



# EXPORTING OF USED AUTOMOBILE PARTS FROM FINLAND TO NIGERIA

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December 2012  
Degree Programme in International Business  
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## ABSTRACT

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Exporting of used automobile parts from Finland to Nigeria

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This thesis is a developmental project been undertaking to assist company x in improving product delivery response and improving efficiency. Company X, Focuses on repairs and services of Honda-Branded cars. Equally offers quality used cars, used automobile car spare parts and also they are into recycling of scrap metal parts of used cars according to the environmental laws. Its customers include Honda car owners and also automobile spare part dealers within and outside Finland.

The objective if this thesis was to examine from logistic point of view the processes involved in getting used auto-mobile spare parts to its end users in Nigeria from Finland and the research problem was to investigate and identify the types of cars that are used in Nigeria and which readily needs spare parts. The study was conducted by using qualitative research approach. Useful information was collected based on literature reviews, internet sources, my experience during my internship and data collected from face to face interview. After exploring and analyzing the collected data from the research interview. I was able to identify the types of cars that are needed in Nigeria and which readily needs spare parts.

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Key words: Automobile, spare parts

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## **1 INTRODUCTION**

Cars have a limited life span, when a car is damaged, that is not worth repairing or worn out parts too expensive to replace, it is time to dispose of it. Every year, end of life vehicles produces about 9 million tonnes of waste and these wastes must be managed correctly. The European commission adopted a proposal for a directive which aims at making vehicle dismantling and recycling to be more environmentally friendly, sets clear targets for reuse, recycling and recovering of vehicles and its components (ec.europa.eu). Although these vehicles have reached its end-of-Life and have been decommissioned from roads, their usable parts are been sold for use in operating vehicles while the unusable parts are sold to metal recycling companies.

### **THESIS BACKGROUND**

Contrary to this, Used auto-mobile spare parts are in good demand in Nigeria especially the diversified range of used mechanical and body parts of cars and engines has brought this parallel to genuine and non-genuine new spare parts business as it offers big variety of affordable prices. Car owners prefers to buy used spare to fix their cars rather than buying new spare parts which are of substandard quality been illegally sent to Nigeria from Asia. The use of these fake new spare parts could result in short life span of engines, frequent visit to mechanic workshop and high cost of maintenance, uncomfortable driving condition, unguaranteed safety and security of car users.

### **THESIS OBJECTIVES AND RESEARCH PROBLEM**

The scope of this thesis is to examine from logistic point of view the processes involved in getting used auto-mobile spare parts to its end users in Nigeria from Finland. The research problem is to investigate and identify the types of cars that are used in Nigeria and which readily needs spare parts. This will clearly help company x to know what its Nigeria clients needs and they will be able to respond quickly to orders. In other words it will help improve company x efficiency in product delivery.

## **RESEARCH METHODOLOGY**

The scope of a research is been defined by the research methodology. It outlines the activities of the research and equally spells out the way forward for the research in question, which then enables us to track and measure the research progress. With human knowledge and wealth of experience gained during my internship i am well equipped with tools to carry out this research.

Therefore research method is a study of how research is been carried out and done scientifically. It is a systematic way of logically solving the research problem by using various steps and equally defines the ways in which data are been collected for the research. (Blaxter et. al. 2001, pg4)

### **Research approach and Design**

The research method employed in this project is the qualitative method. Qualitative research comprises of collecting, analysing and practically interpreting data which have been collected by critically observing peoples reaction or response. This form of research is more subjective and uses different methods or ways to gather and collect information. The nature of this type of research is exploratory, which comprises of searching and travelling for the purpose to discover or gather information and also qualitative research are open- ended. Small number of people are been interviewed and those to be interviewed are been asked to respond to general questions and their response is usually probed and explored by the interviewer in other to identify and define people's perception, opinion and feelings about the topic. The skills, experience and sensitivity of the interviewer goes a long way in helping to get a quality and reliable results of the research. A qualitative research method is often cost effective and very effective way of gathering information about people's needs and views.

The study was conducted at Ladipo auto spare part market, which is arguably the biggest in Africa. The Ladipo automobile spare part market located in Mushin local government area of Lagos state was founded in 1979 and has since grown far beyond the wildest imagination of the founders.

## **DATA COLLECTION**

In this research, a questionnaire was put together and administered as a face to face interview to respondent. Data was collected by recording the responses from the face to face interview. The data collected was used to evaluate the respondent's knowledge and views about automobile spare part business in Nigeria.

A questionnaire according to Wikipedia is a research instrument consisting of a series of questions and other prompts for the purpose of gathering information from respondents. The businessdictionary.com also defines questionnaire as a list of research or survey questions asked to respondents and designed to extract specific information in the research. The data for this research was collected over a period of 3 weeks and in all 30 people were interviewed.

### **Reliability and Validity**

Understanding reliability and validity in qualitative research helps a great deal in a research work. Joppe (2000) defines reliability as the extent to which results are consistent over time and an accurate representation of the total population under study is referred to as reliability and if the results of a study can be reproduced under similar methodology, the research instrument is considered to be reliable. Hence there must be truthfulness in order to achieve accurate results. A thesis work must be said to be reliable if results remain the same even when repeated over a given period with the same instrument of measurement.

Validity on the other hand according to Joppe (2000), determines whether the research truly measures that which it was intended to measure or how truthful the research results are. Therefore a valid research work must totally represent and accurately reflect the purpose of the study by establishing truth and authenticity of the research.

## **CHAPTER 2**

### **LITERATURE REVIEW**

Van Rys, Meyer, Sebranek (2011), Explains that a literature review helps and guides readers or a research student through academic topics as it describes key qualities as well as pointing out similarities and differences between research strategies, methods, or perspectives; showing connections between the works. In this part of the work we will try to explain some important logistical issues as it affects Company X

### **THEORETICAL BACKGROUND ON LOGISTICAL CHALLENGES:**

Basically we will be covering the following Logistical fields;

- Procurement Logistics - consists of activities such as market research, requirements planning, make or buy decisions, supplier management, ordering, and order controlling.
- Production Logistics - connects procurement to distribution logistics
- Distribution Logistics - consists of order processing, warehousing, and transportation.
- Reverse Logistics - stands for all operations related to the reuse of products and materials

### **Transportation**

The global economy has given business a broader access than ever before to markets all over the world. Goods are sold in more countries, in larger quantities and in greater variety. According to an online dictionary ([www.thefreedictionary.com](http://www.thefreedictionary.com)) it defines transportation as a business of conveying passengers or goods from one location to another. Transportation mode can substantially be distinguished by the different ways of performing transportation. The main mode of transportation includes roads, rail, water, air. Other modes of transportation also exist which includes pipelines, cable transport, human powered transport, animal powered transport and space transport

Each mode of transport has a fundamentally different technology solution and requires separate environment. Each mode of transport equally has its own infrastructure, vehicle

of operation and must often a unique regulation in transportation. Some of the modes of transport are combined in other to be able to convey goods to its end users or to convey passengers to their final destination. Therefore transportation involving more than one mode is said to be an inter-modal. As the volume and complexity of international sales increases, so is the possibility for misunderstanding hence the drafting of incoterms which is the official ICC rules for interpretation of trade.

### **Incoterms**

Incoterms are series of predefined commercial terms, which was published by international chambers of commerce (ICC) which are widely used in international commercial transactions (Ramberg, J., *ICC Guide to Incoterms 2000*, p. 10). The incoterm rules are intended primarily to clearly communicate the task, cost and risk associated with transportation and delivery of goods. Incoterms rules are intended to reduce or remove uncertainties arising from different interpretation of the rules in different countries. According to ICC “incoterms are official rules of interpretation of trade terms and rules for use of domestice and international trade which also defines sellers and buyers responsibility.” incoterms does not deal with contract failure. Breach of contract must be dealt with according to the applicable laws as stipulated in the contract.

### **History of Incoterm**

International chambers of commerce began the development of incoterms rule in 1921. The first set of incoterm rules where first published in 1936 which remained in use for about 20 years before the second publication in 1953. Consequently additional amendment and expansion followed in 1967, 1976, 1980, 1990, 2000 and the most recent and current version of incoterm rules was published in January 2011. Since the creation of incoterms by ICC in 1936 the contractual standard has been regularly updated to keep pace with the development of international trade. The recent incoterms takes account of the recent spread of customs free zones, the increased use of electronic communication in business transactions and changes in transport practices

### **Incoterms in general**

Incoterms primarily describes the risks, cost and task in respect to the delivery of goods from seller to buyer. The terms are been abbreviated with three letters which explains



the terms, for example EXW which means Ex works. Incoterms deals with cost of transportation, defines at what point the risk for the goods are been transferred, customs formalities and insurance cover. Importantly to note is that incoterm only are the minimum obligation to the parties, thus there can agree on more obligations provided it is well spelt out in the contract.

To correctly apply incoterm into a contract of sale is to write the chosen term followed by the named place of the contract and incoterm 2010. It is of utmost important to always refer to the correct version of incoterm, and also to know how to choose the appropriate term. The chosen term has to be appropriate to the mode of transport, to the goods and if there are other additional obligation. There are 3 important things to consider when deciding the appropriate term to be used. The first is the carriage of the risk, from which point is whom obliged to arrange for it. The second is the allocation of risk, when is the risk been transferred from seller to buyer. Finally the third to be considered is at what point the cost is been transferred to the buyer.

Incoterms certainly does not state a rule for the price to be paid or the consequences of breach of contract. Those agreements are spelt out in the contract and regulated by the laws of the contracts. Incoterms are constructed with sections which describes how incoterms places obligation on the seller and buyer.

In incoterms, the risk always passes when the seller has fulfilled his delivery obligation. This is in conformity with the general principles of passing of the risk. Even if the risk has passed when damages occurs, but the damages was due to poor packaging, the seller is still liable since proper packaging is one of his main obligations, to provide goods in conformity with the contract. On the other hand, a buyer's negligence or failure to fulfil his obligation can lead to liability even before the risk has passed. The point of delivery is always where the cost is divided.

## Structure of Incoterm

 <b>INCOTERMS® 2010 RULES</b> CHART OF RESPONSIBILITY											
	Any Transport Mode		Sea/Inland Waterway Transport				Any Transport Mode				
	EXW	FCA	FAS	FOB	CFR	CIF	CPT	CIP	DAT	DAP	DDP
Charges/Fees	Ex Works	Free Carrier	Free Alongside Ship	Free On Board	Cost & Freight	Cost Insurance & Freight	Carriage Paid To	Carriage Insurance Paid To	Delivered at Terminal	Delivered at Place	Delivered Duty Paid
Packaging	Buyer or Seller	Seller	Seller	Seller	Seller	Seller	Seller	Seller	Seller	Seller	Seller
Loading Charges	Buyer	Seller*	Seller	Seller	Seller	Seller	Seller	Seller	Seller	Seller	Seller
Delivery to Port/Place	Buyer	Seller	Seller	Seller	Seller	Seller	Seller	Seller	Seller	Seller	Seller
Export Duty & Taxes	Buyer	Seller	Seller	Seller	Seller	Seller	Seller	Seller	Seller	Seller	Seller
Origin Terminal Charges	Buyer	Buyer	Seller	Seller	Seller	Seller	Seller	Seller	Seller	Seller	Seller
Loading on Carriage	Buyer	Buyer	Buyer	Seller	Seller	Seller	Seller	Seller	Seller	Seller	Seller
Carriage Charges	Buyer	Buyer	Buyer	Buyer	Seller	Seller	Seller	Seller	Seller	Seller	Seller
Insurance						Seller		Seller			
Destination Terminal Charges	Buyer	Buyer	Buyer	Buyer	Buyer	Buyer	Seller	Seller	Seller	Seller	Seller
Delivery to Destination	Buyer	Buyer	Buyer	Buyer	Buyer	Buyer	Buyer	Buyer	Buyer	Seller	Seller
Import Duty & Taxes	Buyer	Buyer	Buyer	Buyer	Buyer	Buyer	Buyer	Buyer	Buyer	Buyer	Seller


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 1-800-641-0920 www.i-b-t.net  
This chart is designed to provide a basic level of understanding of Incoterms® 2010 Rules and Definitions. For a fuller explanation of the trade terms refer to the ICC website or visit www.i-b-t.net/incoterms.asp.

\* Seller is responsible for loading charges, if the terms state FCA at seller's facility.  
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Table 1: Incoterms 2010 chart of responsibility

Source: [http://www.i-b-t.net/PDFs/Incoterms\\_2010\\_chart.pdf](http://www.i-b-t.net/PDFs/Incoterms_2010_chart.pdf)

Incoterm 2010 now has 11 terms instead of the 13 terms in incoterm 2000. Four terms were eliminated and two new terms were added to the recent and latest incoterms. The eliminated terms are-

DAF- Delivered At Frontier

DES- Delivered Ex-Ship

DEQ- Delivered Ex-Quay

DDU- Delivered Duty Unpaid

Why the two additional terms are -

DAT- Delivered At Terminal

DAP- Delivered At Place

It is of most important to understand the term delivery; this term has not changed, but was not previously defined. Delivery according to ICC is “where the risk of loss or damage to the goods transfers from seller to buyer”.

Incoterm 2010 which entered into force 1<sup>st</sup> January 2011 consists of 11 terms and is divided into any mode of transport term (multi-modal terms) and maritime terms. The multi-modal terms are EXW, FCA, CPT, CIP, DAT, DAP and DDP. Why the maritime terms are FAS, FOB, CFR and CIF.

#### E -TERM

EXW which is Ex-Works is the only term in E-term and it is used irrespective of the mode of transport, however it is suitable for both domestic and international trade and it is still the most favourable trade term for sellers. The sellers only deliver goods at his or her business premises. All other transportation cost and risk are assumed by the buyer.

#### F-TERMS

This consists of FCA, FAS and FOB.

FCA which is Free Carrier can be used for any mode of transport. Delivery is made when the seller leaves the goods to the carrier or another person at the named place in the contract. The named place is clearly stated in the contract. The seller is responsible for clearing the goods for export when it is applicable. The seller might take out the contract of carriage still at the expense of the buyer.

FAS which is Free Alongside Ship are only used for sea or inland waterway transport. Goods are delivered and risk passes to the buyer when goods are placed alongside the vessel in the named port of shipment.

FOB which is Free On Board is only used for sea or inland waterway transport. The goods are delivered when they are on board the vessel in the named port of shipment or when the seller procures the goods already delivered. FOB is not preferable if the goods are to be handed over to the carrier before they are on board the vessel. Since it is F-term the only obligation for the seller is to clear the goods for shipment.

## C-TERMS

C-terms consist of CFR, CIF, CPT and CIP.

CFR which is Cost & Freight is only used for sea or inland waterway transport. The seller delivers the goods when it is placed on the vessel. However the seller pays for bringing the goods to the named port of destination, the risk of loss or damage of the goods passes when goods are on board the vessel.

CIF which is Cost Insurance & Freight is used for sea or inland transport. CIF is similar to CFR since the risk passes when goods are placed on the board the vessel. The seller is required to arrange for the carriage of goods by sea to a named port of destination and provide the buyer with the documents necessary to obtain the goods from the carrier. What differs between CIF and CFR is that the seller have to contract for insurance cover against the buyer for the carriage.

CPT which is Carriage Paid To can be used for any kind of transport mode. The seller fulfils his delivery obligation when he must have placed the goods to the carrier at a named place. The seller also pays for the carriage of the goods to the named place. Since the risk and cost are transferred at different point, it is therefore recommended to specify both places of delivery as the named place of destination. The seller clears the goods for export but not import.

CIP which is Carriage Insurance Paid To is usually applicable to any mode of transportation. Seller normally delivers the goods to the named carrier, but bears the cost for the carriage to the named place of destination. Moreover the seller concludes the contract of insurance of the carriage for the benefit of the buyer.

## D-TERMS

Changes have occurred within the D-terms in incoterm 2010. In incoterm 2010 there are only three terms which are DAT, DAP, and DDP.

DAT which is Delivered at Terminal is used for all mode of transport. Seller is responsible for export clearance, delivery of goods packed to destination terminal; all cost of transportation to the named terminal is paid by the seller. The buyer is responsible for import clearance and carriage from thereof. There is no insurance

obligation to either party.

DAP which is Delivered at Place is also new and can be used in any mode of transportation. The goods are delivered when they are at the disposal of the buyer. The seller is responsible for export clearance, delivery of the goods appropriately packed at the named destination. The buyer is responsible for unloading and import clearance on the carriage.

DDP which is Delivered Duty Paid is most advantageous for buyers since the seller delivers the goods when they are placed at the disposal of the buyer at the named place of destination. The seller bears all risk, cost and clears the goods for export and import.

### **Phases of Incoterm**

#### **Obligation**

The general obligation placed on both parties is explained in this section. The goods to be delivered by the seller must be in conformity to what was agreed and stated in the contract. The seller also provides evidence that the goods are in conformity with the contract and submits to the buyer a commercial invoice. The buyer upon receiving the invoice must pay the price for the goods as agreed in the contract.

#### **Licences, authorization and formalities**

This phase usually concentrates on the licences, authorization and other formalities for both parties. It is very important to clearly state this for both parties awareness. This enables both parties to know who is responsible for obtaining required licences or official authorization documents and also they are aware of who bears the risk of an export or import prohibition.

#### **Export performance**

Initially it might seem that cross border selling may appear same as domestic trade. Anyway in both domestic and international trades, goods are been sold from sellers and been bought by buyers as agreed in the contract. So for a trade to take place there must be willing sellers and also there must be willing buyers. Doing international trade puts a different complexion on trade matters. Apart from the individual foreign market

structure of demand and competitive situation, both sellers and buyers have to seriously consider the characteristics of export particularities.

Firstly, there is no particular legal interpretation of an export contract. According to the principle of territorial jurisdiction, no state is obliged to recognise foreign law on its home territory ([www.britannica.com](http://www.britannica.com)) therefore in export contract there has to be special arrangements, which are also abundant in domestic trade when express or implied recourse is taken to one domestic law.

Secondly, the issue of currency; since there is no one unique currency for exports into countries outside of the European monetary union to calculate cost, agree on prices and to carry out payment. Differences in currency normally causes

1. Exchange rate fluctuation
2. Country specific rates of inflation
3. Disturbance of conversion of currency and transfer of payment
4. Shortage of hard currency.

Thirdly, international trade normally involves foreign language which poses difficulties in market research and contract negotiation. It also poses difficulties in cases of disputes before a foreign court of justice. Therefore export performance requires some specific measures to be provided for in export contracts which serves as the guideline and equally has to provide also for cases of failure. (ICC, *Incoterms 2010*). The contracts pave way for settlement in case there is failure or conflict.

### **Foreign trade documents**

A lot of documents are been utilise when handling international trade transaction. The cross border transaction must be recorded accurately which allows for retracing every single export contract. Recording of every export process is of most importance when customs authorities have decided upon the application of their export procedures. Legally, documents are been treated differently from country to country. A document maybe a mere instrument of evidence in one country and same document in another country will be a transferable or negotiable document. Example is the way bill.

### **Insurance papers**

Insurance is applied in foreign trade and insurance coverage is available for every risk, right from product liability, over machinery loss of profit and business interruption to transport and credit insurance. Significantly important for trade, is the transport and

credit insurance. These covers long distances and also involves complex infrastructure which generally complicates the order execution.

Transport insurance is available for all modes of transport and the usual coverage is well defined and described in the institute cargo clause. The risk of the coverage must be covered by the insurance policies. Economic export related risks are normally covered by credit insurance policies. They are thus treated equivalent to export credit guarantees which covers economic and political export related risk.

### **Shipping documents**

Every stage of delivery performance is been indicated by shipping document. These documents can be issued by the exporter or one of his suppliers, a forwarding agent or a carrier, a border stationmaster or by the foreign customer. Shipping documents are documents required to clear customs and take delivery of the goods. There are five types of shipping documents, evidencing the different stages of delivery performance.

#### 1. Forwarding advice

This is a document indicating the goods readiness for shipment

2. Consignment note- this indicates that the goods have been shipped by the agreed carrier and mode of transport.

#### 3. Bill of lading

This document contains full particulars of the goods shipped. It is a legal document between the shipper and the carrier, stating clearly the type of goods, quantity and destination. Bill of lading helps to establish an agreement between the shipper and the carrier

#### 4. Certificate of arrival

This document states the arrival of the goods at the port of its destination or agreed place of destination

#### 5. Customs clearing document

These documents are usually required by foreign trade authorities of the exporting and importing countries. The export process officially starts when this document is

submitted to the relevant authority. Customs clearing document is used to organise the whole process and to witness the transaction for subsequent review. Customs clearing documents includes the export permit, import licence, certificate of origin and commercial papers.

### **Export permit**

This document indicates that a government has granted a right for the export of the specified goods to specified countries. Exporter normally has to apply for the permit at his national government or its government approved agency that has been delegated to handle such issues.

### **Import licence**

This is a Permit which allows an importer to bring in a specified quantity of certain goods during a specified period. It is issued by relevant government agencies, depending on the type of goods. Import licence usually helps the government to control and restrict foreign exchange

### **Certificate of origin**

As the name implies this document usually indicates the country of origin of the goods that are to be exported. It is usually issued or endorsed by a chambers of commerce or an authorised trade association. The certificate of origin is equally used in foreign trade benefits such as import quota claims or exemption from customs duties in a free trade zone. It also affirms the quantity of goods in some cases

### **Commercial papers**

This usually comprises of invoice and certificate which clearly spells out the quality and consistency of the goods to be transported. An exporter commercial paper must fulfil three main functions, which is a request for payment to be used for collection of good, a voucher for book keeping and also serves as a written evidence of the business transaction. The exporter must have the invoice signed, which repeats or states the export contract which are very important for payment as well as for accountability and the follow up of respective transaction by the international trade authorities. An invoice, therefore most contain the following.

- Parties names and address



- Quantities to be shipped, prices of the supplies and total amount.
- Means and terms of transport deliveries, including the name of the carrier
- Details of packaging as well as labelling of package
- Exporter bank account details.

## **Warehousing**

The purpose of a warehouse is to store product until customers require them. (Bloomberg et al 2002, 172). Warehouse plays a very vital role in supply chain by building and maintaining good relationship between all those involved in supply chain. Practically some firms fail to realise the importance of warehousing and therefore ignore it. Warehousing is a source of cost reduction and product improvement. A warehouse smoothes out market supply and demand fluctuation. Therefore, in the event that supply exceeds demand, products are stored in warehouse in anticipation of future demand (Bloomberg et al 2002, 172).

By warehousing some inventory, a firm often lower production cost through economical production, lot sizing and sequencing. (Ballou 2004, 470). Hence firms can avoid fluctuations in output levels due to uncertainties and variation in demand patterns. Using enough warehouse can lead to achieving an economical balance among warehousing, production and transportation cost. Warehousing has four main functions.

- Reduce transportation-production cost
- Assist in the production process
- Help coordinate supply and demand
- Assist in marketing process

### **Basic component of a warehouse**

Space, equipment and people are the three basic component required by a warehouse. Space allows for goods to be stored when demand and supply are not equal. Space affect warehousing decision so also it affects the design of logistics systems. Warehouse equipment includes all devices used in material handling, storage racks, conveyor equipments and information processing systems. These equipments help in product movement, storage and tracking. Equipments to be used, varies depending on the products to be stored in the warehouse. The most critical component of a warehouse are the people, a warehouse cannot be said to be complete without people. Since the primary aim of establishing a warehouse is to increase customer service levels, it often requires individual attention to special customer request like special packaging, price

making of shipment, (Bloomberg et al 2002, 174).

### **Types of warehouse**

There are three types of warehouse, which are private, public and contract warehouse. The basic warehouse decision is to choose the type or a combination of types of warehouse which is needed.

The private warehouse as the name implies is been owned by firms which produces its own goods. They store own produced goods in their private warehouse until it is ready to be delivered or sold. With economies of scale it has shown that high volumes and high levels of utilization is always been favoured by owning a warehouse. A firm consequently can maintain lower delivered prices or higher profit margin base on such economies. Private facilities offer a great deal of control regarding to hiring and firing of employees, benefit packages and operations within the warehouse. Operating a private warehouse helps to maintain physical control over the facility thereby addressing the issues of loss, damages and theft. A firm can also earn extra income by leasing excess space in a private warehouse.

On the other hand a public warehouse usually rents out or lease space to people or companies that need storage space. Also a public warehouse provides variety of services which may include packaging, labelling, testing, inventory maintenance, local delivery, data processing and pricing. According to Bloomberg et al (2002, pg176) state that there are many reasons to lease space instead of owning a warehouse. Firstly, leasing lowers the capital investment needed to establish a warehouse. Secondly, leasing offers flexibility. Flexibility in the sense that a firms market target may shift to other regions thereby making the firm to lease a storage space in the new region. Public warehouse also allows for flexibility in terms of space, firms can lease only the amount of space they require at a particular time. Making use of a public warehouse is of advantage to a firm since they can avoid hiring and firing of employees and also paperwork associated with running a warehouse. Hence they can concentrate on its core values.

The third type of warehouse is the contract warehouse which is a specialized form of public warehouse. A contract warehouse provides all warehousing activities and also provides a combination of integrated logistics services, thus allowing the leasing firm to concentrate on its specialty. Contract warehouse is a third party integrated logistics organization that provides higher quality services than public warehouse.

Company x uses its own private warehouse in storing automobile spare parts until they

are been required by customers. The spare parts are clearly labelled and kept in rolls which have been designated to each brand of car and then entered into its inventory which helps to know how many of such parts are available for sale. Recently the growth and demand for contract warehouse has been on the increase because of

- Product seasonality
- Flexibility in testing new market
- Management expertise and dedicated resources
- Off-balance sheet financing
- Reduction in transportation cost
- Geographical coverage requirement.

The decision in choosing a particular type of warehouse frequently rest on the results of a lease versus buy analysis. The goal is to decide whether to build and operate a private warehouse, purchase a space in public warehouse as needed or to enter into an agreement for specialised contract warehousing services. The analysis should incorporate a variety of finance and non financial issues (Bloomberg et al. 2002, pg 177)

### **Material handling**

The movement of products is a vital part of warehousing. Bloomberg et al (2002, pg186) stated that “the art and science of moving, packaging and storing of substance in any form is called material handling” in other to reduce cost and labour, a proper material handling system should be installed in all warehouses. This equally helps to increase safety, increase productivity, reduce waste, increase capacity and improve services. Material handling consist of several elements: firstly is the movement of product into, through and out of a warehouse.

Movement of goods inside a facility helps control cost and improve customer service. The second element is the time spent, which need to be considered. Parts and raw materials must be available when needed at production station, loading docks, and terminal. The third element is quantity, in which goods must move in right quantity between the productions station as well as to the customer. Lastly is the effective utilization of space which is available in the warehouse, terminal or plant. Space is expensive and must be utilize to the fullest.

Material handling systems are manual, mechanized and automated. The physical structure of the facilities normally dictates the system to be used hence the type of system also depends on the type and amount of equipment required. In selecting the equipment to be used, one has to have in mind the equipment selection equation which is;

What + where + when = equipment specification

The what, however refers to the type of material being handled in the facility. All material variables such as size, shape, weight, stowability must be considered. The where, refers to everything involved in routing the material throughout the facility. The components which must be considered includes, types of movement, length of movement, limitation of the movement, building limitation, mobility requirement and transfer requirement. The when means the material must be in the right place at the right time. In case of used automobiles the weights is usually first considered, since these spare parts are usually heavy and requires equipments such as counterbalanced rider , cranes , forklift and reach trucks to move these heavy automobile spare parts.

## **Packaging**

Goods usually require some form of protection as they move through the integrated logistics system. Packaging promotes goods and informs customers as much as it helps to prevent theft and damages. The packaging size, shape and material greatly affect production labour efficiency. Packaging therefore is a science of protecting products for distribution, storage, sale and use. It is a process of design, evaluation and production of packages, it can also been seen as a way of coordinated system of preparing goods for transport, warehousing, sale to its end users. The size, shape, and type of packaging materials influences the type and amount of material handling equipment needed as well as how goods are stored in the warehouse. It also affects transportation in loading, unloading and transporting a product. The easier it is to handle a product, the lower the transportation rate. Packaging varies by mode of transportation; goods to be transported by rail need more protection than those to be transported by air. For product moving internationally, protection is of utmost importance because goods move by water. Oceangoing package protection requires strong moisture-proof containers that add to the overall cost of the product (Bloomberg et al 2002, 195). So in essence the mode of transportation must be considered when choosing packaging material for a product.

Packaging should contain the goods to prevent shifting and also the package should be

able to protect the goods from damage during handling, storing and transportation. Packaging apportion goods by reducing production output to the size and shape as desired by consumers. Unitization is equally considered when choosing a packaging material. It allows packages to be consolidated into larger packages and finally palletized into a single unit for shipping. Unitization makes it easier to handle and transport a product. Packaging should be convenient by allowing customer to use product with ease and also should communicate by conveying information as regard the product to consumers. Of recent packaging requirement have changed because of consumers demand for reuse and recycling, hence this is one great aspect that has to be considered when choosing a packaging material.

### **Reverse logistics**

Reverse logistics refers to logistics activities and management skills used to reduce, manage and dispose of waste from packaging and products. (Bloomberg et al 2002, 200) since integrated logistics involves moving of products to customers, however they must move unwanted products from customers backward through the supply chain which is known as reverse logistics.

Reverse logistics includes recycling, customers return of new products, customers return of used products and reusable items. Logistics systems must take empty package from customers and send them to the appropriate company that is responsible for recycling. Recycling in supply chain uses four stage processes which includes

- Collection of waste materials from recycling bins and delivering them to designated recycling companies
- Processing recycling to create secondary raw materials
- Using these secondary raw materials to manufacture new products
- Returning the products to market place.

Recycling process cannot be successfully completed without an effective reverse logistics system (Bloomberg et al 2002, 201). Reverse logistics allows customers to return their unwanted products, hence companies are increasing their service delivery by including return policies in other for customers to be able to return new goods, defective products and unwanted products for reuse.

As soon as new products are returned they can restock using reverse logistics. So also customers are allowed to return defective or damaged product and reverse logistics will be used to handle these products. Used products are equally collected from customers

through reverse logistics. These used products must undergo some sort of remanufacturing or alteration process. However some products can be reused with minimal effort such as sterilizing and cleaning. Occasionally customers are encouraged to return used products to their retail outlet and obtain a financial credit. In automobile industry, customers are given a financial credit if they return their old used cars for recycling. A reverse logistics is designed also to cater for used old car. These old cars are collected by designated car recycling companies for dismantling and proper recycling. The usable parts are collected and sold for use in operational vehicles as used spare parts while the unusable parts are sold to metal recycling companies.

### **CHAPTER 3**

#### **CASE STUDY: COMPANY X**

Company X was founded in 1998, is a small company with staff strength of about 6 people and also it is in affiliation with some other companies which are in same business. Company X focuses on repairs and services of Honda-Branded passenger cars. Equally offers quality used cars, used automobile parts and also they are into recycling of scrap metal parts of used cars according to the environmental laws. Its customers include Honda car owners and also spare part dealers within and outside Finland.

#### **Transportation and container shipment to Nigeria**

In focusing on transportation and container shipment in company x, the shipments which is loaded with used automobile spare parts normally involves intermodal modes in global transport chain. One has to critically examine some key aspects which must be considered and work together for the success of the container shipment to its end owner in Nigeria. The processes involve pickup of container shipment from origin (Helsinki seaport) to port of destination (Lagos) via Hamburg Port. Thus the mode of transportation across continent is done through sea transport and once it gets to port of destination, delivery to end users is done with road transportation which is a predominant mode of transport in Nigeria. Thus, company x does its business using two types of transportation which is sea and road transport.

In company X, for effective and efficient transfer of containers, Unitized cargo are been moved from maritime transport mode to land transport mode and then vice versa. In the case of container shipment of used automobiles spare parts to Nigeria from Finland, several technical steps or series of procedures are involved:

The agent, who has been contacted by the seller in respect to move the container of used spare parts to Nigeria from Finland, arranges to have a shipping line place an empty container at the shipper's premises to be loaded and at same time books a space on the next available vessel to the port of destination. The loaded container is moved to the vessel since a space has been booked already. The shipping line then raises an ocean bill of lading indicating that the shipper as the exporter at the port of origin and also stating the consignee as the importer at the port of destination and also the shipping line notifies the party being the agent at the port of destination.

Once shipment has sailed, a pre-alert is sent to the agent at the port of destination which consist of ocean bill of lading, an invoice and other supporting shipping documents. It is of utmost importance to state here that a shipping company which intends to bring cargo into any of the Nigeria sea ports will have to clear the ship by obtaining a ship entry notice at least 2 months in advance from the operations department of Nigeria ports authority. The procurement of ship entry notices by the shipping line helps to guaranty that the vessel would have berthing facility on arrival in Nigeria, thereby eliminating queuing and demurrage.

A bill of lading is sent by the consignor/shipper in advance and this bill of lading must contain

- Name of ship carrying the goods
- Description of goods
- Date of departure from port of loading
- Weight of cargo
- Terms of contract

Upon receipt of the bill of lading by the consignee, the consignee takes the bill of lading to the Nigeria port authority central office for planning and information in order to ascertain the expected arrival date of the ship and her allocated berth. The consignee/importer or its agent then proceeds to complete a document called the bill of entry and then returns it to Nigeria customs. A bill of entry according to [www.wisegeek.com](http://www.wisegeek.com) is a formal declaration by the importer, describing goods that are being imported. Stating the nature of goods, quantity of goods and estimated value of

goods

The consignee/importer then proceeds to the shipping company in order to affect the shipping company release of the goods. Before the release is done, the presented bill of lading is cross checked and compared with the ship manifest. Upon certification of the correctness of the bill of lading, a blank form called delivery order (D.O) supplied to the shipping company by the port authority is then issued to the importer. A delivery order is said to be a document from a consignee or shipper which orders the release of the transportation of the cargo to another party. Therefore the consignee or its agent completes the delivery order form and then returns it alongside the bill of lading to the shipping company.

The shipping company upon receipt of duly completed delivery order form and bill of lading proceeds to scrutinize the details of the delivery order form endorse it and then withdraws the original bill of lading from the consignee or his agent. Afterwards the lower portion of the delivery order form is detached and given to the importer. This will then serve as an evidence of the shipping company release. The upper portion of the delivery order is then sent to the terminal operator at the specific or named port of destination. Upon receipt of the upper portion of the delivery order by the terminal operator, they proceed immediately to raise all necessary bills through a computerised system for the importer in order to effect all payment in the bank. Once the bills are paid and receipt of payment confirmed, terminal delivery order is then raised and all necessary delivery sets are produced using the information in the delivery order and these documents are then sent to the delivery port. With all these process concluded the consignee or its agent then proceeds to the delivery point to affect delivery. Cargo pass is then issued to consignee or its agent, who then proceeds to the Nigeria port authority gate for security check and final exit.

### **Environmental and Political aspect of transporting used-automobile from Finland to Nigeria**

All used automobile parts to be loaded in the container must be free of any form of liquid or grease. This is very important because any container found to be leaking liquids such as used oil, benzine, hydraulics and break fluids; radiator water etc. will not be transported by the shipping company. It is strictly against shipping policies since



these liquids are harmful to the environment and also pollutes the water ways.

Ports are also the place where the customs clearance process is completed to allow goods enter a country. This section is very vital because it generates revenue for the government through the collection of tax and duties. The efficiency of customs clearance in ports is then closely monitored with a focus mostly on revenue collection performance. This is however an important awareness of customs clearance time efficiency to facilitate international trade. Theoretically the time to perform import clearance formalities starts much more before the arrival of the vessel carrying the container. But in practice bulk of formalities are still performed after the arrival of the vessel in most ports despite trade facilitation initiative. Hence custom clearance and cargo dwell times are therefore closely related.

### **Market Need for used Automobile parts in Nigeria**

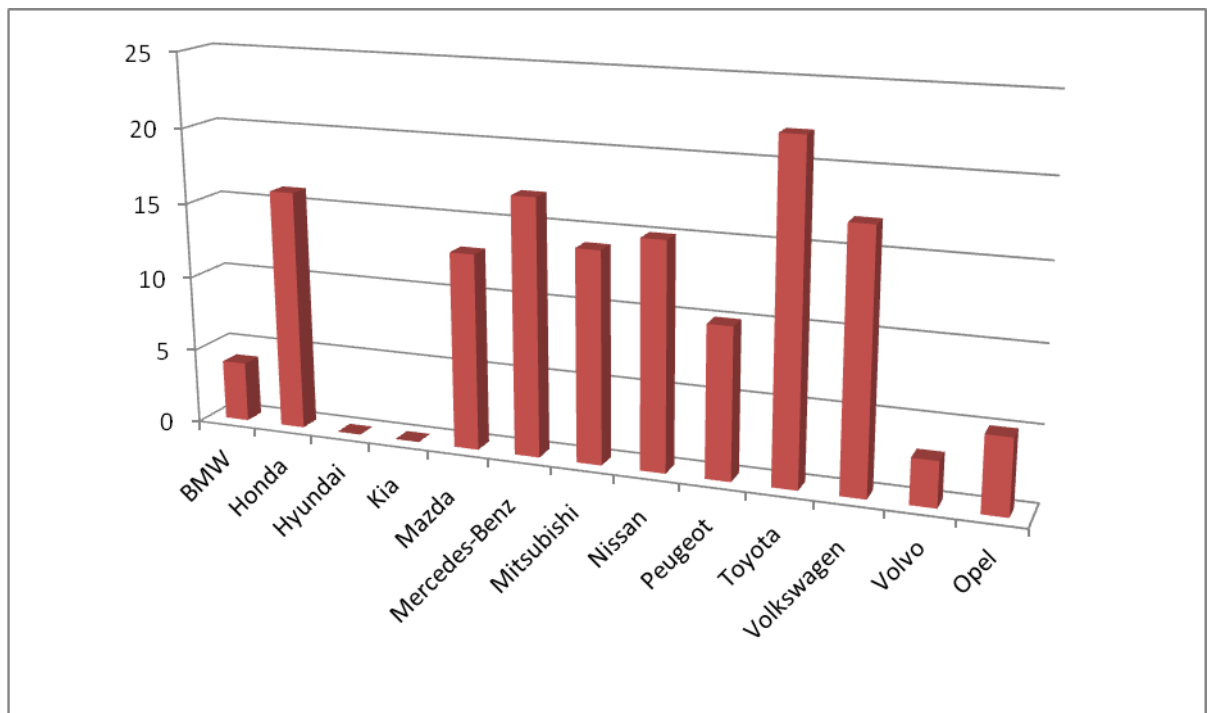
The Increasing growth of industrialisation and modernisation currently sweeping through many African countries has led to an increased demand for capital goods such as machinery, lubricants, spare parts, ball bearings and other mechanical goods and accessories (africa-business.com). According to Syväkuru (excerpts from Helsingin Sanomat), a car and transport entrepreneur, who exports nearly 1,000 used cars from Finland each year. “This is recycling all the way, we recycle this product with 100 per cent efficiency” The African market for used cars is flourishing, because car taxes there are high and they can't afford to buy new ones. Thus, the Nigerian customers are price-sensitive – meaning they are looking for low priced goods and are not much concerned about the quality aspect.

## Chapter 4

### ANALYSIS

This analysis presents the findings made out from the face to face interview that was conducted in Nigeria. Traders or business men who trades on used automobile spare part where interviewed. Approximately 30 people were interviewed and it was aimed at identifying future prospective clients for company x which is based in Finland and also to identify which make of car and spare parts that are readily needed in Nigeria.

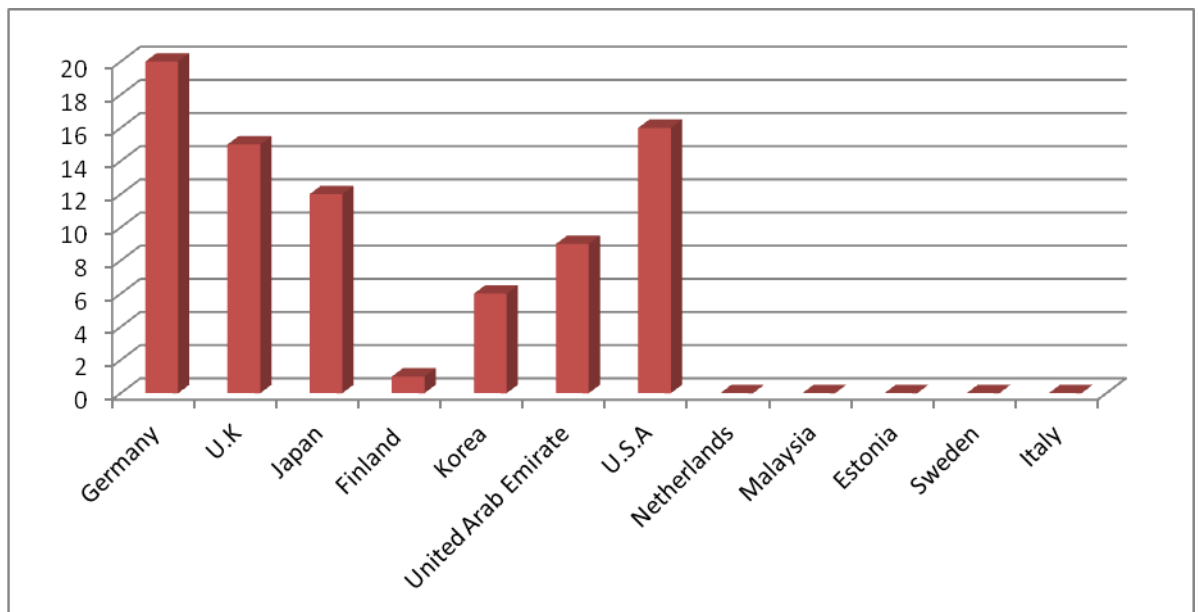
When I asked about what make of car do you sell its spare parts? I released that some of the auto spare part dealers are not actually tied to selling spare part of one particular brand of car. Most respondent indicated that they sell spare parts for up to 5 different car brands. With the statistics I got from the questions I asked, I plotted a bar chart as shown below:



**Fig 1: shows types of preferred car model by dealers**

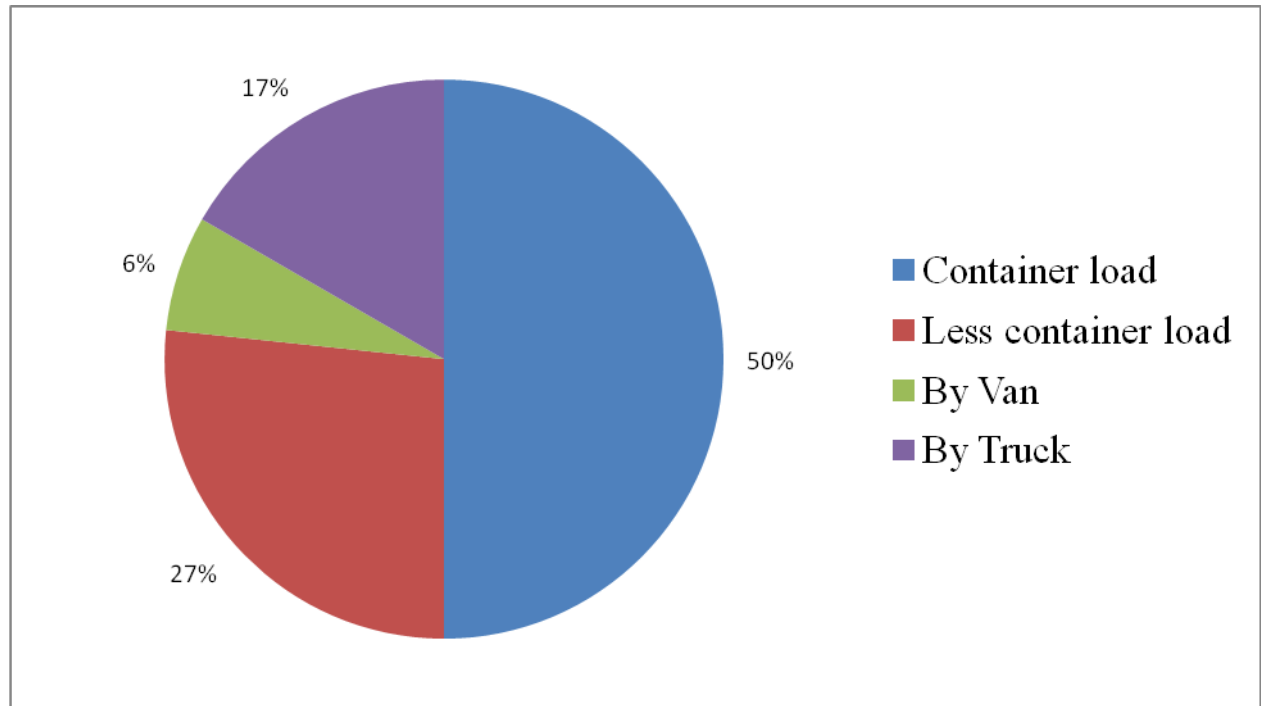
The response from the respondent shows that most of the spare part dealers, deals in one or more of the listed brands of cars with the exception of Hyundai and kai brands of car. These is as a result that there are very few people who owns these type of cars and even those that have these brands of cars, buy them brand new from the manufacturing companies, hence they still have warranty and the owners of such cars will prefer to buy new spare parts for his or her car, rather than buying used spare parts.

When asked about where they get their automobile spare part from? Most respondent have been buying from Germany, UK, Japan, United Arab Emirate, Korea and U.S.A. Only one respondent have actually come to Finland to buy spare parts. This shows that most respondent are not aware of the availability of large quantity of used auto spare part in Finland. The results shows that all the respondent have not have any dealings with countries like Netherlands, Sweden, Italy and Malaysia as indicated below:



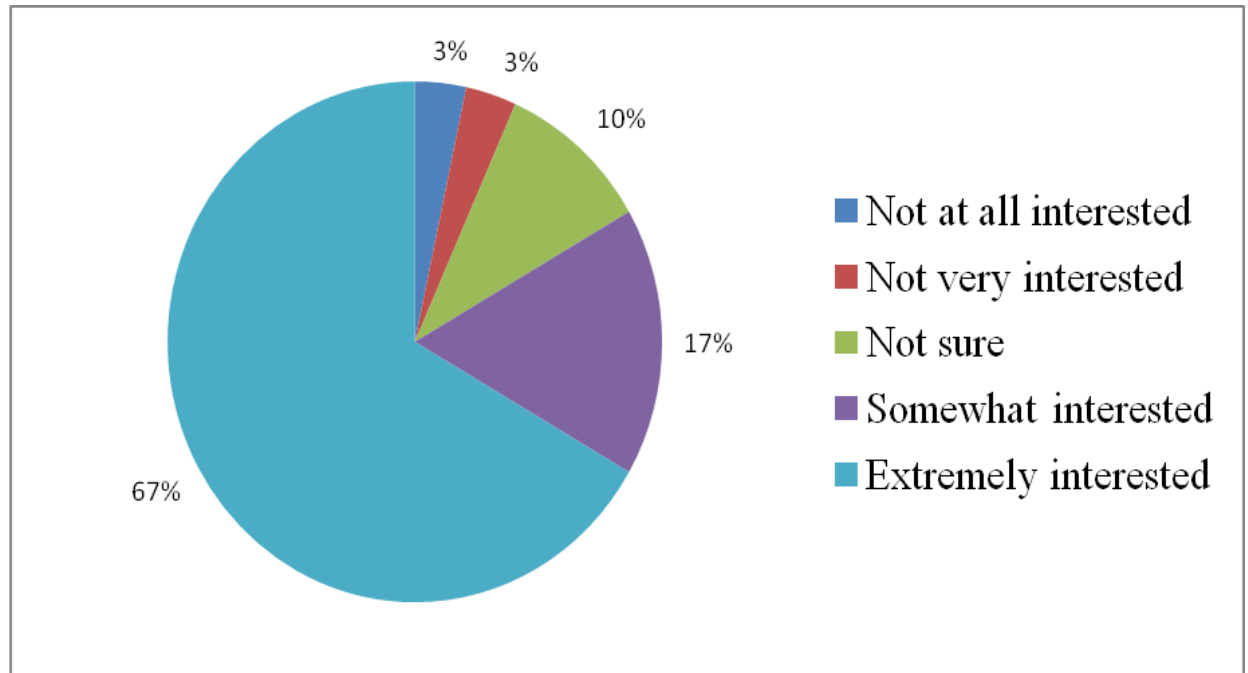
**Fig 2 countries where they get their used automobile parts from**

When asked about how do they ship these used automobile spare part to Africa? 50% of the respondent usually ship with container load why 27% indicated that they do ship with less container load, hence they collaborate with mates to have a full container load before shipping. 17% indicated that they do ship by truck, as a result they first have to buy a truck and load it with used automobile spare parts before shipping the truck. 6% of the total respondent do ship by vans. This results shows that they are really buying this used automobile parts in large volumes



**Fig 3 How do they ship these used automobile spare part to Africa**

When asked how interested would they be in buying this used automobile spare parts from Finland? 67% of the respondent indicated that they are extremely interested why 17% of the respondent are somewhat interested. Taking into consideration the percentage of interested automobile spare part dealers to buy from finland shows that all things been equal, company x will be having more client/customer from Nigeria and these clients are buying these products in large volumes. Company x will be ready to satisfy its costumers taking these results into consideration which will allow her to know what Nigeria clients need and to be able to satisfy its customers.



**Fig 4 How interested would they be in buying this used automobile spare parts from Finland?**

## Chapter 5

### CONCLUSION AND RECOMMEDATION

This final thesis was aimed at examing from logistics point of view the processes involved in getting used automobile spare parts from Finland to its end users in Nigeria. The ideal was to research on the brands of cars which are often used in Nigeria and which readily requires spare parts.

Nigeria with a population of about 150 million people, is populated by the poor and income inequality. Majority of the car drivers in Nigeria cannot afford to buy new genuine spare parts for their cars, hence they prefer to buy used , cheap and functioning automobile parts. Nigeria is a huge market for used automobile spare parts. It was gathered from the response of the interview carried out during the course of this thesis work that spare part dealers in Nigeria do buy in large volumes as indicated with the container load and less container load of shippments been used by dealers.

More so the research has strongly shown that not all car brands spare parts that are

needed in Nigeria. The result analysis gives company x a bigger picture of what potential clients from Nigeria will be interested in buying.

In view of this, we can deduce that transportation can greatly affect a companies overall cost and it is the bridge in the logistics chain. With transportation, goods are been sold in more countries and in larger volumes. And, having analysed and interpreted the collected data in this thesis, I am of the opinion that , company x will have more customers from Nigeria if only they are able to provide the brands of car spare parts that are readily needed in Nigeria and also use the best , reliable and affordable mode of transport which would make product services readily available to customers and in particular paying close attention to the kind of transport agents to be used.

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**APPENDIX.**

## Questionnaire


**Personal details**

Name

Age

What type of business do you own?

- Sole proprietorship
- Partnership
- Corporation

Where is your business located?

- In a public market in the neighbourhood
- In a business premise in the town centre
- In my house

What type of business are you into?

What make of car do you sell its spare parts?

- BMW
- Honda
- Hyundai
- Kia
- Mazda
- Mercedes-Benz
- Mitsubishi
- Nissan
- Peugeot
- Toyota

- Volkswagen
- Volvo
- Opel
- others
- Other:

Where do you get your spare parts from?

- Germany
- U.K
- Japan
- Finland
- Korea
- United Arab emirate
- U.S.A
- Netherlands
- Malaysia
- Estonia
- Sweden
- Italy
- others

How do you ship the products to Africa?

- Container load
- Less container load
- By vans
- By truck

Based on the product description, how interested would you be in buying this Product from Finland

- Not at all interested
- Not very interested
- Not sure
- Somewhat interested