crates are contracted. Also, service providers such as distributors, event managers, marketing agencies, and transporters are outsourced. According to the firm’s financial report of the year 2014, it has a market capitalization of the sum of N1.3 trillion (Nigerian Breweries Plc, 2014).

#### **5.4.1 PRODUCT DISTRIBUTION THROUGH THIRD PARTIES**

There are two (2) extensive parts in the alcoholic distribution channel at the Nigerian Breweries Plc. The primary channel is directly handled by the Nigerian breweries and importers and this involves direct physical distribution of bottled beer to wholesalers via either company-owned delivery trucks or third-party transport companies. The other segment is the secondary segment that makes use of effective and efficient distribution links to sell and transport products from wholesalers to bulk breakers, retailers and ultimately to the consumer. Another approach taken by these companies in their distribution is the industrial network path. It presents the industrial setting as a series of organizations that are connected with ventures in the manufacturing, distribution, and use of goods and services which results in the formation of long-lasting market interrelationships. Therefore, these outsourced firms consider everlasting relationship with customers, distributors, and suppliers in their network to enable competition within the industry. Industry experts estimated beer retailers in Nigeria amounted to five hundred thousand in 2003. The importance is that the product distribution channel is already confirmed, and the substantial infrastructure ensures an effective distribution to all stakeholders involved.

Nigerian Breweries Plc has an advantage from contracting third parties' distribution channels such as KM Haulage Services to use transportation channels to make sure that products are available in all locations of the country. KM Haulage Services is the biggest distributor of Nigerian breweries products in the country with over 500 trucks and it specializes in haulage and transportation services. The company has developed many logistics outlets across Nigeria to ensure logistics systems are fully adequate to meet the demands of customers and partners. The main reason for using third party distributions by Nigerian Breweries is in reduced transactional costs because the beer is not a commodity that has a level of specificity so the distribution channel can be outsourced. Currently, Nigerian Breweries Plc has managed to sign a Memorandum of Understanding with Psaltery International Company Limited to harness huge value chain and expanding domestic business activities in Nigeria, particularly in procuring of raw materials such as sorghum and cassava.

## **5.5 COMPANY PROFILE OF DHL**

In 1969, Adrian Dalsey, Larry Hillblom and Robert Lynn created one of the biggest 3PL companies in the world known as DHL. It started the door-to-door express delivery service which involves delivering shipping documents by air and transporting goods to pass through customs with less delay in the cities of California, Hawaii, and San Francisco.

In 1978, DHL started its operations in Nigeria, making it the first territory in Africa. DHL Nigeria has been a competitive market leader with respect to international deliveries of parcel, courier, express mail services, and logistics services. Since its inception in 1969, DHL has become the best in logistics industry (freight, shipping, tracking, and international express) comprising more than 285,000 employees in 220 nations of the world. Deutsche Post group in 1998 started to acquire shares of DHL, which reached its largest holding interest in 2001 and finally acquire all outstanding shares by 2002. Therefore, the firm is a branch of the Deutsche Post DHL group which comprises DHL Mails, DHL Express (express shipments), DHL Global Forwarding (air and sea freight), DHL Freight (land transports), and DHL Supply Chain. The established groups' knowledge of international and local market helps to proffer professional solutions, services in ground logistics/transportation, freight (air, ocean), supply chain, international postal service areas, and other enterprise logistic solutions. The financial reports of the DHL Express reveal that in 2016, the revenue increased by 2.7 % to a sum of €14 billion while the annual earnings before interest and taxes shows an increase of 11.3% over 2015 to a sum of €1.5 billion (DHL, 2018).

### **5.5.1 DHL FREIGHT LOGISTICS**

Air freight is a vital part in the logistics chain management, speeding up the pace with the ever-competitive global market, and minimizing costly backlogs to increase satisfaction among customers. The DHL Air Global Forwarding carries almost 12% of the worldwide freight market or operations which are operated through private structures which include 600 offices in over 150 countries with 7,000 specialists. This means that despite owning airplanes for freight services, carefully selected private airplanes are sometimes arranged to deliver DHL goods or mail in order to meet on-time service delivery. It also implemented a series of highly secured logistics network worldwide and a logistics interactive system to aid in tracking customer goods

to ensure safety and comfort. The DHL Ocean Freight offers a flexible distribution of customer freight through 330 ocean freight offices through a tracking and tracing system to provide full visibility to customers along the whole supply and logistics chain. DHL's introduction of new shipping technology devices such as satellite networks (GPS) provides the reduction of freight costs, improves reliability and efficiency in the logistics chain and reduces time of delivery. DHL Road Freight network enables increased quality transport integrated service which ensures better service from pick up to delivery, door-to-door delivery to wherever it needs to be at the right time (DHL, 2018).

### **5.5.2 DHL TRANSPORTATION AND WAREHOUSE MANAGEMENT SYSTEMS**

DHL warehouse management systems control a series of daily complex activities of a parcel distribution center, inventory management, order picking, shipping, automated materials-handling equipment interfaces, 3PL billing, voice picking of goods, and parcel manifesting process. The use of a warehouse management application system gathered a revenue of \$1.2 billion in 2015 which can increase to \$4.1 billion in 2024. Over the years, the transportation management system has become a vital tool in DHL's management systems which has helped to achieve competitive transportation in an increasingly complex environment. It has helped in minimizing costs in transporting freights, improving both performance and customer satisfaction. The company can fully track and trace products across networks as they are transported and also identify certain network optimization opportunities such as backhauls of fleet and continuous moves which are not detected in the initial solution design. Presently, DHL has incorporated the MySupplyChain tool with transportation management to increase real-time visibility of products from transporters and the fleet using GPS data real-time updates. The transportation management system of DHL focuses on all aspects of time management, resources management, freight sourcing, planning, executions across all transportation channels, and freight's movement from starting point to final destination (DHL, 2016).

### **5.6 COMPANY BACKGROUND OF FAN MILK PLC**

Fan Milk Plc was created in 1961 by Erik Emborg. It was incorporated as a public limited company on 5 October 1995. The company is a branch of Danish Dairy Services (Fan Milk

International) which owns 99.3% of the equity share capital of the company while the remaining 0.7% share capital belongs to corporate investors and Nigerian individuals.

Fan Milk Plc has a recombination factory situated in Eleyele Industrial Layout at Ibadan which is used in the production and distribution of fresh dairy and juice products. It has a distribution center in Lagos with over 30 staff. The company initially started with the production of fresh cottage cheese, white milk, chocolate milk, and yoghurt which were supplied by bicycle vendors as a main outlet, and other small size depots. The company introduced new products to the country such as ice lollies, yoghurt drinks, ice cream, and packaging technology in 1970. The success of the new products in 1970 generated revenues to further set up distribution centers, depots, and a second producing factory at Kano State in 1981. In 1998, the company, through the integration of newly refurbished cold rooms, finance restructuring and new sets of depots, admitted a new product named FanDango fruit drink which was an instant success among Nigerian consumers. Today, some of the product lines include FANDANGO FRUIT DRINK CITRUS, FANDANGO FROZEN SACHETS, FANDANGO FRUIT DRINK TROPICAL, SUPERYOGO, FANVANILLE, FANCHOCO, AND FANTASTIC YOGHURT DRINK AND the dairy products are CHOCOLATE MILK, COTTAGE CHEESE, SET YOGHURT and ICE CREAM. The company's distribution network, distribution centers, franchise holders and small distribution centers help in transporting their products to teeming consumers all over the nation. It was estimated that Fan Milk Plc has created direct employment in West Africa amounting to 1,300 employees, 400 seasonal workers, and total employment (including bicycle vendors) amounting to 20,000 people. The company's turnover in the year 2017 grew by 7.2% from N10.96 billion in 2016 to N11.75 billion in the year 2017 (Fan Milk Plc, 2017).

### **5.6.1 FAN MILK DISTRIBUTION CHANNEL**

Starting from the company plants, Fan Milk's products are distributed by thousands of Fan Milk's fleet of refrigerated delivery trucks to the company's local distribution centers and depots which have over 800 employees which aid in spreading the business activities. Fan Milk Nigeria PLC has created various distribution channels and complex networks tactically sited at distribution/supplying outlets from where bicycle vendors and pushcarts distribute the products in the streets to the consumers. In Nigeria, the distribution network comprises more than 50

depots, 300 agents, and 15 regional offices spread all over the cities. This means by distributing their products through bicycle vendors and small stores, the company has created a marketing strategy and a flexible logistics network of operation. The bicycles given to the local vendors are fitted with insulated boxes for maintaining the cold nature of the products. The products are bought from FAN MILK factories and then the vendors bike around the local area to sell the products to the customers. Another distribution channel used by the company involves distributing its products directly to restaurants and supermarkets which accounts for 5% of sales because about 5,000 vendors are directly connected with the depots, while the large portion of the company products is sold through vendors connected to the agents' depots. Since its inception, the company objective is to adapt its business to correlate with the Nigerian market conditions starting from the types of products, types of packaging style such as smaller and larger cups (150 ml, 2 litres - 5 litres) and the forms of distribution network to make the products available to as many people as possible (Fan Milk Plc, 2017).

## **5.7 COMPANY BACKGROUND OF FEDEX**

Fedex is an international dispatching and logistics solutions enterprise that provides services to customers and businesses all over the world. The enterprise, known as Federal Express, was developed in 1970 by Frederick Smith when he acquired a controlling equity stake in Arkansas Aviation Sales, then named it Federal Express, and later incorporated Federal Express in 1971 to cater for efficient and reliable delivery service. Federal Express started its operations in Nigeria on the 12th of October 1992 and was represented in Nigeria by RED STAR EXPRESS. In Nigeria, it has over 150 offices which are spread nationwide to service consumers' express shipments delivery and also deliver tactical design route with operating companies such as FedEx Freight, FedEx Express, FedEx Global Logistics, and FedEx Ground under the leadership of the FedEx name globally. In 1980, The company extended its parcels services to 90 U.S. cities and Canada by the use of over 14 small planes delivering about 65,000 parcels daily. The annual revenue reported that year amounted to \$1 billion. The company started its first business acquisition of courier Gelco Express in 1984, followed by acquisitions of Cansica and Island Courier Companies in 1987, then the purchase of holdings in Italy's SAMIMA and three freight carriers based in Japan in 1988.



The earnings of the company during the period of acquisition of firms grew from \$188 million to \$2 billion and later sales amounted to \$4 billion. In 1992, Federal Express introduced business logistics services which aim to offer logistics and operations management to other markets, especially international airfreight services. The company's portfolio of services changed during its integration with global brands to form other services, namely FedEx Custom Critical, FedEx Freight, FedEx Global Logistics, FedEx Express, and FedEx Ground. FedEx is currently a \$60 billion company in revenue with an operating profit of \$5 billion fiscal and ground revenue of a 5% increase per parcel in 2017. The company has grown to the point where it has added 14 B767F to a fleet of 660 aircraft replacing less effective airplanes and over 80,000 vehicles, and serving over 64 countries with incorporated FedEx and TNT operations (FedEx, 2017).

### **5.7.1 FEDEX TRANSPORTATION STRATEGY**

FedEx Freight started through the procurement of Viking Freight and subsequent acquisition of American Freightways. The firm performs fast, door-to-door delivery of important freight while FedEx Express is a leading force in the transportation and express delivery market, and major source of the company's revenue. FedEx transportation strategy involves streams of global networks of vehicles, planes, and trucks to provide a time-sensitive delivery system of documents and packages. FedEx has introduced lean transportation to its services to manage, identify and minimize transportation costs while implementing important lean logistics principles of delivery frequency, level flow, lot size reduction, and four critical laws of lean transportation. The company's eight fundamental logistics processes include Right Materials, Right Quantity, Right Time, Right Place, Right Source, Right Price, Right Quality, and Right Service. The four lean logistics laws which have significantly improved FedEx logistics performance are the following:

- The Law of Transportation Waste
- The Law of Transportation Strategy
- The Law of Daily Event Management
- The Law of Transportation Performance

These logistics laws can describe the place and how transportation procedure can positively improve overall FedEx organizational performance and also help in differentiating a measurable

amount of planned performance while reducing cost through infrequent transportation network designs. FedEx critical inventory logistics is a part of the FedEx Express network that was developed to fully back FedEx critical time inventory and quality service parts inventory. Inventory stocking can be found in 500 stocking points at over 26 countries throughout the FedEx express locations, thereby making distribution processes and customers' transportation networks more efficient. FedEx technology strategy helps organisations in selecting the best point, direction, and method of shipping; it starts with the source from multiple stocking area to fill a form and gain already determined the supplier stocking route. The company works to make its logistics service inventory parts distribution operations more effective and improve the performance of their delivery network by providing quick service supply solutions (FedEx, 2017).

## **5.8 COMPANY BACKGROUND OF NESTLÉ NIGERIA PLC**

Nestlé Nigeria plc is a member of the Switzerland based Nestlé Group that began selling operations in Nigeria in 1961. It evolved to a dominating food manufacturing and marketing company in Nigeria in terms of sales and retail capitalization. It is a part of NESTLE Central and West Africa division which operations is based in Ghana. Internationally, the Nestlé group is arranged into regional arrangement to control skill and size of the firm.

In 1979, the company was listed on the floor of the Nigerian Stock Exchange. It has grown to be the largest shareholder among the West Africa division of the NESTLE group. The market capitalization of Nestlé Nigeria plc contributed to 98.76% turnover of Nestlé Central and West Africa while the remaining 1.24% was contributed by other Nestlé Central and West Africa group. Presently, the shareholders number over 29,000 and the company's revenue is the sum of N133.0 billion with profit after tax of N22.3 billion. The company has two producing plants in Agbara and Flowergate in Ogun State, which is one of Nestlé's biggest plants in Asia and Africa and is also listed among the Global Nestlé factories in terms of increased productivity.

In 2011, the Flowergate factory was commissioned to only manufacture popular products e.g. Maggi brand. In 2013, Nestle Nigeria Plc commissioned a state-of-the-art depot center in

Agbara, Ogun State to further increase productivity output in Nigeria and strengthen its number one position in the West and Central Africa region. The company discovered the need to form a venture or partnership in outsourcing some of its value chain such as vital materials in production which are now sourced locally through farmers and suppliers. The range of products manufactured and supplied by Nestlé Nigeria Plc for marketing is shown in Table 5.2.

**Table 5.2: Nestle Nigeria Plc product lines**

PRODUCT RANGE	TYPE OF PRODUCTS
Infant cereals	Nutrend, Cerelac
Family cereal	Golden Morn
Beverage drink	Milo
Confectionery	Chocomilo
Bouillon	Maggi Cube, Maggi Chicken, Maggi Chicken, Maggi Crayfish, Maggi Maxi Cube
Sauce	Maggi Machop
Table water	Nestlé Pure Life
Coffee	Nescafé Classic, Nescafé 3-in-1
Full cream milk	Nido
Infant formula	Nan, Lactogen

Source: Nestle Nigeria PLC (2017)

### 5.8.1 DISTRIBUTION NETWORK OF NESTLE NIGERIA PLC

The company operates an outstanding distribution network with its depot center in Ota, in Ogun State. The centralized distribution center supplies a sum of 74 - 170 distributors which are spread in different locations of the country. Starting from the production line, the company's products are either exported to surrounding countries or sold locally which form an extensive distribution channel. In the ultra-modern distribution center in Agbara, Nestle Nigeria Plc has created a direct store delivery system whereby local suppliers/agents using delivery trucks and motorcycles to distribute reduced cost products directly to small retailers in local areas. Therefore, the company makes use of local distributors who market the products to mini-stores and also distribute directly to customers in markets which form part of a traditional distribution network. The high productivity recorded is because of an improved distribution channel that saw it moved from wholesale to a retail-guided marketing model. A retail-driven distribution model relies on

supporting sales forces to move products through a distribution network thereby happening in a justification of the firms' distributors. The rationalization of the Nestlé Nigeria Plc distributors corresponds with the firm's move to a more centralized ultra-modern warehouse center in Agbara, Ogun State. Therefore, the company now has a more organized distribution channel which gives the company control over its distribution network chain, while also giving its distributors more responsibility across the nation (Vetiva Capital Management, 2010).

## **5.9 COMPANY BACKGROUND OF NIGERIA BOTTLING COMPANY PLC**

The Nigeria Bottling Company Plc started its operations in 1951 when it was assimilated as a branch of A.G Leventis Group and granted the right to produce and market Coca Cola products in Nigeria. It is the largest producer in the non-alcoholic beverage market in Nigeria which started as a family business to become a popular and leading force. Nigeria Bottling Company was listed on the Nigeria Stock Exchange in 1972 as a public company. In 1953, the production operations started at a bottling plant in Ebute-Metta Lagos and new facilities were later added at Kano, Port Harcourt, and Ibadan. It currently has over 13 bottling plants with over 80 distribution warehouses, over 160 million consumers, 250,000 sales depots which are spread across various cities in Nigeria, and a staff strength of over 6,500 employees. Since the inception of production, the company has produced non-alcoholic beverages in sales volume of over 1.8 billion bottles per year in the country. Nigerian Bottling Company produces and sells over 33 brands such as Sprite, Schweppes, Eva Water, Coca-Cola, Fanta, Burn energy drink, lemon and black currant flavors, Club soda, tonic water, and five Alive fruit juice brands. In 2000, the company became one of the branches of the Coca Hellenic Bottling Company owing to the takeover of CC Beverage Company Plc and Hellenic Bottling Company S.A. The estimated shareholdings report shows that CC Beverage Company Plc has an equity stake of 10.62% while CCHBC has a major equity stake of 55.81% and rest of the 33.57 % stake is for shareholders and directors. The financial structure of the shares of Nigerian Bottling Company PLC grew from N487million in 2003 to N654,367million in 2006 and currently it is the sum of N65.33bn with outstanding shares of N1.31bn which accounts for 8.72% of authorized market capitalization.

### **5.9.1 LOGISTICS OPERATION AND DELIVERY SYSTEM NIGERIA BOTTLING COMPANY PLC**

The company's production capacity volume and process flow of its delivery process has grown over the years because of its understanding of the logistics and delivery processes. The Nigerian Bottling Company's thirteen (13) production plants are spread across the country and it also has sixty (60) distribution depots in vital locations which are referred to as strategic business units. They cover smaller warehouses in some locations which lack easy access to the market delivery from the production plant. This implies that the product being delivered to the customers originated from one of the thirteen (13) production plants and has been arranged, sorted, monitored, and accounted for in the strategic business units, warehouses, and depots. Therefore, batches of production from the plant are accompanied by a production invoice which contains the quantity of product, batch number of the product, signatures, batch date, number plate of the truck, signature of the relevant officers and the truck driver.

The internal logistics control personnel make sure of adequate record keeping from the production facility and routinely perform stock taking of the physical products in the warehouse to ensure that records are accurate. The company recently purchased over 100 trucks and forklifts to add to its fleet which has its own drivers and personnel who control the logistics of distributing and circulating the products to the warehouses. Its various strategic business units, warehouses, and depots are allocated fleets of delivery trucks loaded with products, driver, and assigned personnel with the stock list. The aim of assigning trucks to specific areas is in the hope that the customers/clients reached will be willing to buy the goods. The main responsibility of personnel allocated to each delivery truck is making sure that cash sales collected from customers are delivered to the sales/finance department. The Nigerian Bottling Company holds a series of meetings to solve the logistic challenges faced by the delivery personnel when delivering the products to customers (Oyemakinwa, 2014).

### **5.10 COMPANY HISTORY OF SEVEN-UP BOTTLING COMPANY PLC**

The Seven-Up Bottling Company Plc is one of the foremost fast-moving consumer goods company which was established in Nigeria by Mohammed El-Khalil when he visited the country in 1926. The first bottle of 7Up started rolling out of the production plants which is located in

Ijora, Lagos the day Nigeria gained her independence on 1st of October 1960. Owing to the company vision to become Nigeria's best fast-moving consumer goods, it established two more production lines in Ibadan, Oyo State and Ikeja, Lagos State in 1980. In 1990, Pepsi International acquired 7Up International. This buyout enabled the company to come out with the Pepsi brand on the Nigerian market. Presently, 7up Bottling Company has its main office stationed in Beirut and three operational offices in Nigeria, Tanzania and Ghana. The firm is one of the biggest independent producers and distributors of broadly consumed soft drink brands in Nigeria. The soft drink brands produced and distributed include PEPSI, PEPSI LITE, MIRINDA ORANGE, MIRINDA PINEAPPLE, TEEM TONIC, TEEM SODA, SEVEN UP, AQUAFINA, TEEM BITTER LEMON and MOUNTAIN DEW.

The production plants are sited in Aba, Ibadan, Ikeja, Kano, Benin, Kaduna, Abuja, Ilorin, Enugu while the ones in Apapa and Portharcourt are only used for marketing. The workforce of over 3,500 employees and 200 distribution centers or depots helps in marketing their products to the general public. Through its five-year revenue cumulative average growth rate, the company recorded 10% and revenue of ₦82.450bn, thereby making it one of most admired and second-best soft drink manufacturers in Nigeria in terms of earnings and factory size (Seven-Up Bottling Company Plc, 2017).

#### **5.10.1 DISTRIBUTION NETWORK OF SEVEN-UP BOTTLING COMPANY PLC**

The company has an organized distribution system with an expansive distribution network of over 200 delivery depots situated all over the country. The production and deliveries of products from the nine (9) state-of-the-art production plants are strategically positioned to solve all logistical challenges arising from procurement of raw materials needed for production to delivering the finished soft drink brand to suppliers, distributors, and customers. The consolidation of mini distribution facilities into larger ones increased the load volume while minimizing the cost of delivery. The products are available to consumers through a channel of distribution facilities strategically positioned within the large populated areas, and it distributes the soft drinks brand directly to retail outlets. The retail outlet distribution network enables effective, efficient, quality service to the retail outlets it sells to such as warehouses, convenience stores, supermarkets, malls, and other places that serve the Nigeria population. Seven-Up

Bottling Company Plc constantly monitors the designed distribution network and also makes periodic changes to meet the new conditions in the ever-competitive marketplace because demand for the products has increased with new competition and state-of-the-art distribution strategies emerging (Onwugharam, 2014).

### **5.11 A BRIEF HISTORY OF UNILEVER PLC**

Unilever Nigeria Plc is a multinational organization which is a branch of Unilever Overseas Holding B.V. that was assimilated as Lever Brothers (West Africa) Limited in the year 1923 by Lord Leverhulme. Lever Brothers is known to have started its trading activities in the soap business in the 19th century in Great Britain and it was listed on the Nigerian Stock Exchange as a public limited liability company in 1973. In the course of mergers and possessions, the firm branched out into producing of food items, and home care goods. The outcome of the mergers/acquisitions is the introduction of Cheesebrough Ponds Industries Ltd. and Lipton Nigeria Ltd. in the years 1988 and 1985 respectively. The company changed its name in the year 2001 to Unilever Nigeria Plc, owing to the rapid rise in the stake of its parent company to 50.04% and with general public having equity holdings of 49.96%. According to Capital Bancorp plc (2014), Unilever has sustained an impressive turnover growth momentum in the last five years totaling to N90.77bn and an operating income of N12.95bn. The sum of shareholders' fund amounts to N10.04bn with a compounded annual growth rate of 6.91%. Its head office can be found at NO.1, Billingsway, Oregun, Ikeja, Lagos and some of its regional offices or centers at Jos, Ibadan, Abuja, Industrial sites at Oregun, Aba, and Agbara, Ogun State. About 60% of Unilever's overall business expansion is in the emerging market of which Unilever Nigeria represents a central player in African continent with over 101 major distributors nationwide as their marketing outlet conglomerate and making it the oldest flourishing producing firm in the country.

Unilever Nigeria Plc is regarded as one of Nigeria's dominant suppliers and manufacturers of quality fast-moving consumer goods/products in the categories of foods, home and personal care (Capital Bancorp plc, 2014). Unilever has a large number of dominant goods in the personal care categories which remains a powerful brand and continues to grow in demand both locally and in

other neighboring West African countries such as Ghana. The range of products manufactured and supplied by Unilever for marketing is shown in Table 5.3.

**Table 5.3: Unilever product lines**

Home Care Unit	Personal Care Unit	Foods Unit
Omo detergent	Vaseline petroleum jelly	Lipton Yellow Label
Vim detergent	Lux beauty soap	Home Cup tea
SunLight detergent	Close Up tooth paste	Blue Band Margarine
	Pepsodent tooth paste	Royco Cubes
	Pears lotion	Knorr Cubes
	Fresh soap	
	Rexona	

Source: Unilever Nigeria Plc (2017)

The company was chosen as a study because it is one of the market leaders among the fast-moving consumer goods sector, with aggressive marketing and logistics strategies gaining a high percentage of their market share. Therefore, there is a need to study their distribution channels, logistics management, logistics practices and types of logistics processes in their various bands.

### **5.11.1 UNILEVER LOGISTICS MANAGEMENT**

Unilever Nigeria Plc's vision is for the customer service management, distribution management of the company, optimized service and cost in the various forms of logistics such as warehouse and transport network by outsourcing these logistics solutions with a single provider. This logistics solution was formed with Bolloré Logistics Nigeria, a multinational company with a track record of delivering excellent tailored logistics solutions to partner another multinational company such as Unilever Nigeria Plc. The warehouse requirements to deliver a quality distribution channel and cost-effective logistic chain solution is the responsibility of Bolloré Logistics Nigeria. Apart from Unilever's operations, it also manages the daily reception of finished goods, inventory storage, preparation of orders, distribution of products, and warehousing activities for other big players in the fast-moving consumer goods industry such as FrieslandCampina, A&P Foods, and others. This outsourcing practice is adopted by big companies all over the world and allows Unilever Nigeria Plc to concentrate on production while Bolloré Logistics Nigeria handles distribution and warehousing. This practice will in turn enable competitive advantage in Unilever's operations by increasing transport network solutions,



efficiency, productivity, a drastic reduction of overhead cost, and leveraging on technology (Unilever Nigeria Plc, 2017).

#### **5.11.1.1 Warehousing**

The logistics outsourced company, Bolloré Logistics Nigeria, is located in the company's 16,290 m<sup>2</sup> warehouse sited at its manufacturing factory in Ogun State (Agbara Industrial Estate). The warehouse strategy used is in centralized form which is sited close to the point of production in order to reduce supply chain cost. FOOD, BEVERAGES, KNORR, VASELINE, OMO, CLEANING AGENTS, HOME CARE PRODUCTS, and PERSONAL CARE PRODUCTS are manufactured and distributed at the Agbara factory. The warehouse is controlled using the SAP Warehouse Management, and the operations are managed by 171 operators who ensure non-stop daily operations. The delivery of over 600 bulk truckloads moving a total of 21,397 palettes are delivered every month since the operations started. The warehousing strategy employed is in line with product category management listed as personal care unit, home care unit, and food care unit (Unilever Nigeria Plc, 2017).

The ways in the digitization of the supply and logistic chain activities at the company is supported by a pragmatic innovation programme and initiatives such as the following:

- Real-time logistics chain visibility and piloting services: This involves controlling and handling near real-time data inputs to track and trace products and their quality.
- Flows optimization and anticipation services: This involves relying on analytics data to optimize flows, orders, and proffers alternative solutions when needed.
- Warehouse automation services: This involves automatization of distribution, storage of products in a warehouse using robots and centralized computer systems.
- Internal efficiency services: This offers solutions and improves internal manufacturing processes (Unilever Nigeria Plc, 2017).

**Map 5. Map of Nigeria showing major cities**



Source: CIA Factbook (2010)

## 5.12 CONCLUSION

This chapter explained the impact of globalization on logistics management in Nigeria using multinational companies in Nigeria as case study. This chapter also reviewed existing literature relating to the globalization of logistics in Nigeria. The structure and overview of multinational companies, the marketing strategies of multinational companies, international logistics and logistics outsourcing were also discussed. The next chapter will discuss the research methods and the research instrument adopted for the study in order to achieve the objectives of the study.

## **CHAPTER SIX**

### **RESEARCH METHODOLOGY**

#### **6.0 INTRODUCTION**

This chapter of the study reveals the methodology that was used in carrying out this study. This research is focused on investigating the effects of globalization on logistic management in multinational companies in Nigeria. This section gives a blueprint description of some multinational companies, the methods implemented in data collection and the procedures used in examining gathered data.

#### **6.1 RATIONALE FOR THE STUDY**

This research rationale will add to the hitherto body of knowledge on the contemporary effects of globalization on logistics management in multinational companies in Nigeria, the globalization impact on logistics management in Nigeria, the effects of economic policies on logistics management in Nigeria and also the role of logistics globalization of multinational companies on the economic growth in Nigeria.

#### **6.2 RESEARCH APPROACH**

Brink and Wood (1998) stated that the research approach and design purpose is to highlight strategies for serving responses to the stated research questions. It is the total strategy that aids the numerous methods used to formulate logical, unbiased and precise information. A quantitative research was followed for this research. As Houser and Osman (2010) indicate, the quantitative approach is a formal objective and systemic procedure to depict and test relationships and inspect circumstances and end results association among factors. A quantitative research approach was adopted to determine the effects of globalization on logistics management in Nigeria, the impact of globalization of logistics in multinational companies of Nigeria and the role of economic policies on logistics management, because it is the best means of asking specific questions. These helped in collecting quantifiable data from the employees of multinational companies while analyzing the collected data using statistics method in an unbiased manner.

### **6.3 RESEARCH DESIGN**

This examination gives an all-encompassing review of the key approach that was determined for completing this review. Research design is a basic set of beliefs that guide actions and deals with the researcher's worldviews, according to Groenewald (2004).

It is a process that represents the logical view on how study objectives can be realized by the researcher. The fundamental goal was to examine the effects of globalization on logistic management. The study adopted a case study research approach using P&G, Unilever, PZ Cussons, Nestle, 7up, Nigerian Bottling Company (NBC), Nigeria Brewery, DHL, FedEx and Fan Milk multinational companies in Nigeria. Consequently, this study chose to embrace the quantitative descriptive research approach, implementing a survey research strategy using structured questionnaires obtained from early studies with modifications from the researcher. Questionnaires were randomly administered to all logistic management departments of multinational companies in Nigeria, which was the primary instrument of data collection.

Harwell (2011) states that quantitative designs attempt to maximize objectivity, replicability and generalizability of findings and are typically interested in prediction. This approach was the most suited for the study because the study aims to identify empirically the prevailing effects of globalization on logistic management in multinational companies in Nigeria. By further study the dependent variable of the study was identified as logistic management while the independent variable is globalization. The following can be considered as part of the independent variable, namely government policies, technology, currency fluctuation and the like. To determine the sample size, random sample technique procedures were applied, while data analysis was done using SPSS.

### **6.4 RESEARCH AREA**

The study was conducted in a selected few multinational companies in Nigeria. The research captured all professionals in customer service, operations, logistics and supply chain department as well as consultants. P&G, Unilever, PZ Cussons, Nestlé, 7up, Nigerian Bottling Company (NBC), Nigeria Brewery, DHL, FedEx and Fan Milk multinational companies in Nigeria were selected for the current study because of their easy accessibility to the target area. The target group in the research includes logistics managers, supply chain managers, logistics engineers,

customer service personnel, inventory managers, consultants, operations managers and purchasing manager in the selected multinational companies in Nigeria.

## **6.5 TARGET POPULATION**

According to Burns and Grove (2005), the overall sum of all individuals who have well defined kind of features, are of importance to the researcher and meet the sample conditions for addition in a study is the population. As defined by Ledwaba (2012), a target population is the complete group of persons or entities to which the survey is applicable. A target population can be further be described as clusters and persons who are in a situation to answer the questions and to whom the results of the survey relay (Burns & Grove, 2005). The target population for this study were logistics managers, supply chain managers, logistics engineers, customer service personnel, inventory managers, consultants, operations managers and purchasing managers in multinational companies in Nigeria. The survey was accomplished using designed questionnaires dispersed to the respondents in Multinational Companies in Nigeria. This scheme was considered vital for the survey in order to have a true replication of the effects of globalization on logistics management in Nigeria, using multinational companies as a case study, the competitive situations encountered and also, the impact of globalization in economic growth in Nigeria and development in Nigeria.

## **6.6 SAMPLE SIZE**

A random sampling method was adopted in this study as it was considered the simplest, most convenient and bias-free method. According to Salaria (2012), a sample size as a group is chosen from a larger population with the aim of yielding information about this population as a whole. He also indicated that for a sample to be considered good, it does not only need to be representative, but it should also be adequate or of sufficient size to allow confidence in the stability of its characteristics. Based on the findings, the population of the employees in the logistic management department of all the sampled companies, was 240 employees. Therefore, to arrive at a statistically valid conclusion and maximize the chance of uncovering statistical importance and considering it will be complicated to study the entire population owing to cost and accessibility. A subset of the population, that is, a sample size, was chosen to represent the whole population, using the formula below to determine the sample size:

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

Using Cronbach's formula

N= population size 240

n= sample size

e= error of tolerance 0.05%

$$\begin{aligned} n &= \frac{N}{1 + N(e)^2} \\ &= \frac{240}{1 + 100(0.05)^2} = 150 \text{ workers} \end{aligned}$$

## 6.7 SAMPLING TECHNIQUES

A random sampling was utilized for choosing respondents from the sample frame, within a study population that consists of employees of logistic management departments of the selected multinational companies. Unbiased population of individuals was guaranteed using the sample techniques which designate equivalence in the study by calculating the desired sample size for margin of error. Sampling technique is defined as the process of identifying the specific process by which the entities of the sample have been picked (Salaria, 2012).

## 6.8 DATA COLLECTION

A catalogue of possible respondents was created after the questionnaire had been approved for collection of data by the main supervisor of this present research. The questionnaires were dispersed to the respondents by Google Forms web links. Collection of data took about two months as the respondents could take their time when filling in the questionnaires in the absence of any pressure. However, it took an average of twenty minutes to complete one questionnaire. An aggregate of 150 questionnaires was expected to be received back from the respondents, but in reality, 106 questionnaires were received.

## 6.9 INSTRUMENT OF DATA COLLECTION

A well-structured and self-administered instrument of information collection was put in place. This was utilized in the light of the fact that it is the best and most practical instrument. The

study is limited to P&G, Unilever, PZ Cussons, Nestle, 7up, Nigerian Bottling Company (NBC), Nigeria Brewery, DHL, FedEx and Fan Milk multinational companies in Nigeria. They were specifically chosen because they are among biggest and most popular manufacturers in the global market. According to Harris & Brown (2010), questionnaires are useful when gathering standardized information over a short period of time. The questionnaire comprised four areas, with points on a Likert scoring scale ranging from ‘strongly agree’ to ‘strongly disagree’. Section one elicits demographic and other personal information from respondents, section two contains questions that measure the effects of globalization while the third section focuses on logistic management. The fourth section contains questions on the relationship with globalization and logistics management. The variables used in the questionnaire became thirteen questions in all.

**Table 6. 1: Questionnaire survey**

Survey Responses	Respondents
Questionnaire sent out	150
Questionnaire received back	106
Usable questionnaire	106
Usable response rate (%)	71%

#### **6.10 DURATION OF THE RESEARCH**

The research study was cross-sectional in nature as the research was carried out within the space of one year and three months. The experience was quite challenging: the most demanding parts were the collection of data, imputing the data and the financial aspect of it.

#### **6.11 DATA ANALYSIS**

The procedure of systematically relating statistical and/or logical methods to define and demonstrate, condense and summaries, and appraise data is referred to as data analysis. According to Tellis (1997) & Mofokeng (2012), a logical approach is needed to analyze the data of the research which will successively lead to the research end. The data was analyzed by using both qualitative and quantitative methods which are divided into three.

#### **6.12 MEAN ITEM SCORE**

The research used the mean item score (MIS) to present the discoveries for the Likert queries. The computation of the MIS was reckoned from the aggregate of all weighted feedback on a

specific aspect. The index of MIS of a specific influence that contributes to the result is the sum of respondents' real scores (on the five-point scale) given by all the respondents as a fraction of the sum of all the highest conceivable scores on the five-point measure that all the respondents might give to that standard. Allowance was designated to each feedback ranging from 1 to 5 for the feedback of 'strongly disagree' to 'strongly agree'. This is articulated mathematically below. The MIS index was calculated for each item as follows:

$$\text{MIS} = \frac{1n_1 + 2n_2 + 3n_3 + 4n_4 + 5n_5}{\sum N} \quad (2)$$

where

- n1 = Number of respondents for 'strongly disagree';
- n2 = Number of respondents for 'disagree';
- n3 = Number of respondents for 'neutral';
- n4 = Number of respondents for 'agree';
- n5 = Number of respondents for 'strongly agree';
- N = Total number of respondents

The criteria were then graded in descending order of their mean item score (from the highest to the lowest) after mathematical computations.

### 6.13 FACTOR ANALYSIS

As described by Pallant (2010), the exploratory factor analysis (EFA) was the second part of the analysis. In this study, the EFA was done to assemble information about the uni-dimensionality of the factors in order to yield their analyzability factor. The EFA was used to establish the truth about the commitment and strength of the effects of globalization on logistics management in Nigeria, using multinational companies as a case study, the challenges facing the impact of globalization on logistics management in Nigeria, the role of economic policies in the globalization of logistics in Nigeria and the role of globalization impact on logistics management on economic growth in Nigerian multinational companies. The maximum probability with an eigenvalue over one, together with varimax rotation was stated as the analysis technique for this



research. The EFA was carried out using SPSS version 21. Factor analysis as explained by Pallant (2010) is dissimilar from other methods, such as regression. It is not planned to test hypothesis or to test if a group is notably dissimilar from one another. It takes a large variable set and looks for a way the data may be condensed or concise using a smaller set of factors or components. It does this by looking for clumps or groups among the inter-correlations of set of variables.

There are two main strategies to factor analysis, exploratory and confirmatory. Exploratory factor analysis is frequently used in the preliminary stages of research to assemble information about (explore) the interrelationships amongst a set of variables. Confirmatory factor analysis is an extra composite and sophisticated set of methods used later in the research procedure to test (confirm) precise hypotheses or theories regarding the structure marking a set of variables. The term 'factor analysis' includes a variety of dissimilar, although related methods. One of the main variances is between what is labelled principal component analysis (PCA) and factor analysis (FA). In this study, exploratory factor analysis was embraced as the principal objective of this research was to assemble information and data about the interrelationship among a set of variables (Pallant, 2010).

#### **6.14 STEPS INVOLVED IN FACTOR ANALYSIS**

The research made use of these three core steps in carrying out factor analysis:

##### **6.14.1 STEP 1: ASSESSMENT OF THE SUITABILITY OF THE DATA FOR FACTOR ANALYSIS**

There are two principal problems to consider in determining whether a specific data set is appropriate for factor analysis, namely sample size and the strength of the relationship among the variables (or items).

##### **6.14.2 STEP 2: FACTOR EXTRACTION**

Factor extraction refers to deciding the minimum number of factors that can be used to best denote the inter-correlations amongst the set of variables. There are a variety of methods that can be used to establish (extract) the number of underlying factors or dimensions. Some of the most frequently available techniques are the following:

- Principal components
- Principal factors
- Image factoring
- Maximum likelihood factoring
- Generalized least squares

The utmost frequently utilized method is principal component analysis which was embraced for this research. There are a number of methods that can be used to support the choice regarding the number of factors to keep:

- Kaiser criterion
- Screen test
- Parallel analysis

In this research, the Kaiser principle was used.

### **6.14.3 STEP 3: FACTOR ROTATION AND INTERPRETATION**

Once the number of factors has been decided, the following step is to explain them. For this procedure to be performed, the factors were revolved. There are two major methods to rotation, resulting in either orthogonal (uncorrelated) or oblique (correlated) factor resolutions. Orthogonal rotation results in resolutions that are easier to explain and to review. Nevertheless, they do entail the researcher to accept that the fundamental concepts are independent (not correlated). Oblique methods allow the factors to be correlated but are more difficult to explain.

## **6.15 MEASURES FOR DETERMINING VALIDITY AND RELIABILITY**

### **6.15.1 VALIDITY**

The researcher distributed the questionnaires requested for the research after obtaining permission from the manager/owner of the firm, then explain the study, and then leave the questionnaire, to be collected at a subsequent period in other to protect the right of the respondents. To set this research moral, the right to secrecy, privacy and consent were observed. Also, a written letter of authorization to carry out this research was acquired from the University of Johannesburg, Department of Operations Management, Doorfontein campus which was attached to the questionnaires sent out.

### **6.15.2 RELIABILITY**

After establishing the content strength and initial data analysis, empirical and theoretical reliabilities tests were carried out. Scale dependability is the correlation between two scores from 0 to 1.00 where the Cronbach's alpha is the most common form of internal steadiness dependability coefficient. The usually approved lesser limit for alpha is 0.70; nonetheless, values above 0.8 are preferred (Pallant, 2010:210). The embraced? cut-off-alpha for this research was 0.70 and measures below 0.70 were removed. The adoption of this was due to Connelly (2011) who indicated that the Cronbach alpha coefficient of a scale should be 0.7 and above. In this research some of the scales wererevealed to be less than 0.7, therefore the mean inter-item correlation was declared, and the suggested range for the inter-item correlation is 0.2 – 0.4.

The removal technique used for the data was the major axis factoring. The data were clustered into two categories of factor analysis; the 1<sup>st</sup> Order Factor analysis and 2<sup>nd</sup> Order Factor analysis. For the 1<sup>st</sup> order factor analysis the rotation technique used was the varimax rotation, and for the 2<sup>nd</sup> order factor analysis, the Oblimin rotation technique was used.

### **6.16 NON-PARAMETRIC TESTS**

Subsequently after EFA, the study then followed additional steps to examine the hypothesis. The parametric tests make suppositions about the population from which the sample has been drawn (Pallant, 2010). According to Field (2013), the principal suppositions that this test looks at are linearity and extracts; normality to some degree; homoscedasticity/homogeneity of variance and autonomy. For this research, the normality supposition was embraced. Pallant (2010) indicated that non-parametric tests do not make suppositions about the underlying population dispersion. They do not meet the simple idea of the parametric methods and are typical when small samples are used.

### **6.17 NORMALITY TESTS**

In a study by Hair et al. (1998), sample size affects a research's outcomes where the result of smaller samples has too little statistical power for the test to convincingly recognize significant results. Also, they can be simply over fitting to the data in that they fit the sample very well but have no generalizability. Hair et al. (1998) explained that large sample sizes of more than 200 to 400 respondents, on the other hand, have problems due to making the statistical tests too indirect

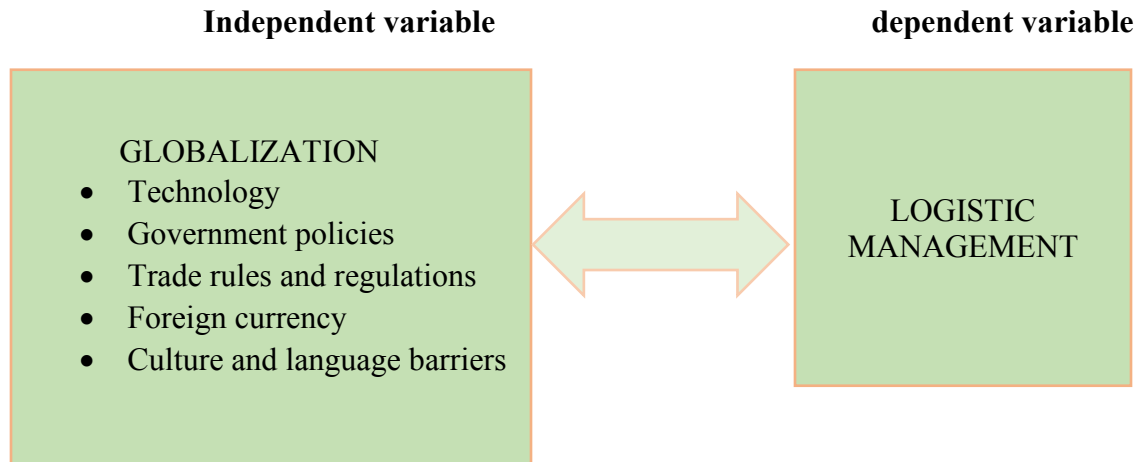
as a consequence of the increased statistical power from the sample size. Since the sample size for the research was small, the data obtained were analyzed for normality to ensure that its suitability using standard multivariate analysis. Data normality can be scrutinized via statistical methods like skewness and kurtosis, the Kolmogorov-Smirnov tests and graphical methods such as histograms and box plots (Pallant, 2010). The variable's frequency value dispersion must approximate the bell-shaped curve or a symmetrical diagonal line to accomplish normality of the data (Field, 2013; Pallant, 2010). This research used the skewness and kurtosis and it accepted that the data was non-normal.

### **6.18 ETHICAL CONSIDERATION**

Ethical issues were not encountered in this present research; nonetheless the ethical considerations in this study took into account the responsibilities of the professionals in the industry whose work that had been added to the body of knowledge in the literature were appropriately cited. The assurance to the professionals who took part in the study was that their contribution was to be kept private and only used for the purpose of academia. Respondents to the questionnaire were accorded the right not to reply to any query that they felt was not proper without any compulsion. A written cover letter of permission to carry out this research was obtained from the University of Johannesburg, Department of Operations Management, Doorfontein campus and was affixed to the questionnaires that were sent out. Anonymity and confidentiality were maintained throughout the study. Anonymity is a situation where the respondents cannot be linked, even by the researcher, to their individual responses (Burns & Grove, 1993).

### **6.19 FRAMEWORK OF THE RESEARCH**

This survey receives the additional examination displayed. In order to be determine the independent variable, the selected and measured factor must be involved.



### **Research model**

This research hypothesis was tested in order to answer the stated research question:

H0: There is no positive relationship between globalization and its effect on logistic management.

H1: There is a positive relationship between globalization and its effect on logistic management.

### **6.20 CONCLUSION**

In this chapter, the methodology used for the research was described regarding the population, sample, strategies used to ensure ethical standards as well as data collection instruments. The reason was also given for the use of questionnaires for the research. The next chapter presents the data analysis and discussions.

## CHAPTER SEVEN

### DATA ANALYSIS AND INTERPRETATION

#### 7.1 CHAPTER INTRODUCTION

This chapter is concerned with the presentation of the data gotten during the course of this research study, and also with the analysis of the responses received from the respondents to the questionnaires administered. The data for the main study was collected by means of a structured questionnaire which was targeted at procurement managers, logistics managers, logistics officers, logistics engineers, inventory managers, supply chain managers, consultants, operations managers, and employees of organizations who were directly involved in logistics management in Nigeria. The questionnaire contains thirteen questions (13) which were all answered. A total of one hundred and six (106) questionnaires were duly completed out of the one hundred and fifty (150) that were administered to the different respondents. Therefore, the response rate for the questionnaires administered was seventy-one per cent (71%).

#### 7.2 SECTION A: BIOGRAPHICAL DATA ANALYSIS

This section describes the demographics of the respondents in this research. It shows the business area of logistics management to which each company belongs, age group, gender, ownership of the company, years of experience, highest level of education, and job position. This data is presented in Figure 7.1 to Figure 7.7.

##### 7.2.1 DISTRIBUTION OF SAMPLE ACCORDING TO GENDER

The distribution of the sample according to gender reveals that 68.9% of the respondents are male, while females accounted for 31.1%. This is presented in Fig 7.1.

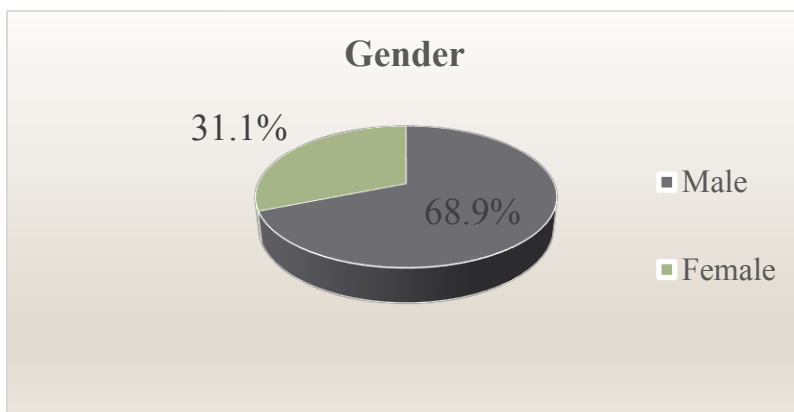


Figure 7.1: Gender of the respondents

### 7.2.2 DISTRIBUTION OF SAMPLE ACCORDING TO AGE GROUP

As illustrated in Figure 7.2, the sample distribution according to the age group shows that 59.4% of the total respondents were from the 26-30 years age group, 23.6% of the total respondents population were from the 31-35 years age group, 6.6% of the respondents were in the age group younger than 25 years, 4.7% of the respondents population were between 51-55 years, 2.8% of the total respondents population were between 46-50 years, 1.9% of the total respondents population were from the 36-40 years age group, and 0.9% of the total respondents population were between 41-45 years.

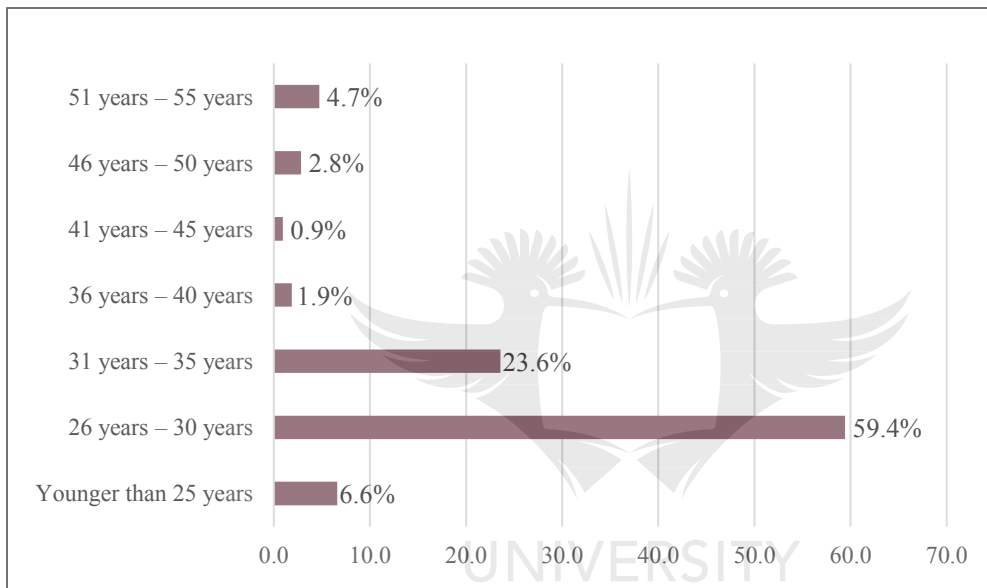


Figure 7.2: Age group of respondents

### 7.2.3 DISTRIBUTION OF SAMPLE ACCORDING TO OWNERSHIP OF THE COMPANY

The findings presented in Figure 7.3 show that 60.4% of the companies surveyed are owned by local firms, 17% are owned by the government, 12.3% are owned by foreign firms, while 10.4% are owned by other forms of ownership.

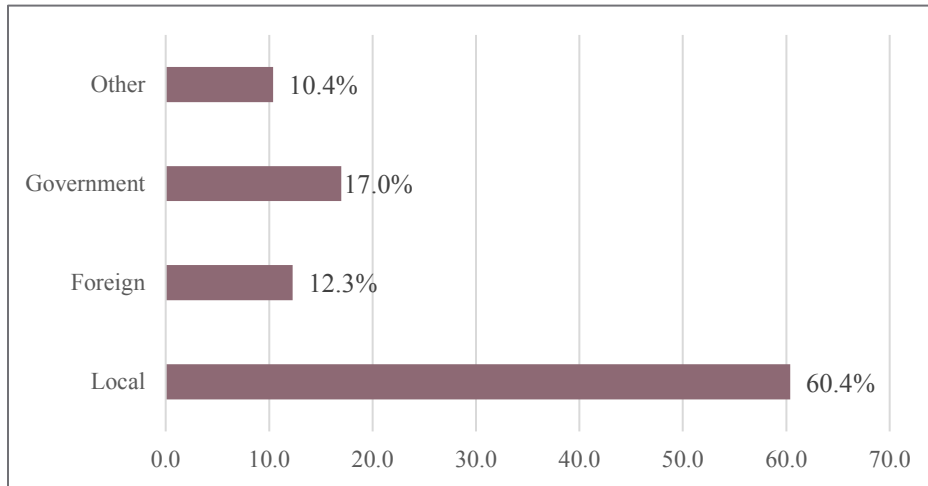


Figure 7.3: Ownership of the companies surveyed

#### 7.2.4 DISTRIBUTION OF SAMPLE ACCORDING TO BUSINESS AREA OF LOGISTICS MANAGEMENT

The findings presented In Figure 7.4 show the distribution of the sample according to the business area of logistics management. This reveals that 23.6% of the respondents were in distribution/marketing, 18.9% were in production, 17.9% were in customer service, 11.3% were in transportation, 10.4% were in storage and warehousing, 10.4% were in other areas of logistic management, and 7.5% of the respondents were in purchasing.

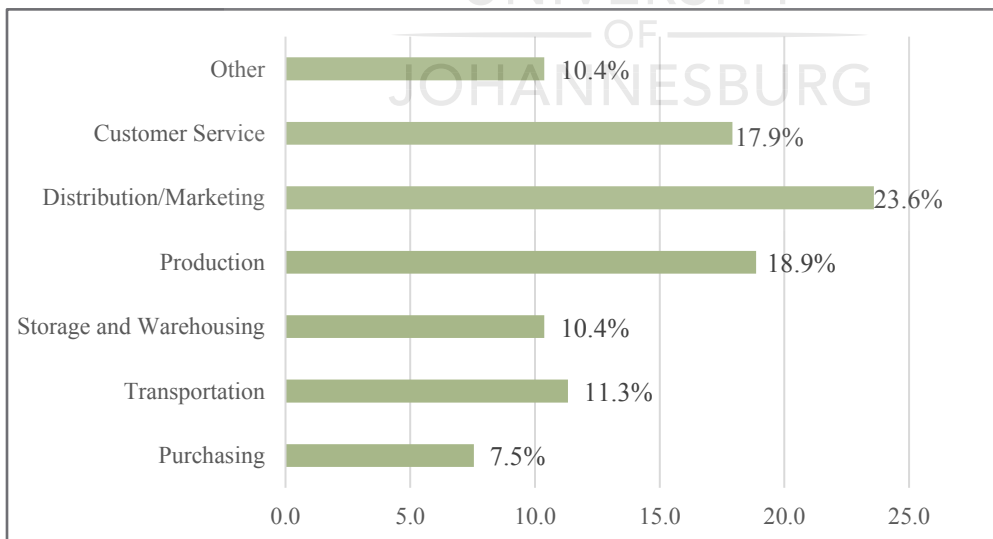


Figure 7.4: Respondents' business area of logistics management



### 7.2.5 DISTRIBUTION OF SAMPLE ACCORDING TO RESPONDENTS' YEARS OF EXPERIENCE

The distribution of the sample according to respondents' years of experience in the logistics industry is revealed in Fig 7.5. It shows that 69.8% of the respondents have experience that ranged from 0-5 years, 21.7% of the respondents have 6-10 years of experience in the logistics industry, 3.8% of the respondents have 11-15 years of experience in the logistics industry, 1.9% of the respondents have 16-20 years of experience in the logistics industry, and finally, 2.8% of the respondents have more than 20 years of experience in the logistics industry.

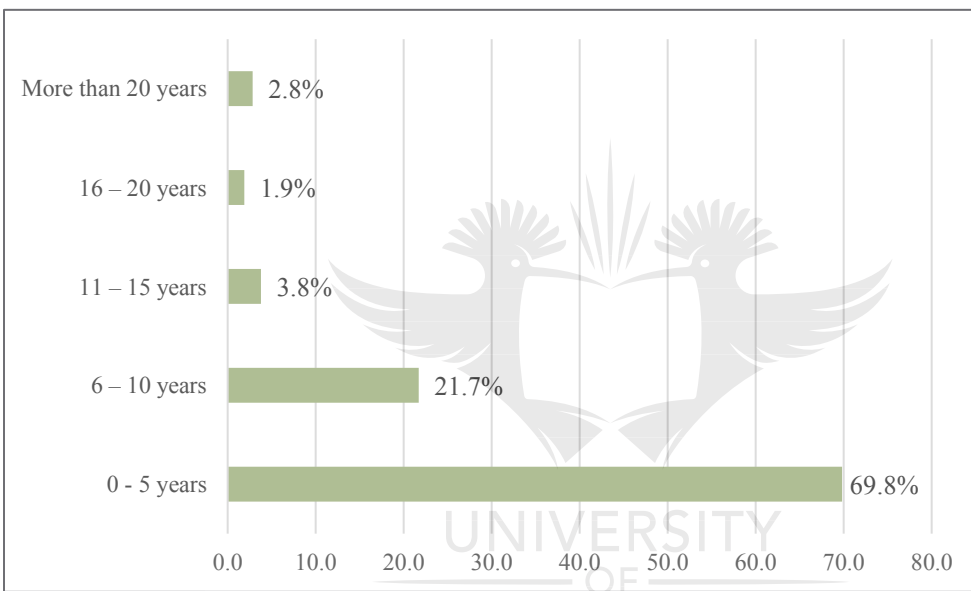


Figure 7.5: Respondents' years of experience

### 7.2.6 DISTRIBUTION OF SAMPLE ACCORDING TO RESPONDENTS' HIGHEST LEVEL OF EDUCATION

The findings presented in Figure 7.6. show that 92.5% of the respondents are bachelor degree holders, 4.7% of the respondents have a diploma, 0.9% of the respondents' highest level of education were a primary school certificate, 0.9 % were secondary school certificate holders, and 0.9% of the total respondent population are master's degree holders.

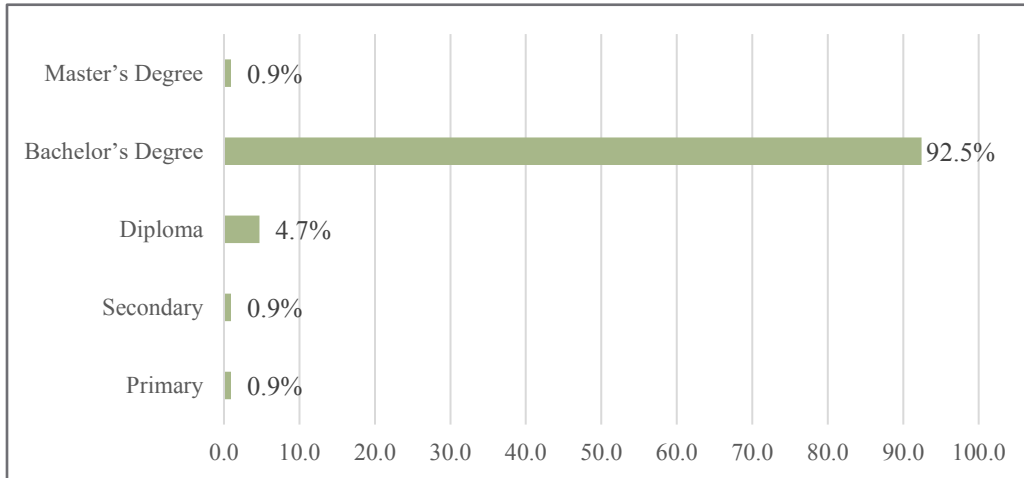


Figure 7.6: Respondents' highest level of education

### 7.2.7 DISTRIBUTION OF SAMPLE ACCORDING TO JOB POSITION

The distribution of the sample according to job position is presented in Figure 7.7. The percentage of respondents that were directors/owners is 29.2%, other types of job position held by respondents amounted to 18.9%, 15.1% of the respondents were logistics officers, 14.2% of the respondents were procurement officers, 12.3% of the respondents were procurement managers, and 10.4% of the respondents were logistics managers.

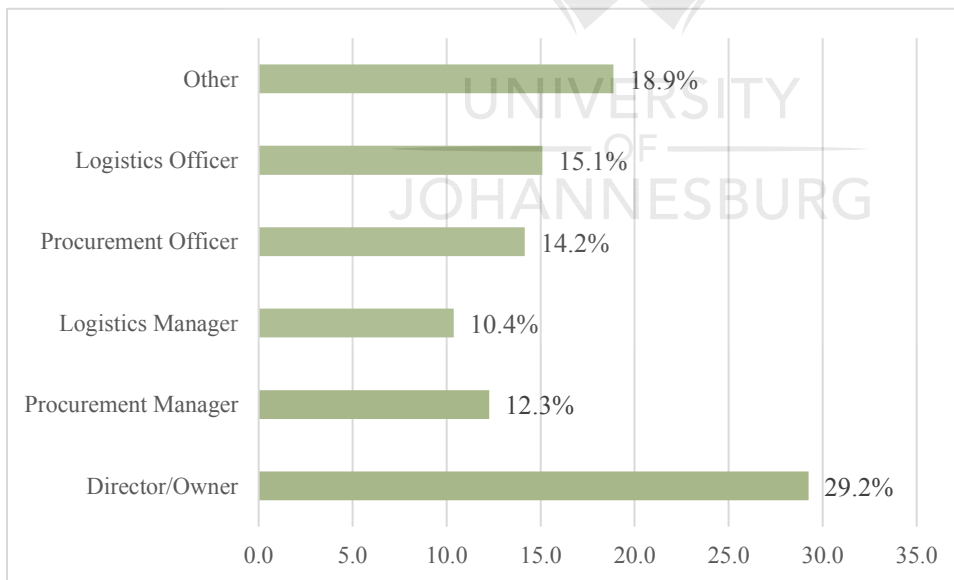


Figure 7.7: Respondents' job positions

### **7.3 SECTION B: LEVEL OF AWARENESS OF LOGISTICS ACTIVITIES IN NIGERIAN INDUSTRIES**

The results of the questions from the section B part of the questionnaire are presented in this section. It displays the current level of awareness of logistics activities in Nigerian industries. The mean item score of all the questions, skewness as well as the exploratory factor analysis (EFA) of the results are presented. The descriptive analysis results reveal the ranking of each of the factors from the highest to the lowest with the table displaying individual mean scores and likewise the standard deviation of each factor. As described by Pallant (2007), EFA is generally used in the initial stages of research in order to obtain information involving the interrelationships among a set of variables. EFA was carried out using the Statistical Package Software for Social Sciences (version 21.0). In order for the factor analysis to proceed, all the vital tests were carried out to determine the suitability of the sample size. Factorability of the correlation matrix can be determined if it can show some correlations of  $r = 0.3$  or higher. Bartlett's test of sphericity should be statistically significant or measured at  $p < 0.5$  and the Kaiser-Meyer-Olkin (KMO) which measures the sampling suitability value must be 0.6 or above. Pallant (2007) pointed out that Cronbach alpha that is above 0.7 are accepted and also the values greater than 0.8 are more preferable in confirming the suitability, reliability and the internal consistency of the research instrument. Also, Briggs and Cheek (1986) mentioned that the accepted range for inter-item correlation must be between 0.2 – 0.4, in a scenario where the Cronbach alpha are seen to decrease below 0.7. Therefore, the aforementioned values are implemented in this research. The data of this research was subjected to principal component analysis with varimax rotation of factor analysis. Kaiser's criterion was used to determine the number of factors to extract. The overall number of components that have an eigenvalue of 1 or above were adopted in this study. According to Ahadzie et al. (2008), an eigenvalue is defined as a mathematical part of a matrix deployed as a measure of creating the precise number of factors to be removed and as a measure of variance considered for a certain dimension. Also, the scree plot test indicates the cut-off point at which the eigenvalues are measured.

#### **7.3.1 RESULTS FROM DESCRIPTIVE ANALYSIS**

The results of mean item score of the questions and skewness of the stated data are illustrated in Table 7.1.

**Table 7.1: Level of awareness of logistics activities in Nigerian industries**

Awareness of Logistics Activities	Mean ( $\bar{x}$ )	Standard deviation ( $\sigma X$ )	Rank (R)
Transport logistics	3.75	1.310	1
Warehouse/Distribution third party logistics	3.47	1.311	2
Domestic logistics	3.47	1.318	2
After-sales logistics	3.44	1.339	3
Procurement logistics	3.43	1.331	4
Production logistics	3.40	1.392	5
Outbound logistics	3.34	1.420	6
Industrial logistics	3.30	1.346	7
Third party logistics (3PL)	3.28	1.365	8
Asset control logistics	3.25	1.265	9
Integrated Logistics	3.22	1.380	10
Inbound logistics	3.22	1.493	10
Global logistics	3.17	1.313	11
Reverse logistics	3.12	1.357	12
Fourth party logistics (4PL)	2.94	1.466	13
Green logistics	2.87	1.448	14

The respondents' ranking of the level of awareness of logistics activities in Nigerian industries is shown in Table 7.1. It reveals that transport logistics was ranked first with a mean item score of 3.75 and standard deviation of 1.310; warehouse/distribution third party logistics and domestic logistics were both ranked second with mean scores of 3.47 and standard deviations of 1.311 and 1.318; after-sales logistics was ranked third with a mean score of 3.44 and standard deviation of 1.339; procurement logistics was ranked fourth with a mean score of 3.43 and standard deviation of 1.331; production logistics was ranked fifth with a mean score of 3.40 and standard deviation of 1.392; outbound logistics was ranked sixth with a mean score of 3.34 and standard deviation of 1.420; industrial logistics was ranked seventh with a mean score of 3.30 and standard

deviation of 1.346; third party logistics (3pl) was ranked eighth with a mean score of 3.28 and standard deviation of 1.365; asset control logistics was ranked ninth with a mean score of 3.25 and standard deviation of 1.265; integrated logistics and inbound logistics were both ranked tenth with a mean score of 3.22 and standard deviations of 1.380 and 1.493; global logistics was ranked eleventh with a mean score of 3.17 and standard deviation of 1.313; reverse logistics was ranked twelfth with a mean score of 3.12 and standard deviation of 1.357; and fourth party logistics (4pl) was ranked thirteenth with a mean score of 2.94 and standard deviation of 1.466. Finally, green logistics was ranked fourteenth with a mean score of 2.87 and standard deviation of 1.448.

### **7.3.2 RESULTS FROM EXPLORATORY FACTOR ANALYSIS**

The tables 7.2, 7.3, 7.4, 7.5, 7.6, and figure 7.8 shows the results from EFA on the level of awareness of logistics activities in Nigerian industries. The following sixteen variables of logistics activities, ‘green logistics’ (B8.5), ‘reverse logistics’ (B8.4), ‘fourth party logistics (4PL)’ (B8.6), ‘third party logistics (3PL)’ (B8.9), ‘domestic logistics’ (B8.8), ‘procurement logistics’ (B8.3), ‘inbound logistics’ (B8.1), ‘after-sales logistics’ (B8.11), ‘industrial logistics’ (B8.16), ‘asset control logistics’ (B8.12), ‘outbound logistics’ (B8.2), ‘production logistics’ (B8.10), ‘transport logistics’ (B8.13), ‘warehouse/distribution third party logistics’ (B8.15), ‘global logistics’ (B8.7), ‘integrated logistics’ (B8.14) were identified as being aware of in Nigerian industries as shown in Table 7.2. Before performing the principal component analysis, the fitness of the data for factor analysis was first evaluated. Checking of the correlation matrix in Table 7.3 shows the presence of values above 0.3. In Table 7.4, the Kaiser-Meyer–Olkin measure of sampling adequacy reached a value of 0.911; in that way it exceeded the suggested minimum value of 0.6. Bartlett’s test of sphericity was also statistically significant at less than 0.05 ( $< 0.05$ ), therefore it supported the factorability of the correlation matrix. The data was subjected to principal component analysis using varimax rotation. The eigenvalue was based on a conventional high value of 1 as denoted in Table 7.5 and three factors and eigenvalues exceeding 1.0 were extracted. Also, the Catell’s scree plot in Figure 7.8 shows the extracted factors by signifying the break in the plot were the eigenvalues is levelled off. The total variance value for each of the extracted factor is as follows: Factor 1 (55.203%), Factor 2 (8.723%), Factor 3

(6.532%) as shown in Table 7.6. Hence, the final statistics of the principal component analysis and the extracted factors accounted for about 63.948% of the entire cumulative variance.

**Table 7.2: Definition of identified variables**

<b>B8.1</b>	Inbound logistics
<b>B8.2</b>	Outbound logistics
<b>B8.3</b>	Procurement logistics
<b>B8.4</b>	Reverse logistics
<b>B8.5</b>	Green logistics
<b>B8.6</b>	Fourth party logistics (4PL)
<b>B8.7</b>	Global logistics
<b>B8.8</b>	Domestic logistics
<b>B8.9</b>	Third party logistics (3PL)
<b>B8.10</b>	Production logistics
<b>B8.11</b>	After-sales logistics
<b>B8.12</b>	Asset control logistics
<b>B8.13</b>	Transport logistics
<b>B8.14</b>	Integrated logistics
<b>B8.15</b>	Warehouse/distribution third party logistics
<b>B8.16</b>	Industrial logistics

**Table 7.3: Correlation matrix of factor analysis**

Correlation	B8.1	B8.2	B8.3	B8.4	B8.5	B8.6	B8.7	B8.8	B8.9	B8.10	B8.11	B8.12	B8.13	B8.14	B8.15	B8.16
B8.1	<b>1.000</b>	0.702	0.633	0.471	0.560	0.502	0.467	0.562	0.507	0.545	0.519	0.480	0.423	0.439	0.419	0.512
B8.2	0.702	<b>1.000</b>	0.556	0.527	0.573	0.476	0.342	0.611	0.446	0.601	0.551	0.550	0.441	0.458	0.455	0.568
B8.3	0.633	0.556	<b>1.000</b>	0.650	0.529	0.486	0.459	0.686	0.566	0.641	0.490	0.505	0.512	0.472	0.520	0.516
B8.4	0.471	0.527	0.650	<b>1.000</b>	0.696	0.650	0.480	0.643	0.598	0.564	0.510	0.475	0.430	0.545	0.470	0.344
B8.5	0.560	0.573	0.529	0.696	<b>1.000</b>	0.665	0.443	0.527	0.564	0.475	0.438	0.481	0.379	0.505	0.384	0.270
B8.6	0.502	0.476	0.486	0.650	0.665	<b>1.000</b>	0.520	0.541	0.541	0.455	0.372	0.413	0.414	0.472	0.485	0.255
B8.7	0.467	0.342	0.459	0.480	0.443	0.520	<b>1.000</b>	0.597	0.547	0.448	0.347	0.329	0.568	0.495	0.529	0.396
B8.8	0.562	0.611	0.686	0.643	0.527	0.541	0.597	<b>1.000</b>	0.624	0.676	0.533	0.493	0.589	0.587	0.592	0.488
B8.9	0.507	0.446	0.566	0.598	0.564	0.541	0.547	0.624	<b>1.000</b>	0.602	0.473	0.388	0.430	0.528	0.500	0.399
B8.10	0.545	0.601	0.641	0.564	0.475	0.455	0.448	0.676	0.602	<b>1.000</b>	0.621	0.613	0.516	0.456	0.528	0.606
B8.11	0.519	0.551	0.490	0.510	0.438	0.372	0.347	0.533	0.473	<b>0.621</b>	<b>1.000</b>	0.770	0.619	0.576	0.520	0.660
B8.12	0.480	0.550	0.505	0.475	0.481	0.413	0.329	0.493	0.388	0.613	0.770	<b>1.000</b>	0.557	0.584	0.444	0.586
B8.13	0.423	0.441	0.512	0.430	0.379	0.414	0.568	0.589	0.430	0.516	0.619	0.557	<b>1.000</b>	0.647	0.736	0.616
B8.14	0.439	0.458	0.472	0.545	0.505	0.472	0.495	0.587	0.528	0.456	0.576	0.584	0.647	<b>1.000</b>	0.596	0.451
B8.15	0.419	0.455	0.520	0.470	0.384	0.485	0.529	0.592	0.500	0.528	0.520	0.444	0.736	0.596	<b>1.000</b>	0.696
B8.16	0.512	0.568	0.516	0.344	0.270	0.255	0.396	0.488	0.399	0.606	0.660	0.586	0.616	0.451	0.696	<b>1.000</b>

**Table 7.4: Kaiser-Meyer–Olkin and Bartlett’s Test**

Kaiser-Meyer-Measure of Sampling Adequacy.		.911
Bartlett’s Test of Sphericity	Approx. Chi-Square	1211.980
	Df	120
	Sig.	.000

**Table 7.5: Rotated factor matrix**

	Factors		
	1	2	3
Green logistics	<b>0.766</b>		
Reverse logistics	<b>0.739</b>		
Fourth Party Logistics (4PL)	<b>0.718</b>		
Third party logistics (3PL)	<b>0.615</b>		
Domestic logistics	<b>0.589</b>		
Procurement logistics	<b>0.560</b>		
Inbound logistics	<b>0.531</b>		
After-sales logistics		<b>0.727</b>	
Industrial logistics		<b>0.697</b>	
Asset control logistics		<b>0.693</b>	
Outbound logistics		<b>0.620</b>	
Production logistics		<b>0.578</b>	
Transport logistics			<b>0.741</b>
Warehouse/distribution third party logistics			<b>0.732</b>
Global logistics			<b>0.546</b>
Integrated logistics			<b>0.505</b>

Extraction Method: Principal Axis Factoring.  
 Rotation Method: Varimax with Kaiser Normalization.<sup>a</sup>  
 a. Rotation converged in 12 iterations

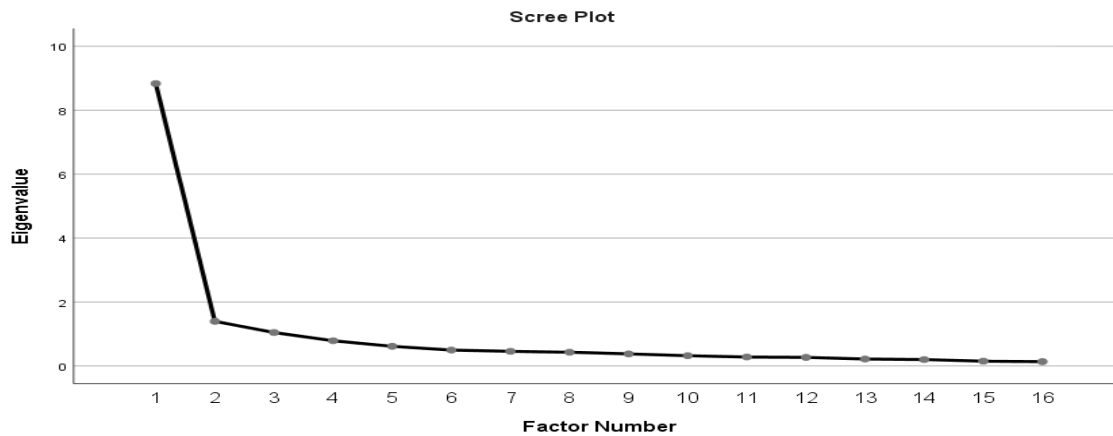


Figure 7.8: Scree plot for the factor analysis

**Table 7.6: Total variance explained**

Factors	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotated Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	<b>8.832</b>	55.203	55.203	8.474	52.962	52.962	4.086	25.538	25.538
2	<b>1.396</b>	8.723	63.926	1.073	6.705	59.667	3.427	21.421	46.959
3	<b>1.045</b>	6.532	<b>70.458</b>	0.685	4.281	63.948	2.718	16.989	<b>63.948</b>
4	0.788	4.924	75.382						
5	0.614	3.838	79.220						
6	0.496	3.101	82.321						
7	0.457	2.853	85.174						
8	0.429	2.680	87.854						
9	0.377	2.354	90.209						
10	0.320	2.002	92.211						
11	0.279	1.744	93.955						
12	0.268	1.672	95.627						
13	0.216	1.351	96.979						
14	0.200	1.251	98.230						
15	0.148	0.927	99.157						
16	0.135	0.843	100.000						
Extraction Method: Principal Axis Factoring									

The principal axis factoring showed the presence of three factors with eigenvalues larger than 1 as presented in Table 7.6. Owing to close inspection of the integral relationships among each of the variables under each factor, the following interpretations were made: Factor 1 was named ‘nodes of distribution network’; Factor 2 was named ‘configuration and management; and Factor 3 was named ‘handling and order processing’. The names used in describing these factors were derived by a close inspection of the variables within each of the factors. The component indicators of each of the three factors extracted are described below, together with a comprehensive explanation of how each of the three factors was described within the group.

- **Factor 1: Nodes of distribution network**

As shown in the Table 7.5, the seven extracted logistics activities in Nigerian industries for factor 1 were green logistics (76.6%), reverse logistics (73.9%), fourth party logistics (4PL) (71.8%), third party logistics (3PL) (61.5%), domestic logistics (58.9%), procurement logistics



(56.0), and inbound logistics (53.1%). The numbers in parenthesis specify the individual factor loadings. Also this group accounted for 55.203% of the variance as shown in Table 7.6.

- **Factor 2: Configuration and management**

The five extracted logistics activities in Nigerian industries for factor 2 were after-sales logistics (72.7%), industrial logistics (69.7%), asset control logistics (69.3%), outbound logistics (62%), and production logistics (57.8%) as presented in Table 7.5. The numbers in parenthesis specify the individual factor loadings. Also this group accounted for 8.723% of the variance as shown in Table 7.6.

- **Factor 3: Handling and order processing**

The four extracted logistics activities in Nigerian industries for factor 3 were transport logistics (74.1), warehouse/distribution third party logistics (73.2%), global logistics (54.6%), and integrated logistics (50.5%) as presented in Table 7.5. The numbers in parenthesis specify the individual factor loadings. Also this group accounted for 6.532% of the variance as shown in Table 7.6.

#### **7.4 SECTION C: FACTORS THAT INFLUENCE GLOBALIZATION OF LOGISTICS MANAGEMENT IN NIGERIA**

The results of the questions from the section C part of the questionnaire are presented in this section. It assesses the factors that most influence globalization in Nigeria. The mean item score of all the questions, skewness as well as the EFA of the results are presented. The descriptive analysis results reveal the ranking of each of the factors from the highest to the lowest with the table displaying individual mean scores and likewise the standard deviation of each factors. As described by Pallant (2007), EFA is used in the initial stages of research in order to obtain information involving the interrelationships among a set of variables. EFA was carried out using the Statistical Package Software for Social Sciences (version 21.0). In order for the factor analysis to proceed, all the vital tests were carried out to determine the suitability of the sample size.

### 7.4.1 RESULTS FROM DESCRIPTIVE ANALYSIS

The results of mean item score of the questions and skewness of the stated data are illustrated in Table 7.7.

**Table 7.7: Factors that influence globalization in Nigeria**

Factors That Influence Globalization	Mean ( $\bar{x}$ )	Standard deviation ( $\sigma_X$ )	Rank (R)
Economy	4.14	1.142	1
Technologies	4.10	1.068	2
Resources and markets	4.09	0.991	3
Political issues	4.05	1.158	4
International business	3.97	1.055	5
Growth strategies of multinational companies	3.92	1.105	6
Trade routes	3.92	1.169	6
Unemployment rate	3.92	1.217	6
Corruption index	3.92	1.317	6
Production issues	3.91	1.126	7
Industrial organisations	3.88	1.084	8
GDP per capital	3.84	1.180	9
Population density	3.83	1.238	10
Tax systems reduction	3.70	1.189	11
Containerization	3.68	1.000	12
Literacy rate	3.60	1.209	13
Historical	3.40	1.084	14

The respondents' rankings of the factors that influence globalization in Nigerian industries are shown in Table 7.7. It reveals that the economy was ranked first with a mean item score of 4.14 and standard deviation of 1.142; technologies was ranked second with a mean score of 4.10 and standard deviation of 1.068; resources and markets was ranked third with a mean score of 4.09 and standard deviation of 0.991; political issues was ranked fourth with a mean score of 4.05 and standard deviation of 1.158; international business was ranked fifth with a mean score of 3.97

and standard deviation of 1.055; growth strategies of multinational companies, trade routes, unemployment rate, and corruption index were ranked sixth with a mean score of 3.92 and standard deviations of 1.105, 1.169, 1.217, and 1.317; production issues was ranked seventh with a mean score of 3.91 and standard deviation of 1.126; industrial organisations was ranked eighth with a mean score of 3.88 and standard deviation of 1.084; GDP per capital was ranked ninth with a mean score of 3.84 and standard deviation of 1.180; population density was ranked tenth with a mean score of 3.83 and standard deviation of 1.238; tax systems reduction was ranked eleventh with a mean score of 3.70 and standard deviation of 1.189; containerization was ranked twelfth with a mean score of 3.68 and standard deviation of 1.000; and literacy rate was ranked thirteenth with a mean score of 3.60 and standard deviation of 1.209. Finally, historical was ranked fourteenth with a mean score of 3.40 and standard deviation of 1.048.

#### **7.4.2 RESULTS FROM EXPLORATORY FACTOR ANALYSIS**

The tables 7.8 - 7.12 and figure 7.9 show the results from EFA on the factors that influences globalization in Nigeria. Out of the seventeen variables itemized for the first approach, none was omitted. Therefore, the identified seventeen variables with the potentials to influence globalization in Nigeria are presented in Table 7.8.

**Table 7.8: Definition of identified variables**

<b>C9.1</b>	Trade routes
<b>C9.2</b>	Economy
<b>C9.3</b>	Resources and markets
<b>C9.4</b>	Production issues
<b>C9.5</b>	Political issues
<b>C9.6</b>	Industrial organisations
<b>C9.7</b>	Technologies
<b>C9.8</b>	Containerization
<b>C9.9</b>	Growth strategies of multinational companies
<b>C9.10</b>	Tax systems reduction
<b>C9.11</b>	Historical
<b>C9.12</b>	International business
<b>C9.13</b>	GDP per capital
<b>C9.14</b>	Literacy rate
<b>C9.15</b>	Unemployment rate
<b>C9.16</b>	Corruption Index
<b>C9.17</b>	Population Density

Before performing the principal component analysis (PCA), the fitness of the data for factor analysis was first evaluated. Checking of the correlation matrix in Table 7.9 shows the presence of values above 0.3. In Table 7.10, the Kaiser-Meyer–Olkin measure of sampling acceptability reached a value of 0.924, thereby exceeding the suggested minimum value of 0.6. Bartlett’s test of sphericity was also statistically significant at less than 0.05 ( $< 0.05$ ), thereby supporting the factorability of the correlation matrix. The data was subjected to PCA using varimax rotation. The eigenvalue was based on a conventional high value of 1 as denoted in Table 7.11, and three factors and eigenvalues exceeding 1.0 were extracted. Also, the Catell’s scree plot in Figure 7.9 shows the extracted factors by signifying the break in the plot where the eigenvalues are levelled off. The variance value for each of the extracted factor is as follows: Factor 1 (63.061%), Factor 2 (6.622%), and Factor 3 (5.898%) as shown in Table 7.12. Hence, the final statistics of the PCA and the extracted factors accounted for about 70.548% of the entire cumulative variance.

**Table 7.9: Correlation matrix of factor analysis**

Correlation	C9.1	C9.2	C9.3	C9.4	C9.5	C9.6	C9.7	C9.8	C9.9	C9.10	C9.11	C9.12	C9.13	C9.14	C9.15	C9.16	C9.17
C9.1	<b>1.000</b>	0.786	0.631	0.675	0.678	0.639	0.754	0.525	0.644	0.553	0.377	0.554	0.626	0.417	0.525	0.633	0.531
C9.2	0.786	<b>1.000</b>	0.763	0.774	0.730	0.730	0.831	0.649	0.719	0.635	0.431	0.707	0.639	0.497	0.632	0.610	0.590
C9.3	0.631	0.763	<b>1.000</b>	0.708	0.619	0.685	0.701	0.627	0.599	0.607	0.453	0.595	0.502	0.485	0.559	0.481	0.557
C9.4	0.675	0.774	0.708	<b>1.000</b>	0.639	0.755	0.776	0.573	0.606	0.562	0.437	0.623	0.662	0.581	0.628	0.624	0.521
C9.5	0.678	0.730	0.619	0.639	<b>1.000</b>	0.710	0.727	0.572	0.621	0.516	0.440	0.656	0.570	0.449	0.537	0.633	0.610
C9.6	0.639	0.730	0.685	0.755	0.710	<b>1.000</b>	0.776	0.683	0.667	0.629	0.577	0.730	0.558	0.544	0.549	0.493	0.616
C9.7	0.754	0.831	0.701	0.776	0.727	0.776	<b>1.000</b>	0.655	0.709	0.550	0.482	0.704	0.693	0.512	0.636	0.642	0.625
C9.8	0.525	0.649	0.627	0.573	0.572	0.683	0.655	<b>1.000</b>	0.733	0.647	0.654	0.560	0.601	0.540	0.465	0.478	0.594
C9.9	0.644	0.719	0.599	0.606	0.621	0.667	0.709	0.733	<b>1.000</b>	0.604	0.482	0.578	0.676	0.538	0.562	0.531	0.518
C9.10	0.553	0.635	0.607	0.562	0.516	0.629	0.550	0.647	0.604	<b>1.000</b>	0.633	0.532	0.583	0.552	0.531	0.446	0.618
C9.11	0.377	0.431	0.453	0.437	0.440	0.577	0.482	0.654	0.482	0.633	<b>1.000</b>	0.543	0.571	0.550	0.449	0.437	0.583
C9.12	0.554	0.707	0.595	0.623	0.656	0.730	0.704	0.560	0.578	0.532	0.543	<b>1.000</b>	0.654	0.618	0.577	0.581	0.652
C9.13	0.626	0.639	0.502	0.662	0.570	0.558	0.693	0.601	0.676	0.583	0.571	0.654	<b>1.000</b>	0.683	0.721	0.769	0.666
C9.14	0.417	0.497	0.485	0.581	0.449	0.544	0.512	0.540	0.538	0.552	0.550	0.618	0.683	<b>1.000</b>	0.698	0.547	0.604
C9.15	0.525	0.632	0.559	0.628	0.537	0.549	0.636	0.465	0.562	0.531	0.449	0.577	0.721	0.698	<b>1.000</b>	0.763	0.592
C9.16	0.633	0.610	0.481	0.624	0.633	0.493	0.642	0.478	0.531	0.446	0.437	0.581	0.769	0.547	0.763	<b>1.000</b>	0.639
C9.17	0.531	0.590	0.557	0.521	0.610	0.616	0.625	0.594	0.518	0.618	0.583	0.652	0.666	0.604	0.592	0.639	<b>1.000</b>

**Table 7.10: Kaiser-Meyer–Olkin and Bartlett’s test**

Kaiser-Meyer-Measure of Sampling Adequacy.		.924
Bartlett’s Test of Sphericity	Approx. Chi-Square	1639.842
	df	136
	Sig.	.000

**Table 7.11: Rotated factor matrix**

	Factors		
	1	2	3
Economy	<b>0.831</b>		
Technologies	<b>0.770</b>		
Trade routes	<b>0.730</b>		
Industrial organisations	<b>0.682</b>		
Production issues	<b>0.681</b>		
Resources and Markets	<b>0.678</b>		
Political issues	<b>0.670</b>		
Growth strategies of multinational companies	<b>0.583</b>		
International business	<b>0.514</b>		
Corruption index		<b>0.783</b>	
Unemployment rate		<b>0.721</b>	
GDP per capital		<b>0.702</b>	
Literacy rate		<b>0.565</b>	
Historical			<b>0.746</b>
Containerisation			<b>0.664</b>
Tax systems reduction			<b>0.622</b>
Population density			<b>0.508</b>
Extraction Method: Principal Axis Factoring. Rotation Method: Varimax with Kaiser Normalization. <sup>a</sup> a. Rotation converged in 12 iterations			

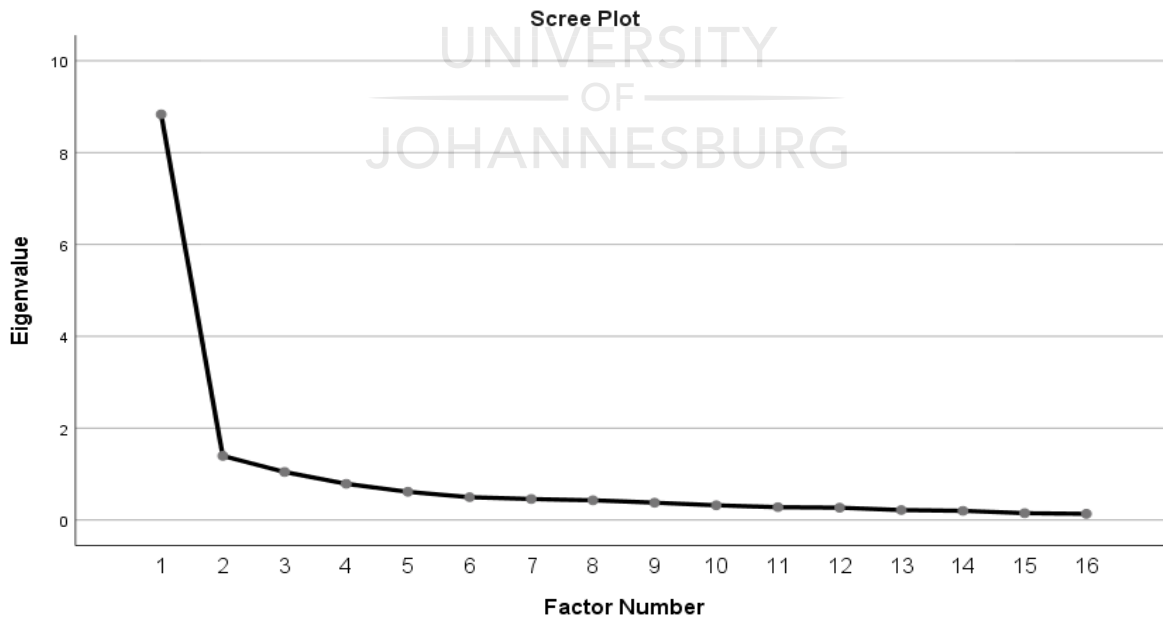


Figure 7.9: Scree plot for factor analysis

**Table 7.12: Total variance explained**

Factors	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotated Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	<b>10.720</b>	63.061	63.061	10.433	61.369	61.369	5.294	31.141	31.141
2	<b>1.126</b>	6.622	69.683	0.837	4.922	66.290	3.381	19.886	51.027
3	<b>1.003</b>	5.898	<b>75.581</b>	0.724	4.258	70.548	3.319	19.521	<b>70.548</b>
4	0.580	3.414	78.995						
5	0.564	3.319	82.314						
6	0.480	2.826	85.140						
7	0.381	2.242	87.382						
8	0.356	2.096	89.478						
9	0.310	1.824	91.302						
10	0.287	1.686	92.989						
11	0.261	1.536	94.525						
12	0.230	1.353	95.878						
13	0.191	1.121	96.999						
14	0.176	1.035	98.034						
15	0.139	0.820	98.854						
16	0.117	0.685	99.540						
17	0.078	0.460	100.000						
Extraction Method: Principal Axis Factoring									

The principal axis factoring showed the presence of three factors with eigenvalues larger than 1 as presented in Table 7.12. Owing to close inspection of the integral relationships among each of the variables under each factor, the following interpretations were made: Factor 1 was named ‘economic globalization’; Factor 2 was named ‘political globalization; and Factor 3 was named ‘cultural globalization’. The names used in describing these factors were derived by a close inspection of the variables within each of the factors. The component indicators of each of the three factors extracted are described below, together with a comprehensive explanation of how each of the three factors was described within the group.

- **Factor 1: Economic globalization**

As shown in the Table 7.11, the nine extracted factors that influence globalization in Nigeria for factor 1 were economy (83.1%), technologies (77.0%), trade routes (73.0%), industrial organisations (68.2%), production issues (68.1%), resources and markets (67.8%), political issues (67.0%), growth strategies of multinational companies (58.3%), and international business

(51.4%). The number in parenthesis specifies the individual factor loadings. Also this group accounted for 63.061% of the variance as shown in Table 7.12.

- **Factor 2: Political globalization**

The four extracted factors that influence globalization in Nigeria for factor 2 were corruption index (78.3%), unemployment rate (72.1%), GDP per capital (70.2%), literacy rate (56.5%), and production logistics (57.8%) as presented in Table 7.11. The number in parenthesis specifies the individual factor loadings. Also this group accounted for 6.62% of the variance as shown in Table 7.12.

- **Factor 3: Cultural globalization**

The four extracted factors that influence globalization in Nigeria for factor 3 were historical (74.6%), containerization (66.4%), tax systems reduction (62.2%), and population density (50.8%) as presented in Table 7.11. The number in parenthesis specifies the individual factor loadings. Also this group accounted for 5.89% of the variance as shown in Table 7.12.

## **7.5 SECTION D: BENEFITS OF GLOBALIZATION ON LOGISTICS MANAGEMENT IN NIGERIA**

The results of the questions from the section D part of the questionnaire are presented in this section. It assesses the benefits of globalization on logistics management in Nigeria. Some of the results presented include EFA, mean score of all the questions, and skewness. The descriptive analysis results show the ranking of each of all the factors from the highest to the lowest, individual mean scores, and likewise the standard deviation of each factor.

### **7.5.1 RESULTS FROM DESCRIPTIVE ANALYSIS**

The results of mean item score of the questions and skewness of the stated data are illustrated in Table 7.13.

**Table 7.13: Benefits of globalization on logistics management**

Benefits of Globalization on Logistics Management	Mean ( $\bar{x}$ )	Standard deviation ( $\sigma_X$ )	Rank (R)
Access to new sources of procurement/distribution	4.18	1.031	1
Better performance due to global exposure	4.15	1.085	2
Opportunity to reach new customers in new markets	4.08	1.144	3
Improvement in transport efficiency	4.08	1.292	3
Increased economies of scale to reduce transport cost	4.06	1.022	4
Improved customers service	4.05	1.174	5
Technological improvements	4.04	1.187	6
Effective global logistics operations in sourcing of labour and components	4.03	1.064	7
Positive change in strategy of logistics firms' services	4.02	1.171	8
Logistics industry expertise and experience	4.01	1.125	9
Boosting efficiency of vital logistics operations	3.97	1.246	10
Expanded outsourcing opportunities	3.96	1.170	11
Flexibility in third party logistics firms' network	3.92	1.164	12
The quality of logistic firms emerging markets being measurable	3.91	1.175	13
High cost-effective logistic solutions	3.86	1.199	14
Competitiveness to firms based on applications such as ERP	3.85	1.085	15
Wide network of resources and carriers	3.82	1.225	16

The respondents' rankings of the benefits of globalization on logistics management in Nigeria are shown in Table 7.13. It reveals that the access to new sources of procurement/distribution was ranked first with a mean item score of 4.18 and standard deviation of 1.031; better performance due to global exposure was ranked second with a mean score of 4.15 and standard deviation of 1.085; opportunity to reach new customers in new markets and improvement in transport efficiency were both ranked third with a mean score of 4.08 and standard deviation of 1.144 and 1.292; increased economies of scale to reduce transport cost was ranked fourth with a mean score of 4.06 and standard deviation of 1.022; improved customers service was ranked fifth with a mean score of 4.05 and standard deviation of 1.174; technological improvements



was ranked sixth with a mean score of 4.04 and standard deviation of 1.187; effective global logistics operations in sourcing of labour and components was ranked seventh with a mean score of 4.03 and standard deviation of 1.064; positive change in strategy of logistics firms' services was ranked eighth with a mean score of 4.02 and standard deviation of 1.171; logistics industry expertise and experience was ranked ninth with a mean score of 4.01 and standard deviation of 1.125; boosting efficiency of vital logistics operations was ranked tenth with a mean score of 3.97 and standard deviation of 1.246; expanded outsourcing opportunities was ranked eleventh with a mean score of 3.96 and standard deviation of 1.170; flexibility in third party logistics firms' network was ranked twelfth with a mean score of 3.92 and standard deviation of 1.164; the quality of logistic firms' emerging markets being measurable was ranked thirteenth with a mean score of 3.91 and standard deviation of 1.175; high cost-effective logistic solutions was ranked fourteenth with a mean score of 3.86 and standard deviation of 1.085; and competitiveness of firms based on applications such as ERP was ranked fifteenth with a mean score of 3.85 and standard deviation of 1.085. Finally, wide network of resources and carriers was ranked sixteenth with a mean score of 3.82 and standard deviation of 1.225.

## 7.5.2 RESULTS FROM EXPLORATORY FACTOR ANALYSIS

The tables 7.14 - 7.18 and figure 7.10 give the EFA results of the benefits of globalization on logistics management in Nigeria. Out of the seventeen variables itemized for the first approach, none was omitted. Therefore, the identified seventeen variables are presented in Table 7.14.

**Table 7.14: Definition of identified variables**

<b>D10.1</b>	Improvement in transport efficiency
<b>D10.2</b>	Technological improvements
<b>D10.3</b>	Expanded outsourcing opportunities
<b>D10.4</b>	Opportunity to reach new customers in new markets
<b>D10.5</b>	Better performance due to global exposure
<b>D10.6</b>	Improved customers service
<b>D10.7</b>	Access to new sources of procurement/distribution
<b>D10.8</b>	High cost-effective logistic solutions
<b>D10.9</b>	Increased economies of scale to reduce transport cost
<b>D10.10</b>	Effective global logistics operations in sourcing of labour and components
<b>D10.11</b>	Competitiveness to firms based on applications such as ERP
<b>D10.12</b>	Wide network of resources and carriers
<b>D10.13</b>	Logistics industry expertise and experience

<b>D10.14</b>	Flexibility in third party logistics firms' network
<b>D10.15</b>	Positive Change in strategy of logistics firms' services
<b>D10.16</b>	The quality of logistic firms emerging markets being measurable
<b>D10.17</b>	Boosting efficiency of vital logistics operations

Before performing the PCA, the fitness of the data for factor analysis was first evaluated. Checking of correlation matrix in Table 7.15 shows the presence of values above 0.3. In Table 7.16, the Kaiser-Meyer–Olkin measure of sampling acceptability reached a value of 0.934, way exceeding the suggested minimum value of 0.6 and the Bartlett's test of sphericity was also statistically significant at less than 0.05 ( $< 0.05$ ), therefore supporting the factorability of the correlation matrix. The data was subjected to PCA using varimax rotation. The eigenvalue was based on a conventional high value of 1 as denoted in Table 7.17, and one factor and eigenvalues exceeding 1.0 were extracted. Also, the Catell's scree plot in Figure 7.10 shows the extracted factors by signifying the break in the plot where the eigenvalues are levelled off. The variance value for the extracted factor is factor 1 (70.588%), as shown in Table 7.18. Hence, the final statistics of the PCA and the extracted factors accounted for about 68.777% of the entire cumulative variance.

**Table 7.15: Correlation matrix of factor analysis**

Correlation	D10.1	D10.2	D10.3	D10.4	D10.5	D10.6	D10.7	D10.8	D10.9	D10.10	D10.11	D10.12	D10.13	D10.14	D10.15	D10.16	D10.17
D10.1	<b>1.000</b>	0.762	0.619	0.647	0.746	0.682	0.762	0.603	0.660	0.608	0.653	0.754	0.707	0.517	0.553	0.600	0.652
D10.2	0.762	<b>1.000</b>	0.803	0.798	0.839	0.771	0.734	0.620	0.627	0.663	0.633	0.699	0.699	0.630	0.671	0.624	0.703
D10.3	0.619	0.803	<b>1.000</b>	0.820	0.815	0.729	0.716	0.560	0.607	0.651	0.633	0.673	0.658	0.585	0.647	0.634	0.698
D10.4	0.647	0.798	0.820	<b>1.000</b>	0.835	0.650	0.731	0.612	0.575	0.679	0.585	0.717	0.702	0.563	0.653	0.579	0.610
D10.5	0.746	0.839	0.815	0.835	<b>1.000</b>	0.817	0.785	0.654	0.714	0.739	0.683	0.759	0.740	0.644	0.702	0.706	0.757
D10.6	0.682	0.771	0.729	0.650	0.817	<b>1.000</b>	0.780	0.675	0.641	0.647	0.671	0.668	0.648	0.581	0.630	0.666	0.678
D10.7	0.762	0.734	0.716	0.731	0.785	0.780	<b>1.000</b>	0.737	0.704	0.725	0.774	0.765	0.737	0.568	0.652	0.674	0.709
D10.8	0.603	0.620	0.560	0.612	0.654	0.675	0.737	<b>1.000</b>	0.683	0.742	0.664	0.657	0.587	0.572	0.613	0.653	0.622
D10.9	0.660	0.627	0.607	0.575	0.714	0.641	0.704	0.683	<b>1.000</b>	0.830	0.721	0.655	0.670	0.669	0.628	0.671	0.667
D10.10	0.608	0.663	0.651	0.679	0.739	0.647	0.725	0.742	0.830	<b>1.000</b>	0.763	0.749	0.700	0.679	0.695	0.672	0.669
D10.11	0.653	0.633	0.633	0.585	0.683	0.671	0.774	0.664	0.721	0.763	<b>1.000</b>	0.789	0.672	0.638	0.625	0.721	0.638
D10.12	0.754	0.699	0.673	0.717	0.759	0.668	0.765	0.657	0.655	0.749	0.789	<b>1.000</b>	0.816	0.624	0.626	0.702	0.696
D10.13	0.707	0.699	0.658	0.702	0.740	0.648	0.737	0.587	0.670	0.700	0.672	0.816	<b>1.000</b>	0.742	0.780	0.721	0.741
D10.14	0.517	0.630	0.585	0.563	0.644	0.581	0.568	0.572	0.669	0.679	0.638	0.624	0.742	<b>1.000</b>	0.812	0.753	0.668
D10.15	0.553	0.671	0.647	0.653	0.702	0.630	0.652	0.613	0.628	0.695	0.625	0.626	0.780	0.812	<b>1.000</b>	0.811	0.751
D10.16	0.600	0.624	0.634	0.579	0.706	0.666	0.674	0.653	0.671	0.672	0.721	0.702	0.721	0.753	0.811	<b>1.000</b>	0.831
D10.17	0.652	0.703	0.698	0.610	0.757	0.678	0.709	0.622	0.667	0.669	0.638	0.696	0.741	0.668	0.751	0.831	<b>1.000</b>

Table 7.16: Kaiser-Meyer-Olkin and Bartlett's Test

Kaiser-Meyer-Measure of Sampling Adequacy.		.934
Bartlett's Test of Sphericity	Approx. Chi-Square	2041.984
	Df	136
	Sig.	.000

**Table 7.17: Rotated factor matrix**

	Factor
	1
Better performance due to global exposure	0.906
Access to new sources of procurement/distribution	0.874
Wide network of resources and carriers	0.858
Logistics industry expertise and experience	0.855
Technological improvements	0.852
Effective global logistics operations in sourcing of labour and components	0.845
Boosting efficiency of vital logistics operations	0.837
The quality of logistic firms emerging markets being measurable	0.830
Improved customer service	0.825
Expanded outsourcing opportunities	0.819
Competitiveness to firms based on applications such as ERP	0.819
Positive change in strategy of logistics firms' services	0.817
Opportunity to reach new customers in new markets	0.812
Increased economies of scale to reduce transport cost	0.807
Improvement in transport efficiency	0.793
High cost-effective logistic solutions	0.770
Flexibility in third party logistics firms' network	0.769
Extraction Method: Principal Axis Factoring. a.1 factor extracted.	

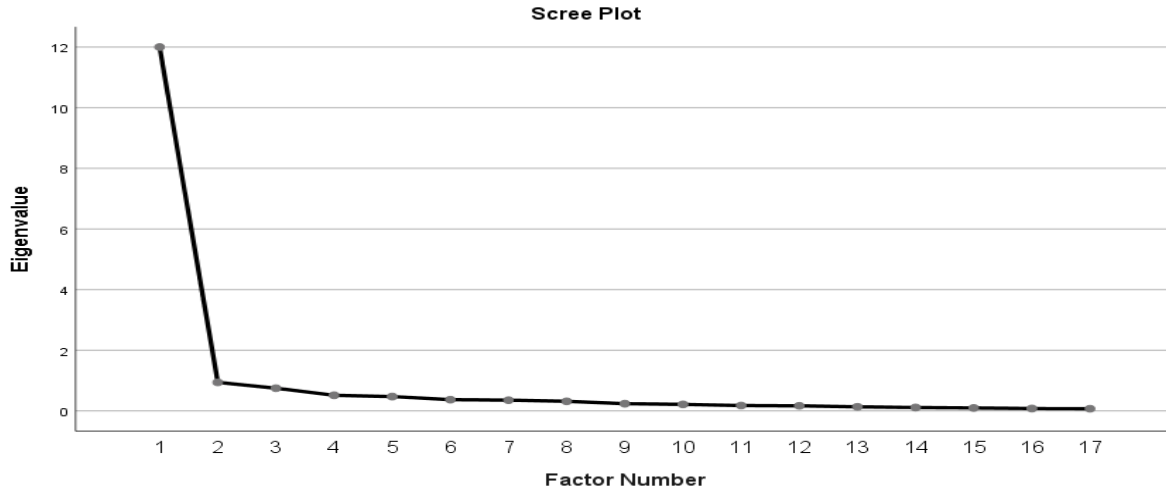


Figure 7.10: Scree plot for factor analysis

**Table 7.18: Total variance explained**

Factors	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotated Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	<b>12.000</b>	70.588	<b>70.588</b>	11.692	68.777	68.777	11.692	68.777	68.777
2	0.941	5.534	76.122						
3	0.749	4.403	80.525						
4	0.515	3.030	83.554						
5	0.472	2.777	86.332						
6	0.370	2.179	88.511						
7	0.354	2.081	90.592						
8	0.316	1.857	92.449						
9	0.236	1.391	93.840						
10	0.214	1.258	95.098						
11	0.176	1.034	96.132						
12	0.168	0.986	97.117						
13	0.135	0.793	97.910						
14	0.111	0.655	98.565						
15	0.097	0.571	99.136						
16	0.077	0.451	99.587						
17	0.070	0.413	100.000						

Extraction Method: Principal Axis Factoring

The principal axis factoring showed the presence of one factor with eigenvalues larger than 1 as presented in Table 7.18. Owing to close inspection of the integral relationships among each of

the variables under each factor, only one factor was generated. Factor 1 was named ‘benefits of globalization on logistics management’. The name used in describing factor 1 was derived by a close inspection of the variables within the factor. The component indicators of factor 1 that was extracted are described below:

- **Factor 1:** Benefits of globalization for logistics management

As shown in the Table 7.17, the seventeen extracted factors for factor 1 were better performance due to global exposure (90.6%), access to new sources of procurement/distribution (87.4%), wide network of resources and carriers (85.8%), logistics industry expertise and experience (85.5%), technological improvements (85.2%), effective global logistics operations in sourcing of labour and components (84.5%), boosting efficiency of vital logistics operations (83.7%), the quality of logistic firms emerging markets being measurable (83.0%), improved customers service (82.5%), expanded outsourcing opportunities (81.9%), competitiveness of firms based on applications such as enterprise resource planning (81.9%), positive change in strategy of logistics firms’ services (81.7%), opportunity to reach new customers in new markets (81.2%), increased economies of scale to reduce transport cost (80.7%), improvement in transport efficiency (79.3%), high cost-effective logistic solutions (77.0%), and flexibility in third party logistics firms’ network (76.9%). The number in parenthesis specifies the individual factor loadings. Also this group accounted for 70.588% of the variance .

## **7.6 SECTION E: IMPACTS OF LOGISTICS MANAGEMENT IN NIGERIA**

The results of the questions from the section E part of the questionnaire are presented in this section. It assesses the impacts of good logistics management in Nigeria. Some of the results presented include EPA, mean score of all the questions, and skewness. The descriptive analysis results show the ranking of each of the factors from the highest to the lowest, individual mean scores, and likewise the standard deviation of each factor.

### **7.6.1 RESULTS FROM DESCRIPTIVE ANALYSIS**

The results of the mean item score of the questions and skewness of the stated data are illustrated in Table 7.19.

**Table 7.19: Impacts of logistics management in Nigeria**

Impacts of Good Logistics Management in Nigeria	Mean ( $\bar{x}$ )	Standard deviation ( $\sigma_X$ )	Rank (R)
Growing number of skilled logistic professionals	4.07	1.080	1
Access to new/effective information	4.04	1.050	2
Improvement in technology	4.03	1.091	3
Efficiency in logistics chains transportation nodes	4.03	1.142	3
Optimization of logistics operational performance	3.99	1.134	4
Availability to new markets	3.97	1.125	5
Availability to resources	3.96	1.086	6
Outsourcing logistics activities to reduce operating cost	3.96	1.195	6
Efficiency of logistics chain models	3.96	1.077	6
Enhancement of logistics competitiveness	3.95	1.036	7
Increase in logistics productivity tools	3.95	1.090	7
Reduction in logistics cost	3.93	1.063	8
Controlling the flow of goods and services	3.92	1.093	9
Improvement in innovation and logistics chain networks	3.92	1.204	9
The impact of globalization attracts attention to green logistics	3.90	1.086	10
Securing of transparency in logistics operations	3.90	1.154	10
Simplicity in global logistics system	3.82	1.102	11
Trade capabilities acceleration in logistics networks	3.81	1.139	12
Securing of visibility in logistics operations	3.75	1.076	13

The respondents' rankings of the impacts of good logistics management in Nigeria are shown in Table 7.19. It reveals that the growing number of skilled logistic professionals was ranked first with a mean item score of 4.07 and standard deviation of 1.080; access to new/effective information was ranked second with a mean score of 4.04 and standard deviation of 1.050; improvement in technology and efficiency in logistic chains transportation modes were both ranked third with a mean score of 4.03 and standard deviations of 1.091 and 1.142; optimization of logistics operational performance was ranked fourth with a mean score of 3.99 and standard deviation of 1.134; availability to new markets was ranked fifth with a mean score of 3.97 and

standard deviation of 1.125; availability of resources, outsourcing logistics activities and efficiency of logistics chain models to reduce operating cost were ranked sixth with a mean score of 3.96 and standard deviation of 1.086, 1.195 and 1.007; enhancement of logistics competitiveness and increase in logistics productivity tools were both ranked seventh with a mean score of 3.95 and standard deviation of 1.036 and 1.090; reduction in logistics cost was ranked eighth with a mean score of 3.93 and standard deviation of 1.063; controlling the flow of goods and services being measurable and improvement in innovation and logistics chain networks were both ranked ninth with a mean score of 3.92 and standard deviation of 1.093 and 1.204; the impact of globalization attracts attention to green logistics and securing of transparency in logistics operations was ranked tenth with a mean score of 3.90 and standard deviation of 1.086 and 1.154; simplicity in global logistics system was ranked eleventh with a mean score of 3.82 and standard deviation of 1.102; and trade capabilities acceleration in logistics networks was ranked twelfth with a mean score of 3.81 and standard deviation of 1.139. Finally, securing of visibility in logistics operations was ranked thirteenth with a mean score of 3.75 and standard deviation of 1.076.

## 7.6.2 RESULTS FROM EXPLORATORY FACTOR ANALYSIS

The tables 7.20 - 7.24 and figure 7.11 give the EFA results on the impacts of good logistics management in Nigeria. Out of the nineteen variables itemized for the first approach, none was omitted. Therefore, the identified nineteen variables are presented in Table 7.20.

**Table 7.20: Definition of identified variables**

<b>E11.1</b>	Improvement in innovation and logistics chain networks
<b>E11.2</b>	Optimization of logistics operational performance
<b>E11.3</b>	Availability to resources
<b>E11.4</b>	Reduction in logistics cost
<b>E11.5</b>	Enhancement of logistics competitiveness
<b>E11.6</b>	Securing of visibility in logistics operations
<b>E11.7</b>	Securing of transparency in logistics operations
<b>E11.8</b>	Improvement in technology
<b>E11.9</b>	Growing number of skilled logistic professionals
<b>E11.10</b>	Efficiency in logistic chains transportation modes
<b>E11.11</b>	Trade capabilities acceleration in logistics networks
<b>E11.12</b>	Simplicity in global logistics system
<b>E12.13</b>	The impact of globalization attracts attention to green logistics
<b>E13.14</b>	Efficiency of logistics chain models

<b>E14.15</b>	Access to new/effective information
<b>E15.16</b>	Outsourcing logistics activities to reduce operating cost
<b>E16.17</b>	Controlling the flow of goods and services
<b>E17.18</b>	Increase in logistics productivity tools
<b>E18.19</b>	Availability of new markets

Before performing the PCA, the fitness of the data for factor analysis was first evaluated. Checking of correlation matrix in Table 7.21 shows the presence of values above 0.3. In Table 7.22, the Kaiser-Meyer–Olkin measure of sampling acceptability reached a value of 0.940, thereby exceeding the suggested minimum value of 0.6. Bartlett’s test of sphericity was also statistically significant at less than 0.05 ( $< 0.05$ ), thereby supporting the factorability of the correlation matrix. The data was subjected to PCA using varimax rotation. The eigenvalue was based on a conventional high value of 1 as denoted in Table 7.23, and one factor and eigenvalues exceeding 1.0 were extracted. Also, the Catell’s scree plot in Figure 7.11 shows the extracted factors by signifying the break in the plot where the eigenvalues are levelled off. The variance value for the extracted factor is factor 1 (71.318%), as shown in Table 7.24. Hence, the final statistics of the PCA and the extracted factors accounted for about 69.747% of the entire cumulative variance.

**Table 7.21: Correlation matrix of factor analysis**

Correlation	E11.1	E11.2	E11.3	E11.4	E11.5	E11.6	E11.7	E11.8	E11.9	E11.10	E11.11	E11.12	E11.13	E11.14	E11.15	E11.16	E11.17	E11.18	E11.19
E11.1	<b>1.000</b>	0.795	0.675	0.673	0.623	0.645	0.576	0.647	0.685	0.646	0.585	0.663	0.670	0.658	0.695	0.686	0.683	0.606	0.617
E11.2	0.795	<b>1.000</b>	0.781	0.711	0.689	0.646	0.574	0.740	0.708	0.728	0.640	0.722	0.734	0.678	0.712	0.668	0.668	0.693	0.604
E11.3	0.675	0.781	<b>1.000</b>	0.749	0.709	0.652	0.582	0.668	0.643	0.677	0.579	0.726	0.739	0.748	0.719	0.689	0.656	0.666	0.669
E11.4	0.673	0.711	0.749	<b>1.000</b>	0.637	0.685	0.600	0.643	0.593	0.653	0.603	0.730	0.704	0.622	0.702	0.651	0.701	0.655	0.652
E11.5	0.623	0.689	0.709	0.637	<b>1.000</b>	0.775	0.657	0.667	0.726	0.725	0.622	0.709	0.656	0.698	0.710	0.745	0.585	0.647	0.652
E11.6	0.645	0.646	0.652	0.685	0.775	<b>1.000</b>	0.800	0.614	0.719	0.695	0.630	0.701	0.719	0.649	0.691	0.689	0.697	0.648	0.631
E11.7	0.576	0.574	0.582	0.600	0.657	0.800	<b>1.000</b>	0.729	0.724	0.703	0.753	0.704	0.660	0.587	0.663	0.640	0.681	0.685	0.614
E11.8	0.647	0.740	0.668	0.643	0.667	0.614	0.729	<b>1.000</b>	0.791	0.802	0.702	0.733	0.686	0.674	0.714	0.681	0.713	0.682	0.684
E11.9	0.685	0.708	0.643	0.593	0.726	0.719	0.724	0.791	<b>1.000</b>	0.817	0.668	0.634	0.704	0.739	0.745	0.659	0.650	0.682	0.699
E11.10	0.646	0.728	0.677	0.653	0.725	0.695	0.703	0.802	0.817	<b>1.000</b>	0.751	0.753	0.832	0.760	0.793	0.762	0.734	0.743	0.720
E11.11	0.585	0.640	0.579	0.603	0.622	0.630	0.753	0.702	0.668	0.751	<b>1.000</b>	0.777	0.738	0.638	0.699	0.674	0.669	0.744	0.687
E11.12	0.663	0.722	0.726	0.730	0.709	0.701	0.704	0.733	0.634	0.753	0.777	<b>1.000</b>	0.788	0.740	0.804	0.790	0.756	0.754	0.741
E12.13	0.670	0.734	0.739	0.704	0.656	0.719	0.660	0.686	0.704	0.832	0.738	0.788	<b>1.000</b>	0.794	0.780	0.724	0.699	0.696	0.691
E13.14	0.658	0.678	0.748	0.622	0.698	0.649	0.587	0.674	0.739	0.760	0.638	0.740	0.794	<b>1.000</b>	0.792	0.776	0.677	0.728	0.722
E14.15	0.695	0.712	0.719	0.702	0.710	0.691	0.663	0.714	0.745	0.793	0.699	0.804	0.780	0.792	<b>1.000</b>	0.836	0.766	0.767	0.766
E15.16	0.686	0.668	0.689	0.651	0.745	0.689	0.640	0.681	0.659	0.762	0.674	0.790	0.724	0.776	0.836	<b>1.000</b>	0.778	0.723	0.651
E16.17	0.683	0.668	0.656	0.701	0.585	0.697	0.681	0.713	0.650	0.734	0.669	0.756	0.699	0.677	0.766	0.778	<b>1.000</b>	0.812	0.649
E17.18	0.606	0.693	0.666	0.655	0.647	0.648	0.685	0.682	0.682	0.743	0.744	0.754	0.696	0.728	0.767	0.723	0.812	<b>1.000</b>	0.729
E18.19	0.617	0.604	0.669	0.652	0.652	0.631	0.614	0.684	0.699	0.720	0.687	0.741	0.691	0.722	0.766	0.651	0.649	0.729	<b>1.000</b>



Kaiser-Meyer-Measure of Sampling Adequacy.		.940
Bartlett's Test of Sphericity	Approx. Chi-Square	2272.284
	df	171
	Sig.	.000

**Table 7.22: Kaiser-Meyer-Olkin and Bartlett's test**

**Table 7.23: Rotated factor matrix**

	Factor
	1
Access to new/effective information	0.893
Efficiency in logistic chains transportation modes	0.889
Simplicity in global logistics system	0.883
The impact of globalization attracts attention to green logistics	0.869
Outsourcing logistics activities to reduce operating cost	0.855
Efficiency of logistics chain models	0.846
Increase in logistics productivity tools	0.843
Growing number of skilled logistic professionals	0.837
Controlling the flow of goods and services	0.837
Improvement in technology	0.837
Optimization of logistics operational performance	0.831
Availability to resources	0.820
Securing of visibility in logistics operations	0.816
Enhancement of logistics competitiveness	0.813
Availability to new markets	0.810
Trade capabilities acceleration in logistics networks	0.809
Reduction in logistics cost	0.794
Securing of transparency in logistics operations	0.792
Improvement in innovation and logistics chain networks	0.785
Extraction Method: Principal Axis Factoring. a. 1 factors extracted	

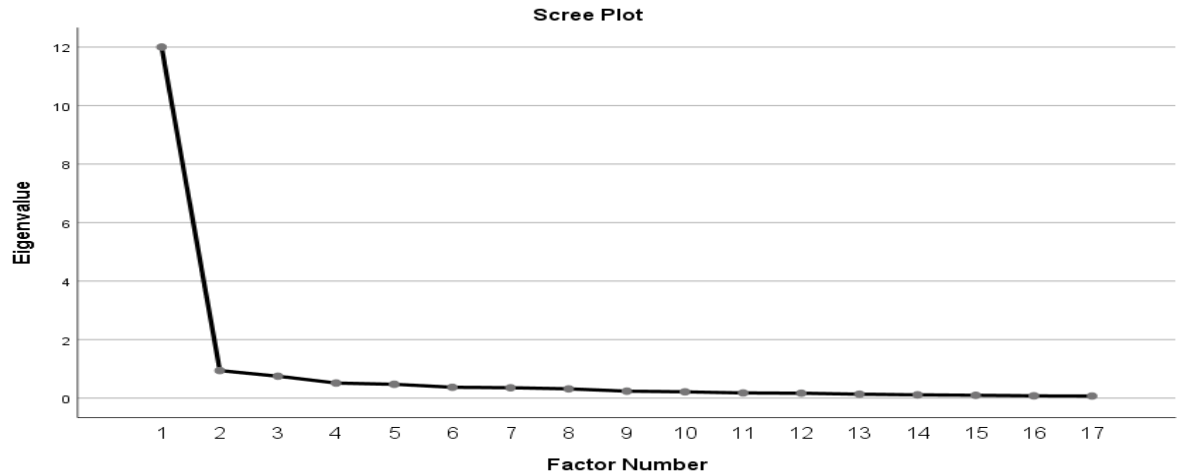


Figure 7.11: Scree plot for factor analysis

Table 7.24: Total variance explained

Factors	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotated Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	13.550	71.318	71.318	13.252	69.747	69.747	13.252	69.747	69.747
2	0.750	3.945	75.263						
3	0.623	3.278	78.541						
4	0.554	2.918	81.459						
5	0.518	2.725	84.185						
6	0.435	2.292	86.476						
7	0.376	1.978	88.454						
8	0.339	1.786	90.241						
9	0.325	1.712	91.952						
10	0.291	1.532	93.484						
11	0.245	1.289	94.774						
12	0.189	0.994	95.768						
13	0.172	0.907	96.675						
14	0.160	0.840	97.515						
15	0.119	0.625	98.141						
16	0.107	0.566	98.706						
17	0.099	0.519	99.225						

Extraction Method: Principal Axis Factoring

The principal axis factoring showed the presence of one factor with eigenvalues larger than 1 as presented in Table 7.24. Owing to close inspection of the integral relationships among each of

the variables under each factor, only one factor was generated. Factor 1 was named 'impacts of logistics management'. The name used in describing factor 1 was derived by a close inspection of the variables within the factor. The component indicators of factor 1 that was extracted are described below:

- **Factor 1:** Impacts of logistics management

As shown in the Table 7.23, the nineteen extracted factors for factor 1 were access to new/effective information (89.3%), efficiency in logistic chains transportation modes (88.9%), simplicity in global logistics system (88.3), outsourcing logistics activities to reduce operating cost (85.5%), efficiency of logistics chain models (84.6%), increase in logistics productivity tools (84.3%), controlling the flow of goods and services (83.7%), improvement in technology (83.7%), optimization of logistics operational performance (83.1%), availability to resources (82.0%), securing of visibility in logistics operations (81.6%), enhancement of logistics competitiveness (81.3%), availability to new markets (81.0%), trade capabilities acceleration in logistics networks (80.9%), reduction in logistics cost (79.4%), securing of transparency in logistics operations (79.2%), and improvement in innovation and logistics chain networks (78.5%). The number in parenthesis specifies the individual factor loadings. Also this group accounted for 71.318% of the variance shown in Table 7.24.

## **7.7 SECTION F: INFLUENCE OF EFFECTIVE AND NEW INFORMATION FLOW ON LOGISTICS MANAGEMENT**

The results of the questions from the section F part of the questionnaire are presented in this section. It assesses the influence of effective and new information flow on logistics management in Nigeria. Some of the results presented include EPA, mean score of all the questions, and skewness. The descriptive analysis results show the ranking of each of the factors from the highest to the lowest, individual mean scores, and likewise the standard deviation of each factor.

### **7.7.1 RESULTS FROM DESCRIPTIVE ANALYSIS**

The results of mean item score of the questions and skewness of the stated data are illustrated in Table 7.25.

Table 7.25: Influence of effective and new information flow on logistics management in Nigeria

Influence of Effective and New Information Flow on Logistics Management	Mean ( $\bar{x}$ )	Standard deviation ( $\sigma_X$ )	Rank (R)
Negotiating better contracts	3.99	1.009	1
Better product tracking and forecasting reports	3.98	1.042	2
Better quality logistics information flow	3.97	1.009	3
Expanded network	3.96	1.050	4
Enhanced information transfer between buyers and sellers	3.93	1.017	5
It helps in timely delivery	3.93	1.089	5
More accurate costing	3.92	0.902	6
Reduced lead time	3.92	1.048	6
Smooth flow of material and products	3.91	1.083	7
Better operational efficiency	3.90	1.077	8
Increase in safety of goods	3.87	1.024	9
Smooth information flow to all logistics functions	3.87	1.043	9
Reduction of uncertainties	3.83	1.064	10
Better quantity logistics information flow	3.82	1.012	11
Providing less expensive transportation nodes	3.79	1.039	12
Reduced inventory level	3.58	1.077	13
Decrease in cost	3.58	1.178	13

The respondents' rankings of the influence of effective and new information flow on logistics management in Nigeria are shown in Table 7.25. It reveals that negotiating better contracts was ranked first with a mean item score of 3.99 and standard deviation of 1.009; better product tracking and forecasting reports was ranked second with a mean score of 3.98 and standard deviation of 1.042; better quality logistics information flow was ranked third with a mean score of 3.97 and standard deviation of 1.009; expanded network was ranked fourth with a mean score of 3.96 and standard deviation of 1.050; enhanced information transfer between buyers/sellers and it helps in timely delivery were both ranked fifth with a mean score of 3.93 and standard deviations of 1.017 and 1.089; more accurate costing and reduced lead time were both ranked sixth with a mean score of 3.92 and standard deviations of 0.902 and 1.048; smooth flow of

material and products was ranked seventh with a mean score of 3.91 and standard deviation of 1.083; better operational efficiency was ranked eighth with a mean score of 3.90 and standard deviation of 1.077; increase in safety of goods and smooth information flow to all logistics functions were both ranked ninth with a mean score of 3.87 and standard deviation of 1.024 and 1.043; reduction of uncertainties was ranked tenth with a mean score of 3.83 and standard deviation of 1.064; better quantity logistics information flow was ranked eleventh with a mean score of 3.82 and standard deviation of 1.012; and providing less expensive transportation nodes was ranked twelfth with a mean score of 3.79 and standard deviation of 1.039. Finally, reduced inventory level and decrease in cost were both ranked thirteenth with a mean score of 3.58 and standard deviations of 1.077 and 1.178.

## 7.7.2 RESULTS FROM EXPLORATORY FACTOR ANALYSIS

The tables 7.26 - 7.30 and figure 7.12 give the EFA results on the influence of effective and new information flow on logistics management in Nigeria. Out of the seventeen variables itemized for the first approach, none was omitted. Therefore, the identified seventeen variables are presented in Table 7.26.

**Table 7.26: Definition of identified variables**

<b>F12.1</b>	Decrease in cost
<b>F12.2</b>	Better operational efficiency
<b>F12.3</b>	Reduced inventory level
<b>F12.4</b>	Better quality logistics information flow
<b>F12.5</b>	Better quantity logistics Information Flow
<b>F12.6</b>	Better product tracking and forecasting reports
<b>F12.7</b>	Reduced lead time
<b>F12.8</b>	Expanded network
<b>F12.9</b>	Negotiating better contracts
<b>F12.10</b>	Providing less expensive transportation nodes
<b>F12.11</b>	More accurate costing
<b>F12.12</b>	Increase in safety of goods
<b>F12.13</b>	Reduction of uncertainties
<b>F12.14</b>	Enhanced information transfer between buyers and sellers
<b>F12.15</b>	Smooth flow of material and products
<b>F12.16</b>	Smooth information flow to all logistics functions
<b>F12.17</b>	It helps in timely delivery

Before performing the PCA, the fitness of the data for factor analysis was first evaluated. Checking of the correlation matrix in Table 7.27 shows the presence of values above 0.3. In Table 7.28, the Kaiser-Meyer–Olkin measure of sampling acceptability reached a value of 0.943, thereby exceeding the suggested minimum value of 0.6. Bartlett’s test of sphericity was also statistically significant at less than 0.05 ( $< 0.05$ ), thereby supporting the factorability of the correlation matrix. The data was subjected to PCA using varimax rotation. The eigenvalue was based on a conventional high value of 1 as denoted in Table 7.29, and one factor and eigenvalues exceeding 1.0 were extracted. Also, the Catell’s scree plot in Figure 7.12 shows the extracted factors by signifying the break in the plot where the eigenvalues are levelled off. The total variance value for the extracted factor is factor 1 (65.711%), as shown in Table 7.30. Hence, the final statistics of the PCA and the extracted factors accounted for about 63.607% of the entire cumulative variance.

**Table 7.27: Correlation matrix of factor analysis**

Correlation	F12.1	F12.2	F12.3	F12.4	F12.5	F12.6	F12.7	F12.8	F12.9	F12.10	F12.11	F12.12	F12.13	F12.14	F12.15	F12.16	F12.17
F12.1	<b>1.000</b>	0.709	0.554	0.559	0.592	0.475	0.414	0.564	0.445	0.582	0.678	0.546	0.445	0.478	0.529	0.544	0.624
F12.2	0.709	<b>1.000</b>	0.545	0.724	0.638	0.626	0.575	0.628	0.621	0.567	0.658	0.600	0.533	0.637	0.612	0.632	0.660
F12.3	0.554	0.545	<b>1.000</b>	0.594	0.665	0.553	0.647	0.626	0.601	0.663	0.536	0.649	0.603	0.549	0.620	0.545	0.626
F12.4	0.559	0.724	0.594	<b>1.000</b>	0.713	0.679	0.574	0.583	0.682	0.557	0.626	0.641	0.678	0.667	0.643	0.630	0.631
F12.5	0.592	0.638	0.665	0.713	<b>1.000</b>	0.656	0.615	0.630	0.688	0.553	0.632	0.703	0.590	0.664	0.654	0.618	0.594
F12.6	0.475	0.626	0.553	0.679	0.656	<b>1.000</b>	0.644	0.722	0.715	0.621	0.607	0.640	0.719	0.727	0.742	0.655	0.645
F12.7	0.414	0.575	0.647	0.574	0.615	0.644	<b>1.000</b>	0.741	0.710	0.632	0.568	0.585	0.594	0.656	0.615	0.557	0.596
F12.8	0.564	0.628	0.626	0.583	0.630	0.722	0.741	<b>1.000</b>	0.673	0.673	0.650	0.633	0.565	0.693	0.801	0.717	0.697
F12.9	0.445	0.621	0.601	0.682	0.688	0.715	0.710	0.673	<b>1.000</b>	0.652	0.627	0.625	0.681	0.668	0.731	0.696	0.658
F12.10	0.582	0.567	0.663	0.557	0.553	0.621	0.632	0.673	0.652	<b>1.000</b>	0.654	0.591	0.588	0.591	0.643	0.572	0.652
F12.11	0.678	0.658	0.536	0.626	0.632	0.607	0.568	0.650	0.627	0.654	<b>1.000</b>	0.659	0.582	0.618	0.636	0.648	0.664
F12.12	0.546	0.600	0.649	0.641	0.703	0.640	0.585	0.633	0.625	0.591	0.659	<b>1.000</b>	0.757	0.705	0.676	0.652	0.752
F12.13	0.445	0.533	0.603	0.678	0.590	0.719	0.594	0.565	0.681	0.588	0.582	0.757	<b>1.000</b>	0.658	0.689	0.640	0.697
F12.14	0.478	0.637	0.549	0.667	0.664	0.727	0.656	0.693	0.668	0.591	0.618	0.705	0.658	<b>1.000</b>	0.773	0.648	0.684
F12.15	0.529	0.612	0.620	0.643	0.654	0.742	0.615	0.801	0.731	0.643	0.636	0.676	0.689	0.773	<b>1.000</b>	0.782	0.738
F12.16	0.544	0.632	0.545	0.630	0.618	0.655	0.557	0.717	0.696	0.572	0.648	0.652	0.640	0.648	0.782	<b>1.000</b>	0.806
F12.17	0.624	0.660	0.626	0.631	0.594	0.645	0.596	0.697	0.658	0.652	0.664	0.752	0.697	0.684	0.738	0.806	<b>1.000</b>

**Table 7.28: Kaiser-Meyer–Olkin and Bartlett’s test**

Kaiser-Meyer-Measure of Sampling Adequacy.		.943
Bartlett’s Test of Sphericity	Approx. Chi-Square	1642.616
	df	136
	Sig.	.000

**Table 7.29: Rotated factor matrix**

	Factor
	1
Smooth flow of material and products	0.860
It helps in timely delivery	0.844
Expanded network	0.834
Negotiating better contracts	0.825
Better product tracking and forecasting reports	0.821
Enhanced information transfer between buyers and sellers	0.821
Increase in safety of goods	0.819
Smooth information flow to all logistics functions	0.815
Better quantity logistics information flow	0.800
Better quality logistics information flow	0.798
Reduction of uncertainties	0.787
More accurate costing	0.785
Better operational efficiency	0.779
Providing less expensive transportation nodes	0.765
Reduced lead time	0.762
Reduced inventory level	0.747
Decrease in cost	0.678
Extraction Method: Principal Axis Factoring. 1 factor extracted	

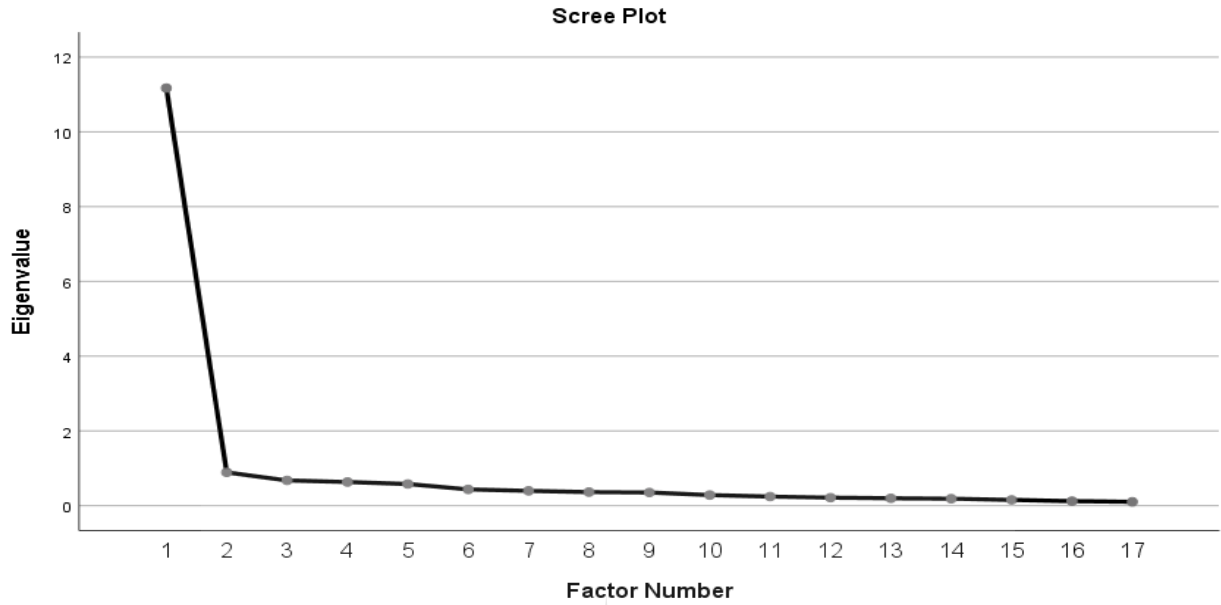


Figure 7.12: Scree plot for factor analysis

Table 7.30: Total variance explained

Factors	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotated Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	11.171	65.711	65.711	10.813	63.607	63.607	10.813	63.607	63.607
2	0.891	5.240	70.951						
3	0.675	3.971	74.922						
4	0.633	3.721	78.643						
5	0.579	3.407	82.050						
6	0.435	2.561	84.611						
7	0.397	2.337	86.948						
8	0.363	2.137	89.085						
9	0.352	2.069	91.155						
10	0.283	1.665	92.820						
11	0.242	1.425	94.245						
12	0.215	1.265	95.510						
13	0.197	1.160	96.670						
14	0.187	1.102	97.772						
15	0.154	0.907	98.679						
16	0.122	0.717	99.396						
17	0.103	0.604	100.000						

Extraction Method: Principal Axis Factoring



The principal axis factoring showed the presence of one factor with eigenvalues larger than 1 as presented in Table 7.30. Owing to close inspection of the integral relationships among each of the variables under each factor, only one factor was generated. Factor 1 was named ‘influence of effective and new information flow on logistics management’. The name used in describing factor 1 was derived by a close inspection of the variables within the factor. The component indicators of factor 1 that was extracted are described below:

- **Factor 1: Influence of effective and new information flow on logistics management**

As shown in the Table 7.29, the seventeen extracted factors for factor 1 were smooth flow of material and products (86.0%), it helps in timely delivery (84.4%), expanded network (83.4%) negotiating better contracts (82.5%), better product tracking and forecasting reports (82.1%), enhanced information transfer between buyers and sellers (82.1%), increase in safety of goods (81.9%), smooth information flow to all logistics functions (81.5%), better quantity logistics information flow (79.8%), reduction of uncertainties (78.7%), more accurate costing (78.5%), better operational efficiency (77.9%), providing less expensive transportation nodes (76.5%), reduced lead time (76.2%), reduced inventory level (74.7%), and decrease in cost (67.8%). The number in parenthesis specifies the individual factor loadings. Also this group accounted for 65.711% of the variance as shown in Table 7.30.

## **7.8 SECTION G: FACTORS TO BE CONSIDERED FOR LOGISTICS MANAGEMENT IN NIGERIA TO ADVANTAGE OF GLOBALIZATION**

The results of the questions from the section G part of the questionnaire are presented in this section. It assesses the factors to be considered for logistics management in Nigeria to take full advantage of globalization. Some of the results presented include EFA, mean score of all the questions, and skewness. The descriptive analysis results show the ranking of each of all the factors from the highest to the lowest, individual mean scores, and likewise the standard deviation of each factor.

### 7.8.1 RESULTS FROM DESCRIPTIVE ANALYSIS

The results of mean item score of the questions and skewness of the stated data are illustrated in Table 7.31.

**Table 7.31: Factors to be considered for logistics management in Nigeria to fully take advantage of globalization**

Factors to Be Considered for Logistics Management in Nigeria To Fully Take Advantage of Globalization	Mean ( $\bar{x}$ )	Standard deviation ( $\sigma_X$ )	Rank (R)
Cost effectiveness	4.26	1.008	1
Presence of skilled logistics professionals	4.25	1.015	2
Quality operations	4.25	1.078	2
Advancements in technology	4.25	1.153	2
Better performance	4.21	1.119	3
ICT infrastructure	4.19	1.139	4
Better products for consumers	4.15	1.119	5
Government support	4.15	1.136	5
Economic factor	4.10	1.330	6
Planning and execution	4.09	1.142	7
Tax/Tariff structures	4.07	1.054	8
Logistics reform to modernization	4.03	1.191	9
Reduction of trade costs	4.00	1.138	10
Competition in the logistics market	3.98	1.051	11
Evaluation of change in government, laws and regulations	3.95	1.107	12
High demand for logistics outsourcing services	3.92	1.144	13
Cultural integration	3.65	1.219	14

The respondents' ranking of the factors to be considered for logistics management in Nigeria to take full advantage of globalization are shown in Table 7.31. It reveals that cost effectiveness was ranked first with a mean item score of 4.26 and standard deviation of 1.008; presence of skilled logistics professionals, quality operations, and advancements in technology were ranked second with a mean score of 4.25 and standard deviations of 1.015, 1.078 and 1.153 respectively; better performance was ranked third with a mean score of 4.21 and standard

deviation of 1.119; ICT infrastructure was ranked fourth with a mean score of 4.19 and standard deviation of 1.139; better products for consumers and government support were both ranked fifth with a mean score of 4.15 and standard deviation of 1.119 and 1.136; economic factors was ranked sixth with a mean score of 4.10 and standard deviation of 1.330; planning and execution was ranked seventh with a mean score of 4.09 and standard deviation of 1.142; tax/tariff structures to all logistics functions was ranked eighth with a mean score of 4.07 and standard deviation of 1.054; logistics reform to modernization was ranked ninth with a mean score of 4.03 and standard deviation of 1.191; reduction of trade costs was ranked tenth with a mean score of 4.00 and standard deviation of 1.138; competition in the logistics market was ranked eleventh with a mean score of 3.98 and standard deviation of 1.051; evaluation of change in government, laws and regulations was ranked twelfth with a mean score of 3.95 and standard deviation of 1.107; and high demand for logistics outsourcing services was ranked thirteenth with a mean score of 3.92 and standard deviation of 1.144. Finally, cultural integration was ranked fourteenth with a mean score of 3.65 and standard deviation of 1.219.

## 7.8.2 RESULTS FROM EXPLORATORY FACTOR ANALYSIS

The tables 7.32 - 7.36 and figure 7.13 give the EFA results on factors to be considered for logistics management in Nigeria to take full advantage of globalization. Out of the seventeen variables itemized for the first approach, none was omitted. Therefore, the identified seventeen variables are presented in Table 7.32.

**Table 7.32: Definition of identified variables**

<b>G13.1</b>	Economic factor
<b>G13.2</b>	Cultural integration
<b>G13.3</b>	Advancements in technology
<b>G13.4</b>	Reduction of trade costs
<b>G13.5</b>	Tax/Tariff structures
<b>G13.6</b>	High demand for logistics outsourcing services
<b>G13.7</b>	Government support
<b>G13.8</b>	ICT infrastructure
<b>G13.9</b>	Presence of skilled logistics professionals
<b>G13.10</b>	Competition in the logistics market
<b>G13.11</b>	Better products for consumers
<b>G13.12</b>	Cost effectiveness
<b>G13.13</b>	Quality operations
<b>G13.14</b>	Better performance

<b>G13.15</b>	Planning and execution
<b>G13.16</b>	Evaluation of change in government, laws and regulations
<b>G13.17</b>	Logistics reform to modernization

Before performing the PCA, the fitness of the data for factor analysis was first evaluated. Checking of the correlation matrix in Table 7.33 shows the presence of values above 0.3. In Table 7.34, the Kaiser-Meyer–Olkin measure of sampling acceptability reached a value of 0.949, thereby exceeding the suggested minimum value of 0.6. Bartlett’s test of sphericity was also statistically significant at less than 0.05 ( $< 0.05$ ), thereby supporting the factorability of the correlation matrix. The data was subjected to PCA using varimax rotation. The eigenvalue was based on a conventional high value of 1 as denoted in Table 7.35, and one factor and eigenvalues exceeding 1.0 were extracted. Also, the Catell’s scree plot in Figure 7.13 shows the extracted factors by signifying the break in the plot where the eigenvalues are levelled off. The total variance value for the extracted factor is factor 1 (71.307%), as shown in Table 7.36. Hence, the final statistics of the PCA and the extracted factors accounted for about 69.607% of the entire cumulative variance.

**Table 7.33: Correlation matrix of factor analysis**

Correlation	G13.1	G13.2	G13.3	G13.4	G13.5	G13.6	G13.7	G13.8	G13.9	G13.10	G13.11	G13.12	G13.13	G13.14	G13.15	G13.16	G13.17
G13.1	<b>1.000</b>	0.610	0.765	0.723	0.579	0.518	0.556	0.672	0.636	0.628	0.718	0.718	0.705	0.702	0.720	0.676	0.689
G13.2	0.610	<b>1.000</b>	0.563	0.542	0.500	0.507	0.465	0.473	0.481	0.537	0.451	0.549	0.510	0.493	0.585	0.601	0.479
G13.3	0.765	0.563	<b>1.000</b>	0.806	0.723	0.715	0.735	0.820	0.817	0.695	0.724	0.739	0.799	0.780	0.799	0.688	0.758
G13.4	0.723	0.542	0.806	<b>1.000</b>	0.763	0.768	0.714	0.757	0.693	0.709	0.710	0.781	0.714	0.740	0.674	0.665	0.696
G13.5	0.579	0.500	0.723	0.763	<b>1.000</b>	0.708	0.716	0.704	0.706	0.577	0.670	0.638	0.589	0.627	0.549	0.492	0.651
G13.6	0.518	0.507	0.715	0.768	0.708	<b>1.000</b>	0.690	0.698	0.648	0.672	0.619	0.662	0.572	0.652	0.596	0.606	0.701
G13.7	0.556	0.465	0.735	0.714	0.716	0.690	<b>1.000</b>	0.802	0.759	0.656	0.761	0.747	0.699	0.672	0.642	0.611	0.736
G13.8	0.672	0.473	0.820	0.757	0.704	0.698	0.802	<b>1.000</b>	0.790	0.679	0.694	0.744	0.713	0.739	0.703	0.641	0.747
G13.9	0.636	0.481	0.817	0.693	0.706	0.648	0.759	0.790	<b>1.000</b>	0.764	0.737	0.753	0.793	0.767	0.776	0.672	0.766
G13.10	0.628	0.537	0.695	0.709	0.577	0.672	0.656	0.679	0.764	<b>1.000</b>	0.723	0.751	0.735	0.724	0.723	0.728	0.731
G13.11	0.718	0.451	0.724	0.710	0.670	0.619	0.761	0.694	0.737	0.723	<b>1.000</b>	0.809	0.733	0.735	0.666	0.666	0.775
G13.12	0.718	0.549	0.739	0.781	0.638	0.662	0.747	0.744	0.753	0.751	0.809	<b>1.000</b>	0.814	0.838	0.764	0.762	0.811
G13.13	0.705	0.510	0.799	0.714	0.589	0.572	0.699	0.713	0.793	0.735	0.733	0.814	<b>1.000</b>	0.824	0.823	0.720	0.743
G13.14	0.702	0.493	0.780	0.740	0.627	0.652	0.672	0.739	0.767	0.724	0.735	0.838	0.824	<b>1.000</b>	0.826	0.769	0.839
G13.15	0.720	0.585	0.799	0.674	0.549	0.596	0.642	0.703	0.776	0.723	0.666	0.764	0.823	0.826	<b>1.000</b>	0.764	0.775
G13.16	0.676	0.601	0.688	0.665	0.492	0.606	0.611	0.641	0.672	0.728	0.666	0.762	0.720	0.769	0.764	<b>1.000</b>	0.803
G13.17	0.689	0.479	0.758	0.696	0.651	0.701	0.736	0.747	0.766	0.731	0.775	0.811	0.743	0.839	0.775	0.803	<b>1.000</b>

**Table 7.34: Kaiser-Meyer-Olkin and Bartlett's test**

Kaiser-Meyer-Measure of Sampling Adequacy.		.949
Bartlett's Test of Sphericity	Approx. Chi-Square	2018.461
	df	136
	Sig.	.000

**Table 7.35: Rotated factor matrix**

	Factor
	1
Advancements in technology	0.900
Cost effectiveness	0.898
Better performance	0.887
Logistics reform to modernization	0.884
Presence of skilled logistics professionals	0.873
Quality operations	0.868
Reduction of trade costs	0.861
Planning and execution	0.858
ICT infrastructure	0.857
Better products for consumers	0.843
Competition in the logistics market	0.829
Government support	0.824
Evaluation of change in government, laws and regulations	0.815
Economic factor	0.795
High demand for logistics outsourcing services	0.772
Tax/Tariff structures	0.761
Cultural Integration	0.615
Extraction Method: Principal Axis Factoring. 1 factors extracted	

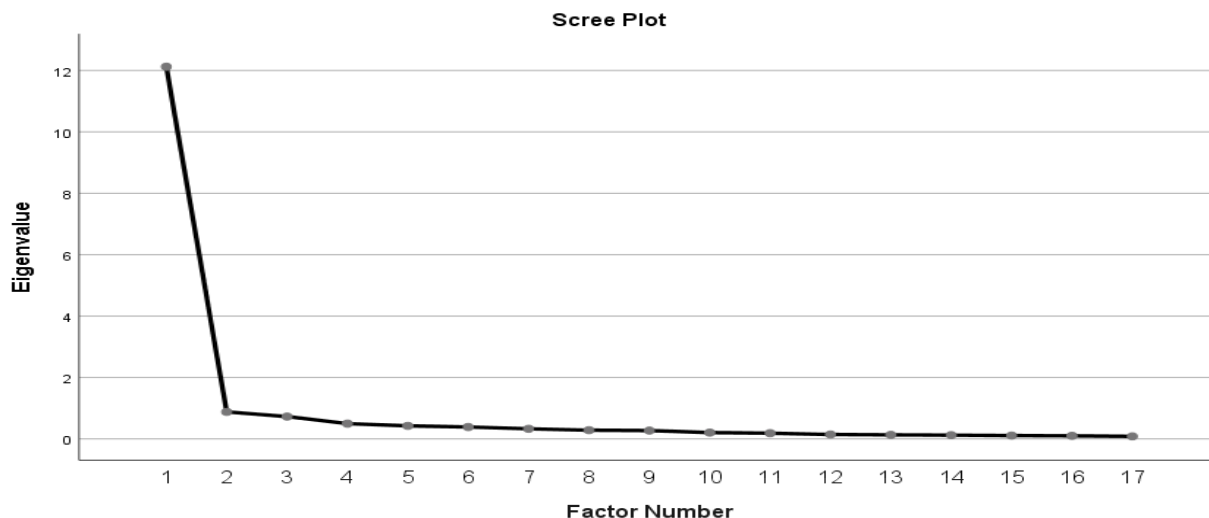


Figure 7.13: Scree plot for factor analysis

**Table 7.36: Total variance explained**

Factors	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotated Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	12.122	71.307	71.307	11.833	69.607	69.607	11.833	69.607	69.607
2	0.879	5.173	76.480						
3	0.727	4.275	80.755						
4	0.497	2.921	83.676						
5	0.424	2.496	86.172						
6	0.387	2.277	88.449						
7	0.329	1.938	90.387						
8	0.283	1.665	92.052						
9	0.271	1.594	93.645						
10	0.207	1.215	94.860						
11	0.185	1.090	95.950						
12	0.144	0.845	96.795						
13	0.132	0.777	97.572						
14	0.123	0.721	98.292						
15	0.108	0.636	98.928						
16	0.100	0.590	99.519						
17	0.082	0.481	100.000						

Extraction Method: Principal Axis Factoring

The principal axis factoring showed the presence of one factor with eigenvalues larger than 1 as presented in Table 7.36. Owing to close inspection of the integral relationships among each of

the variables under each factor, only one factor was generated. Factor 1 was named ‘factors to be considered for logistics management in Nigeria to fully take advantage of globalization’. The name used in describing factor 1 was derived by a close inspection of the variables within the factor. The component indicators of factor 1 that was extracted are described below:

- **Factor 1: Factors to be considered for logistics management in Nigeria to fully take advantage of globalization**

As shown in the Table 7.35, the seventeen extracted factors for factor 1 were advancements in technology (90.0%), cost effectiveness (89.8%), better performance (88.7%) logistics reform to modernization (88.4%), presence of skilled logistics professionals (87.3%), quality operations (86.8%), reduction of trade costs (86.1%), planning and execution (85.8); ICT infrastructure (85.7%), better products for consumers (84.3%), competition in the logistics market (82.9%), government support (82.4%), evaluation of change in government, laws and regulations (81.5%), economic factors (79.5%), high demand for logistics outsourcing services (77.2%), tax/tariff structures (76.1%), and cultural integration (61.5%). The number in parenthesis specifies the individual factor loadings. Also this group accounted for 71.307% of the variance as shown in Table 7.36.

## **7.9 EMPIRICAL RELIABILITIES RESULTS**

The results of the conducted reliability tests are presented and discussed in this section. It showed the Cronbach’s alpha values for the empirical reliabilities for the impacts of globalization on logistics management, the benefits of globalization on logistics management, the factors that influence globalization, the awareness level of logistics activities, and the influence of effective and new information flow on logistics management. As mentioned in the methodology section of the thesis, Cronbach’s alpha adopted for this research study was 0.70, as this value declared the scale used has a good internal consistency. All the coefficients reveal Cronbach’s alpha above the adopted 0.70. According to Pallant (2007), Cronbach’s alpha is fairly sensitive to the total number of items in a scale. It is normal to find low Cronbach’s alpha values (< 0.70) with scales with less than ten items. Thus, it is proper/acceptable? to report the mean inter-item correlation for such items. As described by Briggs and Cheek (1986), the mean

inter-item correlation range of 0.2 to 0.4 is to be used. Since the Cronbach's alpha of all the items used in this study is above 0.7, there is no need for the mean inter-item correlation. The Cronbach's alpha values for the empirical reliabilities are shown in Table 7.37.

**Table 7.37: Empirical reliabilities**

<b>Empirical</b>	<b>No. of items</b>	<b>Cronbach's alpha</b>
<b>Level of awareness of logistics activities</b>	16	0.945
Nodes of distribution network	7	0.906
Configuration and management	5	0.887
Handling and order processing	4	0.854
<b>Factors that influence globalization in Nigeria</b>	17	0.962
Economic globalization	9	0.952
Political globalization	4	0.901
Cultural globalization	4	0.865
<b>Benefits of globalization on logistics management</b>		
Benefits of globalization on logistics management	17	0.973
<b>Impacts of good logistics management</b>		
Impacts of logistics management	19	0.977
<b>Influence of effective and new information flow on logistics management in Nigeria</b>		
Influence of effective and new information flow on logistics management in Nigeria	17	0.967
<b>Factors to be considered for logistics management in Nigeria to fully take advantage of globalization</b>		
Factors to be considered for logistics management in Nigeria to fully take advantage of globalization	17	0.974



## 7.10 RESULTS FROM THE NORMALITY TESTS

This section explains the normality tests carried out on the compared groups to ascertain whether they are normally distributed. Therefore, in this research study, 0.05 was used as the cut-off value for the normality tests. The sample sizes from 50 and above used the Kolmogorov-Smirnov statistics results, while for sample size below 50 the Shapiro-Wilk statistics results were used. Also, it is important to find the null hypothesis and the alternative hypothesis so as to test whether there is a difference between the groupings.

To ascertain whether the variables are normally distributed or not normally distributed, the following criteria are required:

H<sub>0</sub>: Normally distributed

There is no difference between the groupings

If *p-value* is  $>0.05$ ; Do not reject H<sub>0</sub> (accept H<sub>0</sub>) meaning normally distributed.

H<sub>1</sub>: Not normally distributed

There is a difference between the groupings

If *p-value* is  $<0.05$ ; Reject H<sub>0</sub> (accept H<sub>1</sub>) meaning not normally distributed.

### 7.10.1 NORMALITY TESTS FOR YEARS OF EXPERIENCE

This section explains the normality test result of the respondents' years of experience (five years or less and more than five years) using the Kolmogorov-Smirnov and Shapiro-Wilk statistical tests. The Kolmogorov-Smirnov statistical test was used because the sample size of years of experience (five years or less) is more than 50 while the Shapiro-Wilk statistical test was also used because the sample size (more than five years) was less than 50. The Table 7.38 shows the result of the test comparing years of experience (five years or less and more than five years) against the impacts of globalization on logistics management, the benefits of globalization on logistics management, the factors that influence globalization, the awareness level of logistics activities, the influence of effective and new information flow on logistics management, and the factors to be considered for logistics management in Nigeria to fully take advantage of globalization.

**Table 7.38: Normality test for years of experience**

Normality test for years of experience							
rA5		Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Nodes of distribution network	5 years or less	0.109	74	0.029			
	More than 5 years				0.929	32	0.037
Configuration and management	5 years or less	0.124	74	0.007			
	More than 5 years				0.898	32	0.006
Handling and order processing	5 years or less	0.126	74	0.005			
	More than 5 years				0.921	32	0.023
Economic globalization	5 years or less	0.209	74	0.000			
	More than 5 years				0.877	32	0.002
Political globalization	5 years or less	0.175	74	0.000			
	More than 5 years				0.901	32	0.007
Cultural globalization	5 years or less	0.183	74	0.000			
	More than 5 years				0.951	32	0.151
Benefits of globalization on logistics management	5 years or less	0.213	74	0.000			
	More than 5 years				0.855	32	0.001
Impacts of logistics management	5 years or less	0.194	74	0.000			
	More than 5 years				0.921	32	0.022
Influence of effective and new information flow on logistics management in Nigeria	5 years or less	0.210	74	0.000			
	More than 5 years				0.872	32	0.001
Factors to be considered for logistics management in Nigeria to fully take advantage of globalization	5 years or less	0.224	74	0.000			
	More than 5 years				0.806	32	0.000

a. Lilliefors Significance Correction

Table 7.38 revealed that the *p-values* were less than 0.05 for the normality tests for years of experience (five years or less and more than five years) against nodes of distribution network. The null hypothesis (H0) is rejected and the alternative hypothesis (H1) is accepted. Therefore, it is not normally distributed.

**Conclusion:** The null hypothesis was rejected (Ho). This means that there is a difference between the variables that made up the factor for “nodes of distribution network”.

The normality test for years of experience (five years or less and more than five years) against configuration and management showed that the *p-values* were less than 0.05, hence the null hypothesis (H0) is rejected and the alternative hypothesis (H1) is accepted. Therefore, it is not normally distributed.

**Conclusion:** The null hypothesis (H0) is rejected. Therefore, there is a difference between the variables that made up the factor for “configuration and management”.

The normality test for years of experience (five years or less and more than five years) against handling and order processing showed that the *p-values* were less than 0.05. The null hypothesis (H0) is rejected and the alternative hypothesis (H1) is accepted. Therefore, it is not normally distributed.

**Conclusion:** The null hypothesis (H0) is rejected. Therefore, there is a difference between the groups on how they assess the awareness of logistics activities categorized as handling and order processing.

The normality test for years of experience (five years or less and more than five years) against economic globalization showed that the *p-values* were less than 0.05. The null hypothesis (H0) is rejected and the alternative hypothesis (H1) is accepted. Therefore, it is not normally distributed.

**Conclusion:** The null hypothesis (H0) is rejected. Therefore, there is a difference between the groups on how they assess the factors that influences globalization categorized as economic globalization.

The normality test for years of experience (five years or less and more than five years) against political globalization showed that the *p-values* were less than 0.05. The null hypothesis (H0) is rejected and the alternative hypothesis (H1) is accepted. Therefore, it is not normally distributed.

**Conclusion:** The null hypothesis (H0) is rejected. Therefore, there is a difference between the groups on how they view the factors that influence globalization categorized as political globalization.

The normality test for years of experience against cultural globalization showed that the *p-value* was less than 0.05 for five years or less and greater than 0.05 for more than five years. The null hypothesis (H0) is rejected and the alternative hypothesis (H1) is accepted for five years or less of experience. Therefore, it is not normally distributed. Also, the null hypothesis (H0) is not

rejected but accepted for more than five years of experience. Therefore, it is normally distributed.

**Conclusion:** The null hypothesis (H0) is rejected for five years or less of experience. Therefore, there is a difference between the groups on how they view the factors that influence globalization categorized as cultural globalization. For more than five years of experience, the null hypothesis (H0) is accepted. Therefore, there is no difference between the groups on how they view the factors that influence globalization categorized as cultural globalization.

The normality test for years of experience (five years or less and more than five years) against the benefits of globalization for logistics management showed that the *p-values* were less than 0.05. The null hypothesis (H0) is rejected and the alternative hypothesis (H1) is accepted. Therefore, it is not normally distributed.

**Conclusion:** The null hypothesis was rejected (H0). Therefore, there is a difference among the variables that made up the factor for “benefits of globalization for logistics management”.

The normality test for years of experience (five years or less and more than five years) against impacts of logistics management showed that the *p-values* were less than 0.05. The null hypothesis (H0) is rejected and the alternative hypothesis (H1) is accepted. Therefore, it is not normally distributed.

**Conclusion:** The null hypothesis was rejected (H0). Therefore, there is a difference among the variables that made up the factor for “impacts of logistics management”.

The normality test for years of experience (five years or less and more than five years) against the influence of effective and new information flow on logistics showed that the *p-values* were less than 0.05. The null hypothesis (H0) is rejected and the alternative hypothesis (H1) is accepted. Therefore, it is not normally distributed.

**Conclusion:** The null hypothesis was rejected (H0). Therefore, there is a difference among the variables that made up the factor for “influence of effective and new information flow on logistics”.

The normality test for years of experience (five years or less and more than five years) against factors to be considered for logistics management in Nigeria to take full advantage of globalization showed that the *p-values* were less than 0.05. The null hypothesis (H<sub>0</sub>) is rejected and the alternative hypothesis (H<sub>1</sub>) is accepted. Therefore, it is not normally distributed.

**Conclusion:** The null hypothesis was rejected (H<sub>0</sub>). Therefore, there is a difference among the variables that made up the factor for “factors to be considered for logistics management in Nigeria to fully take advantage of globalization”.

## **7.11 RESULTS FROM NON-PARAMETRIC TESTS**

This section discusses the non-parametric tests that were conducted since most of the distribution was not normally distributed as revealed from the normality tests results in Table 7.38. Non-parametric tests are rather applied when there data is measured on ranked and normal scales. They are also appropriate when samples are very small and data does not meet the demanding assumptions of the parametric test. Thus, in this study, the non-parametric test was carried out to ascertain whether the groups perceived differently from each other. When the *p-value* is greater than or above 0.05, it implies that the null hypothesis (H<sub>0</sub>) is not rejected since this would mean that there is no difference between the groups, but if the *p-value* is less than 0.05, the alternative hypothesis (H<sub>1</sub>) will be accepted since this would show that there is a difference between the groups. Hence, the Mann-Whitney U test would be performed. The Mann-Whitney U test is a method used to assess the changes connecting two independent groups on a continuous measure (Pallant, 2007). It was done in this study because the normality test showed that most of the factors were not normally distributed.

### **7.11.1 RESULTS FROM NON-PARAMETRIC TESTS: YEARS OF EXPERIENCE**

The years of experience was tested against the variables to ascertain whether respondents with five years or less experience and more than five years’ experience had the same opinion. The results from the group test statistics are shown in Table 7.39 while the test statistics results are shown in Table 7.40.

**Table 7.39: Group statistics**

Group Statistics							
	rA5		N	Mean	Std. Deviation	Mean Rank	Median (MD)
SecB_F1	Nodes of distribution network	5 years or less	74	3.12	1.130	51.66	3.286
		More than 5 years	32	3.36	1.086	57.75	3.286
SecB_F2	Configuration and management	5 years or less	74	3.36	1.088	53.71	3.600
		More than 5 years	32	3.32	1.217	53.02	3.500
SecB_F3	Handling and order processing	5 years or less	74	3.39	1.113	53.13	3.625
		More than 5 years	32	3.42	1.115	54.36	3.500
SecC_F1	Economic globalization	5 years or less	74	4.08	0.903	56.55	4.333
		More than 5 years	32	3.81	0.997	46.44	4.056
SecC_F2	Political globalization	5 years or less	74	3.90	1.044	55.51	4.125
		More than 5 years	32	3.65	1.164	48.86	4.000
SecC_F3	Cultural globalization	5 years or less	74	3.75	0.959	57.28	4.000
		More than 5 years	32	3.41	0.913	44.75	3.500
SecD_F1	Benefits of globalization on Logistics management	5 years or less	74	4.08	0.937	56.59	4.235
		More than 5 years	32	3.81	1.020	46.36	4.000
SecE_F1	Impacts of logistics management	5 years or less	74	4.00	0.962	56.78	4.132
		More than 5 years	32	3.80	0.863	45.91	3.947
SecF_F1	Influence of effective and new Information flow on logistics Management in Nigeria	5 years or less	74	3.89	0.839	54.30	4.000
		More than 5 years	32	3.81	0.871	51.66	4.000
SecG_F1	Factors to be considered for logistics management in Nigeria to fully take advantage of globalization	5 years or less	74	4.16	0.883	55.47	4.412
		More than 5 years	32	3.92	1.076	48.94	4.294

**Table 7.40: Test statistics<sup>a</sup>**

		Mann-Whitney U	Wilcoxon W	Z	Asymp. Sig. (2-tailed)
SecB_F1	Nodes of distribution	1048.000	3823.000	-.937	0.349
SecB_F2	Configuration and management	1168.500	1696.500	-.107	0.915
SecB_F3	Handling and order processing	1156.500	3931.500	-.190	0.849
SecC_F1	Economic globalization	958.000	1486.000	-1.559	0.119
SecC_F2	Political globalization	1035.500	1563.500	-1.029	0.304
SecC_F3	Cultural globalization	904.000	1432.000	-1.940	0.052
SecD_F1	Benefits of globalization on logistics management	955.500	1483.500	-1.576	0.115
SecE_F1	Impacts of logistics management	941.000	1469.000	-1.675	0.094
SecF_F1	Influence of effective and new information flow on logistics	1125.000	1653.000	-0.407	0.684

	management in Nigeria				
SecG_F1	Factors to be considered for logistics management in Nigeria to fully take advantage of globalization	1038.000	1566.000	-1.006	0.314
a. Grouping Variable: rA5					

From the results presented in Table 7.39 and 7.40, the Mann-Whitney U test revealed no significant difference in the nodes of distribution between respondents' years of experience (five years or less) (MD= 3.286, n= 74) and those with more than five years (MD= 3.286, n= 32), U= 1048.000, z= -.937, p= 0.349.

From the results presented in Tables 7.39 and 7.40, the Mann-Whitney U test revealed no significant difference in the configuration and management between respondents' years of experience (five years or less) (MD= 3.600, n= 74) and those with more than five years (MD= 3.500, n= 32), U= 1168.500, z= -.107, p= 0.915.

From the results presented in Table 7.39 and 7.40, the Mann-Whitney U test revealed no significant difference in the handling and order processing between respondents' years of experience (five years or less) (MD= 3.625, n= 74) and those with more than five years (MD= 3.500, n= 32), U= 1156.500, z= -.190, p= 0.849.

From the results presented in Table 7.39 and 7.40, the Mann-Whitney U test revealed no significant difference in the economic globalization between respondents' years of experience (five years or less) (MD= 4.333, n= 74) and those with more than five years (MD= 4.056, n= 32), U= 958.000, z= -1.559, p= 0.119.

From the results presented in Table 7.39 and 7.40, the Mann-Whitney U test revealed no significant difference in the political globalization between respondents' years of experience (five years or less) (MD= 4.123, n= 74) and those more than five years (MD= 4.000, n= 32), U= 1035.500, z= -1.029, p= .304.

From the results presented in Table 7.39 and 7.40, the Mann-Whitney U test revealed no significant difference in the cultural globalization between respondents' years of experience (five years or less) (MD= 4.000, n= 74) and those with more than five years (MD= 3.500, n= 32), U= 904.000, z= -1.940, p= 0.052.

From the results presented in Table 7.39 and 7.40, the Mann-Whitney U test revealed no significant difference in the benefits of globalization on logistics management between

respondents' years of experience (five years or less) (MD= 4.235, n= 74) and those with more than five years (MD= 4.000, n= 32), U= 955.500, z= -1.576, p= 0.115.

From the results presented in Table 7.39 and 7.40, the Mann-Whitney U test revealed no significant difference in the impacts of logistics management between respondents' years of experience (five years or less) (MD= 4.132, n= 74) and those with more than five years (MD= 3.947, n= 32), U= 941.000, z= -1.675, p= 0.094.

From the results presented in Table 7.39 and 7.40, the Mann-Whitney U test revealed no significant difference in the influence of effective and new information flow on logistics management in Nigeria between respondents' years of experience (five years or less) (MD= 4.000, n= 74) and those with more than five years (MD= 4.000, n= 32), U= 1125.000, z= -0.407, p= 0.684.

From the results presented in Table 7.39 and 7.40, the Mann-Whitney U test revealed no significant difference in the factors that should be considered for logistics management in Nigeria to take full advantage of globalization between respondents' years of experience (five years or less) (MD= 4.412, n= 74) and those with more than five years (MD= 4.294, n= 32), U= 1038.000, z= -1.006, p= 0.314.

## **7.12 CONCLUSION**

The findings for this research study have been presented in this chapter. The interpretations of the results were done using graphs/chart, histograms, tables, among others. The discussion of the results will be presented in the next chapter.



## **CHAPTER EIGHT**

### **DISCUSSION OF FINDINGS**

#### **8.0 CHAPTER INTRODUCTION**

This chapter discusses the research analysis findings with respect to the research questions in chapter one. Also, the research findings are further discussed in relation to the literature review with the aim of ascertaining whether the research questions have been answered from the data analysis.

The following research questions were used to explore the effect of globalization on logistics management in Nigeria using multi-national companies as a case study:

1. What is the level of awareness of logistics activities in Nigeria?
2. What are the factors that influence globalization on logistics management in Nigeria?
3. What are the benefits of globalization on logistics management in Nigeria?
4. What are the impacts of globalization on logistics management in Nigeria?
5. Can effective and new information flow influence logistics management in Nigeria?
6. What factor(s) must be considered for logistics management in Nigeria to take full advantage of globalization?

#### **8.1 RESEARCH QUESTION ONE**

- What is the level of awareness of logistics activities in Nigeria?

##### **8.1.1 FINDINGS**

The findings from the factor analysis (exploratory and descriptive) were applied when answering the research questions. From the result of the descriptive analysis, transport logistics was ranked first by the respondents as the most recognized form of logistics activities in Nigeria with a mean score of 4.76 and standard deviation of 0.526. Domestic logistics was ranked second with a mean score of 3.47 and standard deviation of 1.318. Warehouse/distribution third party logistics was also ranked second with a mean score of 3.47 and standard deviation of 1.311, after-sales logistics was ranked third with a mean score of 3.44 and standard deviation of 1.339, and procurement logistics was ranked fourth with a mean score of 3.43 and standard deviation of

1.331. However, the least informed logistics activities by the respondents are reverse logistics (ranked twelfth with a mean score of 3.12 and standard deviation of 1.357); fourth party logistics (4pl) (ranked thirteenth with a mean score of 2.94 and standard deviation of 1.466), and green logistics (ranked fourteenth with a mean score of 2.87 and standard deviation of 1.448).

From the EFA, the level of awareness of logistics activities in Nigeria was grouped into three factors, namely handling and order processing with the highest mean ranking of (MIS=3.40 and SD of 1.106), followed by configuration and management (MIS=3.34 and SD of 1.122) and lastly, nodes of distribution network (MIS=3.191 and SD of 1.117).

Also, the conducted Mann-Whitney test results confirmed that the comparison of years of experience against handling and order processing revealed no significant differences between respondents' years of experience of five years or less and those having more than five years on handling and order processing. In addition, the comparison of years of experience against configuration and management revealed no significant differences between respondents' years of experience of five years or less and those having more than five years. Finally, there was no significant difference between respondents' years of experience and nodes of distribution network on years of experience (five years or less and those having more than five years).

### **8.1.2 DISCUSSION**

The findings from this study are in line with the study of Rahman (2011) which mentioned that if logistics activities such as transportation, procurement/distribution, and procurement logistics are properly identified, they will be vital to logistics management execution and the organizations as well. According to the respondents, transport logistics is the most popular form of logistics activities in Nigeria, followed by warehouse/distribution logistics, domestic logistics, after-sales logistics, and procurement logistics. Thus, their level of awareness is rated as very high. These findings agree with the study of Yildirim (2009) which mentioned that transport logistics is a vital and significant part of the process of economic competitiveness that ensures important distribution for manufacturing, enhanced production as well as effective and efficient transport which connects businesses to global markets. Transport logistics is very popular among Nigerian industries because it ensures effective and efficient distribution for manufacturing processes. However, the findings also revealed that fourth party logistics and green logistics have low mean item scores and are the least popular logistics activities in Nigeria. Therefore, their level of

awareness is classified as very low. In addition, from the above non-parametric test, it was shown that the comparison between the three factors against years of experience (five years or less and more than five years) reveals that there was no significant difference because all the respondents have similar views on the level of awareness of logistics activities in Nigeria.

### **8.1.3 IMPLICATION OF RESULTS**

The levels of awareness of logistics activities in Nigeria have been successfully investigated. It shows that empirical findings from this research study are consistent with the theoretical review. The ranking of these logistics activities from the descriptive results and their grouping into three factors from the factor analysis results further establishes their importance in accomplishing enhanced production and economic competitiveness. Being the factor with the highest mean ranking, transport logistics will no doubt help important distribution for manufacturing in Nigeria and also connect businesses to global markets. Therefore, it is vital for Nigerian organizations to implement some form of logistics activities in their business functions.

## **8.2 RESEARCH QUESTION TWO**

- What are the factors that influence globalization of logistics management in Nigeria?

### **8.2.1 FINDINGS**

The findings from the factor analysis (exploratory and descriptive) were applied when answering the research questions. From the result of the descriptive analysis, the economy was ranked first by the respondents as the most important factor that influences globalization in Nigeria with a mean 4.14 and standard deviation of 1.142. Technologies was ranked second with a mean score of 4.10 and standard deviation of 1.068, resources and markets was ranked third with a mean score of 4.09 and standard deviation of 0.991, political issues was ranked fourth with a mean score of 4.05 and standard deviation of 1.158, international business was ranked fifth with a mean score of 3.97 and standard deviation of 1.055, trade routes was ranked sixth with a mean score of 3.92 and standard deviation of 1.169, and corruption index was also ranked sixth with a mean score of 3.92 and standard deviation of 1.317. However, containerisation was ranked

twelfth with a mean score of 3.68 and standard deviation of 1.000, literacy rate was ranked thirteenth with a mean score of 3.60 and standard deviation of 1.209. Finally, historical was ranked fourteenth with a mean score of 3.40 and standard deviation of 1.048.

From the EFA, factors that influence globalization in Nigeria were grouped into three factors, namely economic globalization with the highest mean ranking of (MIS=3.997 and SD of 0.935), followed by political globalization (MIS=3.821 and SD of 1.081) and lastly, cultural globalization (MIS=3.651 and SD of 0.954).

Also, the Mann-Whitney test results confirmed that from the comparison between years of experience against economic globalization, there was no significant difference between respondents' years of experience (five years or less and those having more than five years) on economic globalization. In addition, the comparison of years of experience against political globalization revealed no significant differences between respondents' years of experience (five years or less and those having more than five years) on political globalization. Finally, there was no significant difference between respondents' years of experience and cultural globalization on years of experience (five years or less and those having more than five years).

### **8.2.2 DISCUSSION**

The findings are in line with the study of Lemoine (2005) which outlined that steady growth experienced by organizations in global trade is due to the factors that drive or influence globalization such as global economic growth, reductions of trade barriers, and expansion in trade routes. Also, Pesut (2009) indicates that globalization is influenced by several economic, social and political factors because the process can be flexible. Another study by Hamilton and Webster (2009) mentioned that technologies are an important factor that influence globalization because the operation of business has rapidly changed in every aspect so fast owing to technology. The author reveals that cheap and easy access to technology has led to a wide array of business practices which are now referred to as globalization. Therefore, it is important for Nigeria to adopt these factors that influence globalization for development in the country and a more improved global business environment.

The results from the non-parametric test reveal that the comparison between the three factors (economic, political, and cultural) against years of experience (five years or less and those

having more than five years) shows that there was no significant difference because all respondents had similar views on the factors that influence globalization in Nigeria.

### **8.2.3 IMPLICATION OF RESULTS**

The factors that influence globalization in Nigeria have been successfully investigated. Empirical findings from this research study are consistent with the theoretical review. This is clearly shown in the empirical study which indicates that the factors from the three cluster factors that influence globalization in Nigeria are political, cultural, and economic which were ranked highest. From the findings, it is revealed that all respondents have similar views on the factors that influence globalization in Nigeria. Therefore, it is important for Nigeria to adopt these factors that influence globalization for development in the country and a more improved global business environment. Lastly, since the respondents have agreed that the factors listed influence globalization, it is imperative for the Nigerian government to ease and modernize trade routes and also revise the tax system.

## **8.3 RESEARCH QUESTION THREE**

- What are the benefits of globalization for logistics management in Nigeria?

### **8.3.1 FINDINGS**

The findings from the factor analysis (exploratory and descriptive) were applied when answering the research questions. From the result of the descriptive analysis, access to new sources of procurement/distribution was ranked first by the respondents as the most significant benefit of globalization on logistics management in Nigeria with a mean item score of 4.18 and standard deviation of 1.031. Better performance due to global exposure was ranked second with a mean score of 4.15 and standard deviation of 1.085; improvement in transport efficiency was ranked third with a mean score of 4.08 and standard deviation of 1.292; opportunity to reach new customers in new markets was ranked third with a mean score of 4.08 and standard deviation of 1.144; increased economies of scale to reduce transport cost was ranked fourth with a mean score of 4.06 and standard deviation of 1.022; improved customers service was ranked fifth with a mean score of 4.05 and standard deviation of 1.174, and technological improvements was ranked sixth with a mean score of 4.04 and standard deviation of 1.187. However, high cost-effective

logistics solution was ranked fourteenth with a mean score of 3.86 and standard deviation of 1.085 and competitiveness to firms based on applications such as ERP was ranked fifteenth with a mean score of 3.85 and standard deviation of 1.085. Finally, wide network of resources and carriers was ranked sixteenth with a mean score of 3.82 and standard deviation of 1.225.

From the EFA, benefits of globalization for logistics management in Nigeria was grouped into one factor, namely benefits of globalization for logistics management with the mean ranking of (MIS=3.9978 and SD of 0.965).

Also, the Mann-Whitney test results confirmed that from the comparison between years of experience against benefits of globalization on logistics management, there was no significant difference between respondents' years of experience (five years or less and those having more than five years) on benefits of globalization on logistics management.

### **8.3.2 DISCUSSION**

The findings from this study are in line with the study of Mangan et al. (2016) which states that globalization plays an essential function in logistics management and its actions appear in different parts of logistics processes. Good logistics management can possibly ensure better logistics industry competence and experience, decrease transport process cost, and encourage customer service quality. The study conducted by Čepinskis and Masteika (2011) is also in agreement with the findings of this study, namely that globalization is advancing logistics/supply lines, thereby increasing the wide network of resources and transport carriers of the world economy. The findings with this study agree with study conducted by Kong (2010) which posits that globalization has impacted logistic management in the process of aiming to produce more international logistic procedures through the decreasing of logistic costs and increasing services standards while improving profits and adding value. Anderson and Kovacic's (2009) study also agrees that the benefits of globalization on logistics management are access to new technology, direct investment due to global exposure, and lower transport costs. Access to new sources of procurement/distribution, according to the respondents, is the most important benefit of globalization for logistics management in Nigeria.

The results from the non-parametric test reveal that the comparison between the factor (benefits of globalization on logistics management) against years of experience (five years or less and those having more than five years) shows that there was no significant difference because all

respondents have similar view on the benefits of globalization for logistics management in Nigeria.

### **8.3.3 IMPLICATION OF RESULTS**

The theoretical literature review is in line with the empirical findings of this research study. This is clear in the empirical study which reveals the benefits of globalization for logistics management in Nigeria. Access to new sources of procurement/distribution was ranked highest. This means that access to new sources of procurement/distribution has great benefits for logistics management in Nigeria, and it has to do with the fact that globalization has made it easier for organizations to operate in a global market while benefiting from higher sales, access to procurement, improved efficiency and reduced cost of distribution of goods. Globalization will benefit logistics in Nigeria in terms of having a better performance due to global exposure, improvement in transport efficiency, opportunity to reach new customers in new markets, and increased economies of scale to reduce transport cost. In addition, it will also foster the means firms have in partnering with external organizations while seeking outside advice with availability of required resources and the high mobility of all production factors. It is therefore important for the benefits as revealed by this study to be considered to enable logistics management to thrive in the Nigerian environment for a better sustainable growth of the logistics industry.

### **8.4 RESEARCH QUESTION FOUR**

- What are the impacts of logistics management in Nigeria?

#### **8.4.1 FINDINGS**

The findings from the factor analysis (exploratory and descriptive) were applied when answering the research questions. From the result of the descriptive analysis, the growing number of skilled logistics professionals was ranked first by the respondents as the most important impact of logistics management in Nigeria with a mean item score of 4.07 and standard deviation of 1.080. Access to new/effective information was ranked second with a mean score of 4.04 and standard deviation of 1.050; efficiency in logistic chains transportation modes was ranked third with a mean score of 4.03 and standard deviation of 1.142; improvement in technology was also ranked third with a mean score of 4.03 and standard deviation of 1.091; optimization of logistics'

operational performance was ranked fourth with a mean score of 3.99 and standard deviation of 1.134; availability to new markets was ranked fifth with a mean score of 3.97 and standard deviation of 1.125; and outsourcing logistics activities to reduce operating cost was ranked sixth with a mean score of 3.96 and standard deviation of 1.195. However, simplicity in global logistics system was ranked eleventh with a mean score of 3.82 and standard deviation of 1.102 and trade capabilities acceleration in logistics networks was ranked twelfth with a mean score of 3.81 and standard deviation of 1.139. Lastly, securing of visibility in logistics operations was ranked thirteenth with a mean score of 3.75 and standard deviation of 1.076.

From the EFA, impacts of logistics management in Nigeria were grouped into one factor, namely impacts of logistics management with the mean ranking of (MIS=3.904 and SD of 0.9337).

Also, the Mann-Whitney test results confirmed that from the comparison between years of experience with impacts of logistics management, there was no significant difference between respondents' years of experience (five years or less and those having more than five years) on the impacts of logistics management.

#### **8.4.2 DISCUSSION**

The findings agree with the study of Taylor (2006) and Asghar (2010) in which the authors outlined the impacts of logistics management. According to the authors, logistics has an enormous impact on the logistics chain network. That includes the global logistics data which is essential for supporting organizational decision making, forecasting and simplicity in global logistics system. Also, owing to the simplicity in the global logistics system through logistics management, organizations have constantly reassessed and reconsidered how they operate, understand, adopt and implement changes in their organizational model in response to global changing trends. Logistics management plays an imperative role in countries: it helps in the growing number of skilled logistics professionals which is ranked first in this study to be vital for logistics operational performance.

Furthermore, the impacts of logistics management in Nigeria, according to this study, are access to new/effective information, efficiency in logistic chains transportation modes, improvement in technology, optimization of logistics operational performance, availability to new markets, outsourcing logistics activities to reduce operating cost, and several others. These are among the many variables from the factor generated for this question. The results from the non-parametric



test showed that the comparison between the factor (impacts of logistics management) against years of experience (five years or less and those having more than five years) do not show a significant difference since all respondents involved have same opinion of the impacts of logistics management in Nigeria.

### **8.4.3 IMPLICATION OF RESULTS**

It can be concluded from the study that the growing number of skilled logistics professionals is the most important impact of logistics management in Nigeria. To be able to achieve the full impact of logistics management in Nigeria, stakeholders in logistic management must introduce a strategy based on formation, planning, material flow control, warehousing, inventory, work in progress, finished goods, and adequate information from the stage of obtaining raw materials to the stage of consumption, to meet the needs of customers. Preference must also be given to the logistics management activities of integration, cooperation, coordination and information sharing to be able to achieve these impacts of logistics management for an industrialised and economically functioning Nigeria. Finally, the impacts of logistics management in Nigeria and other countries cannot be over-emphasized. Thus, the information derived from this study on impacts of logistics management is a strategic resource in helping logistics operators, organizations, and other sectors to gain sustainable competitive advantage in this age of globalization.

## **8.5 RESEARCH QUESTION FIVE**

- Can effective and new information flow influence logistics management in Nigeria?

### **8.5.1 FINDINGS**

The findings from the factor analysis (exploratory and descriptive) were applied when answering the research questions. From the result of the descriptive analysis, negotiating better contracts was ranked first by the respondents as the best ways of achieving effective and new information flow of logistics management in Nigeria with a mean item score of 3.99 and standard deviation of 1.009. Better product tracking and forecasting reports was ranked second with a mean score of 3.98 and standard deviation of 1.042; better quality logistics information flow was ranked third with a mean score of 3.97 and standard deviation of 1.009; expanded network was ranked fourth

with a mean score of 3.96 and standard deviation of 1.050; timely delivery was ranked fifth with a mean score of 3.93 and standard deviation of 1.089; enhanced information transfer between buyers and sellers was ranked fifth with a mean score of 3.93 and standard deviation of 1.017 and reduced lead time and more accurate was ranked sixth with a mean score of 3.92 and standard deviations of 1.048 and 0.902. However, providing less expensive transportation nodes was ranked twelfth with a mean score of 3.79 and standard deviation of 1.039 and reduced inventory level was ranked thirteenth with a mean score of 3.58 and standard deviation of 1.077. Finally, decrease in cost was also ranked thirteenth with a mean score of 3.58 and standard deviation of 1.178.

From the EFA, the influence of effective and new information flow on logistics management in Nigeria was grouped into one factor, namely influence of effective and new information flow on logistics management with the mean ranking of (MIS=3.869 and SD of 0.8455).

Also, the Mann-Whitney test results confirmed that from the comparison between years of experience against influence of effective and new information flow on logistics management, there was no significant difference between respondents' years of experience (five years or less and those having more than five years) on effective and new information flow on logistics management.

### **8.5.2 DISCUSSION**

The findings are in line with the study of Yang and Maxwell (2011) in which the authors highlighted the benefit of information flow within the supply/logistics management chain. These are achieved by identifying distinct parties within the firm's network and finding a way to improve the business contacts. Some of the benefits include an increase in safety of stock, reduction in inventory, decrease in cost, reduction of uncertainties, enhanced resource utilization, better tracing and tracking, and negotiating better contracts. Also, the studies conducted by Lee et al (2000) and Mentzer (2004) are in line with the current study that new and effective information flow enables firms to make better planning decisions in their operations such as improved utilization of resources, supply and logistics chain costs minimization and better responsiveness to customers' needs. It is therefore important for Nigerian logistics firms to adopt effective and new information flow in their logistics management processes because the growth

of any logistics firm and its ability to compete globally with developed nations' businesses depend on effective information flow. The results from the non-parametric test showed that the comparison between the factor (influence of effective and new information flow on logistics management) against years of experience (five years or less and those having more than five years) does not show a significant difference since all respondents involved have same opinion of the influence of new/effective information flow on logistics management in Nigeria.

### **8.5.3 IMPLICATIONS OF RESULTS**

From the findings, the empirical findings conforms to the theoretical reviews. It can be deduced from the study that negotiating better contracts was seen by the respondents as the best way to achieve effective and new information flow of logistics management in Nigeria. Likewise, better product tracking and forecasting reports, better quality logistics information flow, expanded networks, timely delivery and enhanced information transfer between buyers and sellers are among many factors identified by the study which can help in achieving effective and new information flow of logistics management in Nigeria. As logistics chains become bigger and larger, it is important to adopt efficient and effective information flow on logistics management. Therefore, there is a need to improve on the logistics management information flow in Nigeria because it will help in reducing waste such as inventory and prime time from suppliers to end consumers

## **8.6 RESEARCH QUESTION SIX**

What factor(s) must be considered for logistics management in Nigeria to take full advantage of globalization?

### **8.6.1 FINDINGS**

The findings from the factor analysis (exploratory and descriptive) were applied when answering the research questions. From the results of the descriptive analysis, cost effectiveness was ranked first by the respondents as the most important factor considered for logistics management in Nigeria to fully take advantage of globalization with a mean item score of 4.26 and standard deviation of 1.008. Advancements in technology was ranked second with a mean score of 4.25

and standard deviation of 1.153; quality operations was also ranked second with a mean score of 4.25 and standard deviation of 1.078; presence of skilled logistics professionals was also ranked second with a mean score of 4.25 and standard deviation of 1.015; better performance was ranked third with a mean score of 4.21 and standard deviation of 1.119; ICT infrastructure was ranked fourth with a mean score of 4.19 and standard deviation of 1.139 and government support was ranked fifth with a mean score of 4.15 and standard deviation of 1.136. However, evaluation of change in government, laws and regulations was ranked twelfth with a mean score of 3.95 and standard deviation of 1.107 and high demand for logistics outsourcing services was ranked thirteenth with a mean score of 3.92 and standard deviation of 1.144. Finally, cultural integration was ranked fourteenth with a mean score of 3.65 and standard deviation of 1.219.

From the exploratory factor analysis, it was grouped into one factor, namely factors to be considered for logistics management in Nigeria to take full advantage of globalization with the mean ranking of (MIS=4.089 and SD of 0.9470).

Also, the Mann-Whitney test results confirmed that from the comparison between years of experience against factors that should be considered for logistics management in Nigeria to fully take advantage of globalization, there was no significant difference between respondents' years of experience (five years or less and those having more than five years).

## **8.6.2 DISCUSSION**

The findings from this study agree with the study of Chatterjee and Tsai (2002) which states the logistics importance in the process of globalization involves some factors such as boosting modernization of economies, constant reduction of tariffs, and the opening of closed economies.

From the study, one cluster factor was identified as the factors to be considered for logistics management in Nigeria to fully take advantage of globalization. Some of the variables from the cluster factor are cost effectiveness which was ranked highest according to the respondents. Others are advancements in technology, quality operations, and presence of skilled logistics professionals. According to the respondents, the outlined variables were selected as the factors to be considered for logistics management in Nigeria to take full advantage of globalization. The results from the non-parametric test showed that the comparison between the one factor against years of experience (five years or less and those having more than five years) reveals that there

was no significant difference because all respondents have similar view on factors to be considered for logistics management in Nigeria to take full advantage of globalization.

### **8.6.3 IMPLICATIONS OF RESULTS**

It is clear in the empirical study that cost effectiveness which was ranked highest is the most important factor to be considered for logistics management in Nigeria to take full advantage of globalization. This shows that businesses in Nigeria still experience high costs in procuring, movement of raw materials, labour, and services which are characterized by covering distances. Therefore, cost effectiveness is desired by businesses in Nigeria which is only possible through the availability of effective and efficient logistics management. It was also revealed, according to the respondents, that advancements in technology, quality operations, and the presence of skilled logistics professionals and other listed variables will greatly contribute to logistics management in the process of globalization. Therefore, it is vital for key players in the logistics industry, logistics management, transport, services and forwarding businesses in Nigeria to consider the factors highlighted in this study to help them in adapting to new developments required of them to improve in the reliability of services delivery in the globalized economy.

### **8.7 CONCLUSION**

The data attained from the questionnaires in this study as answered by the respondents regarding the effect of globalization on logistics management in Nigeria were presented and analyzed in relation to the research questions and literature review. It involves reviewing the study objectives in relation to the study's findings and showing how the research objectives are met. The next stage of this research study will be recommendations which will be presented and discussed in relation to the objectives of the study.

## **CHAPTER NINE**

### **CONCLUSIONS AND RECOMMENDATIONS**

#### **9.1 CHAPTER INTRODUCTION**

In this chapter, the conclusions and recommendations of the research study are presented and discussed in relation to the research objectives. A general research conclusion is also presented based on the conclusions drawn from each of the research objectives.

##### **9.1.1 CONCLUSION FOR RESEARCH OBJECTIVE 1**

- To assess the level of awareness of logistics activities in Nigerian industries

Results from the findings of the questionnaire survey indicate that transport logistics, domestic logistics, warehouse/distribution, after-sales logistics, procurement logistics, production logistics, outbound logistics, industrial logistics, third party logistics (3pl), and asset control logistics are the top ten most popular logistics activities in Nigerian industries. It can also be deduced from the result that the levels of awareness of fourth party logistics (4pl) and green logistics activities are low in the Nigerian industries. Results of the factor analysis also showed that nodes of distribution networks, configuration and management, and handling and order processing are the three factors used to assess the level of awareness of logistics activities in Nigerian industries. Therefore, it can be concluded that the research objective of the study has been met.

##### **9.1.2 CONCLUSION FOR RESEARCH OBJECTIVE 2**

- To determine the factors that influence globalization in Nigeria

The literature review revealed that technologies, cultural, political, global economic growth, reductions of trade barriers, and expansion in trade routes are the factors that influence globalization. Results from the findings of the questionnaire survey indicate that the factors that influence globalization in Nigeria from the three cluster factors are political, cultural, and economic which were ranked highest. Therefore, it can be concluded that the research objective of the study has been met.

##### **9.1.3 CONCLUSION FOR RESEARCH OBJECTIVE 3**

- To identify the benefits of globalization for logistics management in Nigeria.

The literature review revealed that the benefits of globalization for logistics management includes decreased transport process costs, encouraging customer service quality, increasing the wide network of resources and transport carriers of the world economy, decreasing logistic costs, access to new technology, access to new sources of procurement/distribution, better performance and direct investment due to global exposure, and opportunities to reach new customers in new markets. Results from the findings of the questionnaire survey indicate access to new sources of procurement/distribution, better performance due to global exposure, improvement in transport efficiency, opportunity to reach new customers in new markets, increased economies of scale to reduce transport cost, improved customers service, technological improvements, effective global logistics operations in sourcing of labour and components, positive change in strategy of logistics firms' services, and logistics industry expertise and experience are the top ten benefits of globalization on logistics management in Nigeria. Therefore, it can be concluded that the research objective of the study has been met.

#### **9.1.4 CONCLUSION FOR RESEARCH OBJECTIVE 4**

- To ascertain how globalization as impacted on logistics management in Nigeria

Results from the findings of the questionnaire survey indicate that access to new/effective information, efficiency in logistic chains transportation modes, improvement in technology, optimization of logistics operational performance, availability of new markets, outsourcing logistics activities to reduce operating cost, availability of resources, efficiency of logistics chain models, and increase in logistics productivity tools are the top ten impacts of good logistics management in Nigeria. Conclusively, it can be said that the research objective of this study has been met.

#### **1.1.5 CONCLUSION FOR RESEARCH OBJECTIVE 5**

- To explore the influence of effective and new information flow on logistics management in Nigeria

Results from the literature review revealed that the following are the influences of effective and new information on logistics management. These include increase in safety of stock, reduction in inventory, decrease in cost, reduction of uncertainties, enhanced resource utilization, better tracing and tracking, negotiating better contracts, improved utilization of resources, supply/logistics chain costs minimization, and better responsiveness to customers' needs.

Results from the findings of the questionnaire survey indicate that there are seventeen main influences of effective and new information flow on logistics management in Nigeria, namely negotiating better contracts, better product tracking and forecasting reports, better quality logistics information flow, expanded network, timely delivery, enhanced information transfer between buyers and sellers, reduced lead time, more accurate costing, smooth flow of material and products, better operational efficiency, smooth information flow to all logistics functions, increase in safety of goods, reduction of uncertainties, better quantity logistics information flow, less expensive transportation nodes, and reduced inventory level decrease in cost. Hence, it can be said that the research objective of this study has been met.

#### **1.1.6 CONCLUSION FOR RESEARCH OBJECTIVE 6**

- To understand the factors to be considered for logistics management in Nigeria to take advantage of the adoption of globalization

Results from the literature review revealed the factors to be considered for logistics management to take advantage of the adoption of globalization. These includes boosting the modernization of economies, constant reduction of tariffs, technological improvements, logistics industry expertise and experience and the opening of closed economies. Results from the findings of the questionnaire survey indicate cost effectiveness, advancements in technology, quality operations, presence of skilled logistics professionals, better performance, ICT infrastructure, government support, better products for consumers, economic factor, and planning and execution are the top ten factors to be considered for logistics management in Nigeria to take advantage of the adoption of globalization. Therefore, it can be concluded that the research objective of the study has been met.



## 9.2 GENERAL RESEARCH CONCLUSIONS

The aim of this research is to explore the effect of globalization on logistics management in Nigeria using multi-national companies as a case study. It involves assessing the level of awareness of logistics activities in Nigeria industries, determining the factors that influence globalization in Nigeria, identifying benefits of globalization on logistics management in Nigeria, ascertaining how globalization has impacted on logistics management in Nigeria, exploring the influence of effective and new information on logistics management in Nigeria, and finally, understanding the factors to be considered for logistics management in Nigeria to take full advantage of the adoption of globalization. The aim was achieved by data collected from a structured questionnaire, and also from the methodology used for the research study. Hence, the following conclusions were drawn from the research study:

- The levels of awareness of logistics activities within Nigerian industries have been successfully investigated. The total average awareness level of logistics activities within the Nigerian industries is average. Out of the sixteen logistics activities listed in this study, fourth party logistics (4PL) and green logistics have low levels of awareness, hence very low implementation levels in Nigerian industries. It is therefore important that stakeholders in the logistics industry, business owners and organizations should adopt one or more forms of logistics functions in their core business activities to aid sustainability and economic growth.
- Globalization has moved rapidly over the years; the rate at which organizations operate on a global scale has also increased. Organizations now operate easily in the global market because the factors that influence globalization have been studied and the elements influencing globalization have made the process flexible and accommodating. Prior to this study, little was known about the factors that influence globalization in Nigeria. This study has determined the factors that influence globalization in Nigeria. The economy was ranked first as the most important factor that influences globalization in Nigeria. It is therefore necessary for the Nigerian government and stakeholders in logistics management to look into these factors influencing globalization as a way of closely integrating markets, economies, societies, and ensuring more and adequate products are available to consumers universally.

- Globalization will benefit logistics management in Nigeria to have better performance due to global exposure, improvement in transport efficiency, opportunities to reach new customers in new markets, and increased economies of scale to reduce transport cost. It is therefore important for the benefits as revealed by this study to be considered to enable logistics management to thrive in the Nigerian environment for a better sustainable growth of the logistics industry.
- Logistics management impacts firms' performance and achieves firms' value by the fulfilment of customers' contentment, minimal cost in supply, and reduction of profitless inventory. It can be concluded from the study that the growing number of skilled logistics professionals is the most important impact of logistics management in Nigeria.
- New and effective information flow enables firms to make better planning decisions in their operations such as improved utilization of resources, supply and logistics chain costs minimization and better responsiveness to customers' needs. It is therefore important for Nigerian logistics firms to adopt an effective and new information flow in their logistics management processes because the growth of any logistics firm and its ability to compete globally with developed nations businesses depend on effective information flow.
- Globalization is known as the expansion of local economies and businesses into a broader international marketplace. Logistics management has benefited from globalization in such a way that the economies of the world are linking up through the expansion of international trade routes in services. Cost effectiveness, which was ranked highest, is the most important factor to be considered for logistics management in Nigeria to take full advantage of globalization. The factors identified in this study that will aid logistics management in Nigeria to take full advantage of globalization can only be achieved if the government and stake holders in logistics management address some of the factors such as tax/tariff structures, reduction of trade costs, advancements in technology, and logistics reform to modernization, among others.

### 9.3 RECOMMENDATIONS

This research study has explored the effect of globalization on logistics management in Nigeria. Thus, from the findings of this research, the following recommendations are offered to the Nigerian government, stakeholders in logistics management, logistics managers, and the general public:

- The public should be sensitized on the awareness of logistics activities and functions in Nigeria. Furthermore, awareness training and education of professionals, public, logistics managers and stakeholders in the logistics management on logistics activities should be encouraged for its adoption and practice to be generally accepted.
- It is recommended that the Nigerian government and stakeholders in logistics management should embrace and encourage the adoption of factors influencing globalization as a way of closely integrating markets, economies, societies, and ensuring more and adequate products are available to consumers universally.
- It is recommended that for globalization to benefit logistics management in Nigeria, favourable and efficient legislation and policies should be enacted to improve transport efficiency, opportunities to reach new customers in new markets, increase economies of scale to reduce transport cost, technological improvements, and for a better sustainable growth of logistics industry.
- To achieve the full impact of logistics management in Nigeria, stakeholders in logistic management must introduce a strategy based on formation, planning, material flow control, warehousing, inventory, work in progress, finished goods, and adequate information from the stage of obtaining raw materials to the stage of consumption, to meet the needs of customer satisfaction.
- It is recommended that Nigerian logistics management bodies ensure that logistics firms adopt an effective and new information flow in their logistics management processes because information flow improves the utilization of resources, supply and logistics chain costs minimization and better responsiveness to customers' needs.
- It is recommended that the government, public and stakeholders in logistics management

adopt factors identified in this study that will aid logistics management in Nigeria to take full advantage of globalization such as tax/tariff structures, reduction of trade costs, advancements in technology, and logistics reform to modernization, among others.

#### **9.4 RECOMMENDATION FOR FURTHER STUDIES**

The research studies recommend the following areas for further studies:

- Further research can be conducted to determine ways at which some lesser known logistics activities such as fourth party logistics, green logistics, and reverse logistics can be widely used among Nigerians.
- Further research can be done to ascertain whether the adoption of political globalization and cultural globalization can influence development and improved global business environment in Nigeria.
- It is recommended that a wider range of research be conducted on ways logistics management can thrive in the Nigeria environment in the era of globalization for a better sustainable growth of logistics industry.
- Further research can be conducted on the impacts of globalization on logistics management in Nigeria through the optimization of logistics operational performance and efficiency in logistic chains transportation nodes.
- Further research into the use of a multiple regression model to understand the relationship between effective/new information flow and logistics management in Nigeria.

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## APPENDIX 1: Cover Letter



University of Johannesburg  
Faculty of Engineering and the Built Environment (FEBE)  
Department of Quality and Operations Management  
Doornfontein, 2028  
P.O. Box 524  
Johannesburg.  
Website: <http://www.uj.ac.za>  
Phone: +27 (0) 11 559 4555

February, 2019

### TO WHOM IT MAY CONCERN

Dear Sir/Madam,

#### **LETTER OF INVITATION FOR RESEARCH SURVEY**

I am an M-Tech Student at the University of Johannesburg in the Department of Quality and Operations Management. I am undertaking a study to assess the “*EFFECT OF GLOBALIZATION ON LOGISTICS MANAGEMENT: A CASE STUDY OF MULTINATIONAL COMPANIES IN NIGERIA*”. The study is a pre-requisite of the Department for the completion of a Magister Technologiae degree in Operations Management. As part of this research, we need to test the validity of the principles and approaches of globalization effects on logistics management in multinational companies in Nigeria. We would like you to assist us to identify the barriers, benefits and ways in which multinational companies in Nigeria can fully take advantage of globalization.

**Please do not enter your name or contact details on the questionnaire. It remains anonymous. Information provided by you remains confidential and will be kept at the department.**

Answering this questionnaire will take approximately **30 minutes**.

Should you wish to know the findings of the research, you are welcome to contact Adeitan A.D. telephonically at: +234 (0) 90 3020 5625 / +27 (0) 78 294 9256 or at: [adeitandennis@gmail.com](mailto:adeitandennis@gmail.com), [218098336@student.uj.ac.za](mailto:218098336@student.uj.ac.za). The faculty will gladly send you a summary of the results. Please answer the questions **TRUTHFULLY AND SINCERELY** to help us improve logistics management in the Nigerian Multinational companies.

Thank you in advance.

**Adeitan A.D.**

## APPENDIX 2: QUESTIONNAIRE SAMPLE

### **QUESTIONNAIRE ON THE EFFECT OF GLOBALIZATION ON LOGISTICS MANAGEMENT IN NIGERIA**

#### **INSTRUCTIONS:**

**PLEASE ANSWER THE FOLLOWING QUESTIONS BY CROSSING (X) ON THE RELEVANT BLOCK OR WRITING DOWN YOUR ANSWER IN THE SPACE PROVIDED.**

**EXAMPLE of how to complete this questionnaire:**

Your gender? If you are female:

Male	1
Female	2

### **SECTION A - BACKGROUND INFORMATION**

Dear respondent, this section of the questionnaire refers to biographical information. The questionnaire items are about the study and you are kindly requested to participate in responding to the questions below. The information given will be treated as confidential and the results of the study will be used for academic research purposes only. Your cooperation is appreciated.

1. Gender

Male	1
Female	2

2. What is your age group?

Younger than 25 years	1
26 years – 30 years	2
31 years – 35 years	3
36 years – 40 years	4
41 years – 45 years	5
46 years – 50 years	6
51 years – 55 years	7
56 years & Above	8

3. Please indicate ownership of your company

Local	1
Foreign	2
Government	3
Others	4

4. To what business area of logistics management does your company belong to?

Purchasing	1
Transportation	2
Storage and Warehousing	3
Production	4
Distribution/Marketing	5
Customer Service	6
Others	7

5. How many years of experience do you have in the logistics industry?

0 - 5 years	1
6 – 10 years	2
11 – 15 years	3
16 – 20 years	4
More than 20 years	5

6. Indicate your highest level of education from the list below.

Primary	1
Secondary	2
Diploma	3
Bachelor's degree	4
Master's degree	5

Doctorate	6
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7. Which of the following best describes your job position?

Director/Owner	1
Procurement Manager	2
Logistics Manager	3
Procurement Officer	4
Logistics Officer	5
Others	6

### **SECTION B: LEVEL OF AWARENESS OF LOGISTICS ACTIVITIES IN NIGERIAN INDUSTRIES**

This section of the questionnaire assesses the awareness of logistics activities in Nigerian Industries. Please indicate your answers using the following 5-point scale where:

1= Not aware, 2= Slightly aware, 3= Moderately aware, 4= Strongly aware, 5= Very strongly aware

8. To what extent are you aware of the following logistics activities within your company?

No		Not at all aware	Slightly aware	Somewhat aware	Moderately aware	Very aware
<b>B8.1</b>	Inbound Logistics	1	2	3	4	5
<b>B8.2</b>	Outbound Logistics	1	2	3	4	5
<b>B8.3</b>	Procurement Logistics	1	2	3	4	5
<b>B8.4</b>	Reverse logistics	1	2	3	4	5
<b>B8.5</b>	Green Logistics	1	2	3	4	5
<b>B8.6</b>	Fourth Party Logistics (4PL)	1	2	3	4	5
<b>B8.7</b>	Global Logistics	1	2	3	4	5
<b>B8.8</b>	Domestic Logistics	1	2	3	4	5
<b>B8.9</b>	Third Party Logistics (3PL)	1	2	3	4	5
<b>B8.10</b>	Production Logistics	1	2	3	4	5
<b>B8.11</b>	After-sales Logistics	1	2	3	4	5
<b>B8.12</b>	Asset Control logistics	1	2	3	4	5
<b>B8.13</b>	Transport Logistics	1	2	3	4	5
<b>B8.14</b>	Integrated Logistics	1	2	3	4	5
<b>B8.15</b>	Warehouse/Distribution Third Party Logistics	1	2	3	4	5
<b>B8.16</b>	Industrial Logistics	1	2	3	4	5

### **SECTION C: FACTORS THAT INFLUENCES GLOBALIZATION**

This section of the questionnaire assesses the factors that influences globalization in Nigeria. Please indicate your answers using the following 5-point scale where:

1= Strongly disagree, 2 = Disagree, 3= Neutral, 4= Agree, 5= Strongly agree

9. To what extent do you agree that the following factors influence globalization in Nigeria?

No		Strongly disagree	Disagree	Neutral	Agree	Strongly agree
C9.1	Trade routes	1	2	3	4	5
C9.2	Economy	1	2	3	4	5
C9.3	Resources and markets	1	2	3	4	5
C9.4	Production issues	1	2	3	4	5
C9.5	Political issues	1	2	3	4	5
C9.6	Industrial organizations	1	2	3	4	5
C9.7	Technologies	1	2	3	4	5
C9.8	Containerization	1	2	3	4	5
C9.9	Growth strategies of multinational companies	1	2	3	4	5
C9.10	Tax systems reduction	1	2	3	4	5
C9.11	Historical	1	2	3	4	5
C9.12	International business	1	2	3	4	5
C9.13	GDP per capita	1	2	3	4	5
C9.14	Literacy rate	1	2	3	4	5
C9.15	Unemployment rate	1	2	3	4	5
C9.16	Corruption index	1	2	3	4	5
C9.17	Population density	1	2	3	4	5

#### **SECTION D: BENEFITS OF GLOBALIZATION ON LOGISTICS MANAGEMENT IN NIGERIA**

This section of the questionnaire assesses the benefits of globalization on logistics management in Nigeria. Please indicate your answers using the following 5-point scale where:

1= Strongly disagree, 2 = Disagree, 3= Neutral, 4= Agree, 5= Strongly agree

10. To what extent do you agree that the following are the benefits of globalization on logistics management?

No		Strongly disagree	Disagree	Neutral	Agree	Strongly agree
D10.1	Improvement in transport efficiency	1	2	3	4	5
D10.2	Technological Improvements	1	2	3	4	5
D10.3	Expanded outsourcing opportunities	1	2	3	4	5
D10.4	Opportunity to reach new customers in new markets	1	2	3	4	5
D10.5	Better performance due to global exposure	1	2	3	4	5
D10.6	Improved customers service	1	2	3	4	5
D10.7	Access to new sources of procurement/distribution	1	2	3	4	5
D10.8	High cost-effective logistic solutions	1	2	3	4	5
D10.9	Increased economies of scale to reduce transport cost	1	2	3	4	5
D10.10	Effective global logistics operations in sourcing of labour and components	1	2	3	4	5

<b>D10.11</b>	Competitiveness to firms based on applications such as ERP	1	2	3	4	5
<b>D10.12</b>	Wide network of resources and carriers	1	2	3	4	5
<b>D10.13</b>	Logistics industry expertise and experience	1	2	3	4	5
<b>D10.14</b>	Flexibility in third party logistics firms' network	1	2	3	4	5
<b>D10.15</b>	Positive change in strategy of logistics firms' services	1	2	3	4	5
<b>D10.16</b>	The quality of logistic firms emerging markets being measurable	1	2	3	4	5
<b>D10.17</b>	Boosting efficiency of vital logistics operations	1	2	3	4	5

### **SECTION E: IMPACTS OF LOGISTICS MANAGEMENT IN NIGERIA**

This section of the questionnaire assesses the impacts of logistics management in Nigeria Please indicate your answers using the following 5-point scale where:

1= Strongly disagree, 2 = Disagree, 3= Neutral, 4= Agree, 5= Strongly agree

11. To what extent do you agree that the following are the impacts of good logistics management in Nigeria?

No		Strongly disagree	Disagree	Neutral	Agree	Strongly agree
<b>E11.1</b>	Improvement in Innovation and Logistics Chain Networks	1	2	3	4	5
<b>E11.2</b>	Optimization of logistics operational performance	1	2	3	4	5
<b>E11.3</b>	Availability of resources	1	2	3	4	5
<b>E11.4</b>	Reduction in logistics cost	1	2	3	4	5
<b>E11.5</b>	Enhancement of logistics competitiveness	1	2	3	4	5
<b>E11.6</b>	Securing of visibility in logistics operations	1	2	3	4	5
<b>E11.7</b>	Securing of transparency in logistics operations	1	2	3	4	5
<b>E11.8</b>	Improvement in technology	1	2	3	4	5
<b>E11.9</b>	Growing number of skilled logistic professionals	1	2	3	4	5
<b>E11.10</b>	Efficiency in logistic chains transportation modes	1	2	3	4	5
<b>E11.11</b>	Trade capabilities acceleration in logistics networks	1	2	3	4	5
<b>E11.12</b>	Simplicity in global logistics system	1	2	3	4	5
<b>E11.13</b>	The impact of globalization attracts attention to green logistics	1	2	3	4	5
<b>E11.14</b>	Efficiency of logistics chain models	1	2	3	4	5
<b>E11.15</b>	Access to new/effective information	1	2	3	4	5
<b>E11.16</b>	Outsourcing logistics activities to reduce operating cost	1	2	3	4	5
<b>E11.17</b>	Controlling the flow of goods and services	1	2	3	4	5
<b>E11.18</b>	Increase in logistics productivity tools	1	2	3	4	5
<b>E11.19</b>	Availability of new markets					



**SECTION F: INFLUENCE OF EFFECTIVE AND NEW INFORMATION FLOW ON LOGISTICS MANAGEMENT**

This section of the questionnaire explores the influence of effective and new information flow on logistics management in Nigeria.

Please indicate your answers using the following 5-point scale where:

1= Strongly disagree, 2 = Disagree, 3= Neutral, 4= Agree, 5= Strongly agree

12. To what extent do you agree that effective and new information flow influences the following in terms of logistics management in Nigeria?

		Strongly disagree	Disagree	Neutral	Agree	Strongly agree
<b>F12.1</b>	Decrease in Cost	1	2	3	4	5
<b>F12.2</b>	Better Operational Efficiency	1	2	3	4	5
<b>F12.3</b>	Reduced Inventory Level	1	2	3	4	5
<b>F12.4</b>	Better Quality Logistics Information Flow	1	2	3	4	5
<b>F12.5</b>	Better quantity logistics Information Flow	1	2	3	4	5
<b>F12.6</b>	Better product tracking and forecasting reports	1	2	3	4	5
<b>F12.7</b>	Reduced lead time	1	2	3	4	5
<b>F12.8</b>	Expanded network	1	2	3	4	5
<b>F12.9</b>	Negotiating better contracts	1	2	3	4	5
<b>F12.10</b>	Providing less expensive transportation nodes	1	2	3	4	5
<b>F12.11</b>	More accurate costing	1	2	3	4	5
<b>F12.12</b>	Increase in safety of goods	1	2	3	4	5
<b>F12.13</b>	Reduction of uncertainties	1	2	3	4	5
<b>F12.14</b>	Enhanced information transfer between buyers and sellers	1	2	3	4	5
<b>F12.15</b>	Smooth flow of material and products	1	2	3	4	5
<b>F12.16</b>	Smooth information flow to all logistics functions	1	2	3	4	5
<b>F12.17</b>	It helps in timely delivery	1	2	3	4	5

**SECTION G: FACTORS TO BE CONSIDERED FOR LOGISTICS MANAGEMENT IN NIGERIA TO FULLY TAKE ADVANTAGE OF GLOBALIZATION**

This section of the questionnaire explores the factors which must be considered for logistics management in Nigeria to fully take advantage of globalization.

Please indicate your answers using the following 5-point scale where:

1.= Strongly disagree (SD); 2. = Disagree (D); 3. = Neutral (N); 4. = Agree (A); 5. = Strongly agree (SA)

13. To what extent do you agree that the following factors should be considered for logistics management in Nigeria to fully take advantage of globalization?

		Totally unimportant	Unimportant	Neutral	Important	Very important
<b>G13.1</b>	Economic factor	1	2	3	4	5
<b>G13.2</b>	Cultural integration	1	2	3	4	5
<b>G13.3</b>	Advancements in technology	1	2	3	4	5
<b>G13.4</b>	Reduction of trade costs	1	2	3	4	5
<b>G13.5</b>	Tax/Tariff structures	1	2	3	4	5
<b>G13.6</b>	High demand for logistics outsourcing services	1	2	3	4	5
<b>G13.7</b>	Government support	1	2	3	4	5
<b>G13.8</b>	ICT infrastructure	1	2	3	4	5
<b>G13.9</b>	Presence of skilled logistics professionals	1	2	3	4	5
<b>G13.10</b>	Competition in the logistics market	1	2	3	4	5
<b>G13.11</b>	Better products for consumers	1	2	3	4	5
<b>G13.12</b>	Cost effectiveness	1	2	3	4	5
<b>G13.13</b>	Quality operations	1	2	3	4	5
<b>G13.14</b>	Better performance	1	2	3	4	5
<b>G13.15</b>	Planning and execution	1	2	3	4	5
<b>G13.16</b>	Evaluation of change in government, laws and regulations	1	2	3	4	5
<b>G13.17</b>	Logistics reform to modernization	1	2	3	4	5