

**COMPARATIVE ANALYSIS OF SOCIO-ECONOMIC TRUCKING ACTIVITIES  
BETWEEN MARARABAN JOS AND TAFI IN KADUNA STATE, NIGERIA**

**BY**

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**A DISSERTATION SUBMITTED TO THE SCHOOL OF POSTGRADUATE STUDIES,  
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**FEBRUARY, 2017**

## **DECLARATION**

I hereby declare that the work in this dissertation title “Comparative Analysis of Socio-Economic Trucking Activities between Mararaban Jos and Tafa in Kaduna State, Nigeria, has being written by me in the Department of Geography’ Ahmadu Bello University Zaria, Nigeria. The information derived from literatures has been duly acknowledged in the text and a list of references provided. No part of this thesis was previously presented for another degree or diploma at this or any other institution.

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**Gbenga Adekola ASUBIARO**

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**Date.**

## CERTIFICATION

This dissertation titled A Comparative Analysis of Socio-Economic Trucking Activities between Mararaban Jos and Tafa in Kaduna State, Nigeria meets the regulation governing the award of the degree of Master of Science in Transport Management of Ahmadu Bello University, and is approved for its contribution to knowledge and literary presentation.

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## **DEDICATION**

This dissertation is dedicated to the Almighty God and to the loving memory of my late wife Mrs.Christiana Kelly Peterson Asubiaro.

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## **ABSTRACT**

Trucking has become the major and most important mean of transporting goods in Nigeria as a result of the collapse of the rail means. Due to the bad nature of the roads that these trucks/tankers pass through, the state of the trucks and the fact that most designated truck park are not fully developed. This has resulted in these trucks/tankers converging on towns on their routes from origin to destination known as rest stations. This study examines the socio-economic activities of trucking between Mararaban Jos and Tafa, two rest stations along the Abuja-Zaria road corridor. The aim of the study is to compare the socio-economic activities of trucking between Mararaban Jos and Tafa, while the objectives was to determine the socio-demographic characteristics of truckers making use of the rest stations, assess the impact of trucking on trading/business related to trucking in these rest stations, asses the trucking facilities in the rest stations, assess the impact of truck drivers on the social life style of the resident of the study area and assess the impact of trucking on the environment of the rest stations.

In achieving this, the methodology adopted for this research work was the quantitative research method; this was done through the administration of questionnaires in the rest stations. A total of 134 copies of questionnaire were administered to the resident of the two rest stations out of which 96 were recovered. Also, 61 copies of questionnaire were administered to truckers in the two rest stations out of which 59 were recovered. Data collected from the field was presented using tabular presentation after which they were analyzed. Equally, certain variable were cross tabulated for further analysis.

After analysis, it was discovered that most trading/business activities in the rest stations are related to trucking and trucking activities and that trucking in the reststations greatly impact on the profit margin of businesses in the area(61.1% in Mararaban Jos and 53.8% in Tafa), and that trucking equally impact negatively on their social life style (100% in Mararaban Jos and 100% in Tafa) and environment (100% in Mararaban Jos and 100% in Tafa).

Recommendations stated in this work includes, a holistic approach towards the development of the two truck parks in the rest stations, relocation of truckers to these parks after the development of the parks, encouragement of small scale business in the town since they provide source of living and employments to residents. Discouragement of illicit hard drug trade and prostitution in the town.

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## CHAPTER ONE

### INTRODUCTION

#### 1.1 Background to the Study

Transportation plays a crucial role in the economic development and trade of countries and consequently in the welfare of their peoples (UNESCO 2008). The ability of industries to produce goods and services is dependent on transport to bring raw materials, spare parts, labour and energy from different locations. It also delivers manufactured goods, agricultural products and services to domestic and international markets.

For any economy to be efficient and effective there is the need to have an efficient and effective transport system. Abdulkareem (2008) opined that since no single location is well endowed with all natural resources, there is the need to transport some of these natural resources from places where they are abundantly available to areas where they are needed but not available. Rodrigue and Notteboom (2009) also noted that the transport sector is an important component of the economy impacting on development and the welfare of the people. When transport systems are efficient, they provide economic and social opportunities and benefits that result in positive multiplier effects such as better accessibility to markets, employment and additional investments.

Rodrigue and Notteboom (2009) concluded that contemporary trends have shown that economic development has become less dependent on the environment (resource) and more dependent on relationship across space (transportation). While resources remain the foundation of economic activities, the commodification of the economy has been linked to higher level of

material flow of all kind. Road freight vehicle movements clearly play an important role in the functioning of towns and cities, distributing goods to numerous locations that are vital to socio-economic wellbeing.

Ta (2007) opined that the distribution of goods and services is majorly facilitated by transportation, in a well-developed transport system, the rail mode of transportation is supposed to be used for long distance haulage of goods. However, in less developed transport system, the road mode has taken over the long distance haulage of goods.

The importance of trucks to both developed and developing economies can never be over emphasized, as they facilitate the distribution of goods from point of production to point of consumption and from the coastal land to the hinterland. In a study by International Road Transport Union (2011), it was discovered that trucks are a necessary link in the logistics chain. All products are at some point in time transported by trucks. Truck can replace most other forms of road transport but is not itself easily replaced by them. Rail and ship modes are by their nature confined in their flexibility, and for that reason, truck transport has become a link in the chain of transport used by others, for example to and from airfields, harbors and rail terminals.

In Africa, the role of transportation as the lifeline of the economy is aptly captured in the statement made by the apostle of indirect rule in Africa Sir Fredrick Lugard that the material development of Africa is summed up in one word "transportation" (Lugard 1923) Olobomehin (2012) put it differently that transportation was the lifeline of development in colonial Africa.

Many businesses today are dependent upon fast and flexible deliveries. Firms have tried to work with the smallest stocks possible to avoid tying up capital. Instead, they rely on running



deliveries of raw materials and parts, even up to several times a day. Even small disturbances can have a large effect on their business. Truck transportation has met this demand by offering high quality services beyond simple transport. Truck operator's knowledge of logistics in combination with information technology turns them into a central player when it comes to coordinating customer transport needs. Despite these simple economic and transport realities, few people understand the vital importance of truck transport in our daily lives. What would happen if a truck stopped for a week?

According to the American Trucking Association Incorporation (2008), trucks transport the tangible goods portion of the economy. Which is nearly everything consumed by households, businesses and industries. However, trucking also plays a critical role in keeping costs down throughout the business community. Specifically, for businesses that produce high-value, low-weight goods, inventory carrying costs can be considerable. But many of these producers now count on trucks to deliver products efficiently and timely so that they can keep stocks as low as possible. In fact, the global impact of road transport on the economy is more considerable, in 2005; the estimated revenue of the road sector in 25 European Countries stood at EUR 2,209.4 billion a figure equivalent approximately to 22% of the 25 countries Gross Domestic Product (International Road Federation 2007).

Tankers and trucks provide important freight transport services across Nigeria, from urban to rural and long distance inter-state services, thus, Olagunju, (2011) observed that the sole dependence on road mode as the major means of transportation has resulted in the road infrastructure being overstretched to the point of breakage. Furthermore, Edeth (2009) noted that

As a result of the collapse of the rail mode in Nigeria, haulage of goods across the country is only facilitated by trucks and tankers. Olagunju (2007) equally reiterated that trucks in Nigeria contribute in a small measure to the socio-economic wellbeing of the citizens of the country as they facilitate the distribution of essential commodities across the vast area of the country. In the same vein Okafor (2003) concluded that commercial activities in the eastern part of Nigeria can be majorly attributed to the activities of trucks as they are solely responsible for transportation of goods in and out of the area.

The long distance usually covered by these trucks necessitated the development of what is today known as truck rest stations. The history of truck rest station can be traced back to the role of the Federal Government in the United States of America in addressing issues related to driver fatigue and the safety of the commercial vehicle industry; it began in 1937 with the promulgation of Hours of Service (HOS) rules by the Interstate Commerce Commission (United States Department of Transport 2000). These rules established limits on the number of hours (5 hours) that truck drivers may drive and be on duty before being required to take a mandatory rest break. Complying with these rules has created a demand for parking spaces for commercial vehicle drivers. Most times the truck drivers spend hours or pass the night in these rest stations. It is a comparative analysis of socio-economic trucking activities between Mararaban Jos and Tafa, Nigeria that this study focused on.

## **1.2 Statement of the Research Problem.**

The history of transportation in Nigeria dates back to the pre – colonial era. Within this period, transportation facilities such as roads, railways, air transport facilities were really non-

existent with emphasis then on the bush path. At present, the modes of transport in Nigeria include road, railways, airways, inland waterways, coastal waters, the deep sea, and the pipeline (Anyanwu, Oiakhena, Oyefusi and Dimowo, 1997).

According to Brian *etal* (2009) transportation infrastructure is of key importance to the economic and social development of a country. This infrastructure comprises of roads, railroads, airports and shipping routes that promote the economy through the transportation of goods and people. This is important because one measure of the wealth of a nation is the value of trade across its borders. Unfortunately, the lack of a complete and efficient transportation infrastructure in many developing countries has inhibited their overall economic and social growth. There is no doubt therefore, that the major means of freight distribution in developing countries including Nigeria is by road. Ubogu, (2011) noted that the major type of trucks used in transporting cargo from point of origin to destination consists of articulated trucks and lorries.

The problem of bad roads in the country (through which these trucks travel) has become an embarrassing stigma. In many parts of this country, normal interaction has been frustrated by bad roads. Vehicle owners are in distress as their vehicles are not used optimally. Moreover, the very many potholes and detours mean that vehicles keep breaking down so that on many of Nigeria's roads emergency mechanics have sprung up to assist stranded commuters sometimes with disastrous consequences (Guardian 26<sup>th</sup> November, 2006). It is common for thieves, rapists and other miscreants to ensconce themselves in bad portions of the roads where all vehicles virtually come to a halt, this means that most heavy goods vehicles (that spend days on the road) on these roads have to converge in a place at night to safely guard themselves from these dangers or carry-out repairs to damages on their trucks (as a result of the bad roads). Commuters are in trouble

whether in the city of Lagos or on interstate highways as bad roads make it impossible to plan a journey or predict arrival time. Commercial activity is suffering as goods and services are now in short supply leading to price increases in practically all consumer itemsAdekunjo (2014)

Accidents involving trailers often lead to marathon hold-ups. In Lagos a 30-minute journey can easily become a four-hour ordeal. On the notorious Lagos-Benin route an 8-hour journey was once accomplished in 36 hours. A journey from Lagos to Port Harcourt used to be seven and half hours but it may now take one and half days. The Lagos-Ibadan expressway has become a death trap. The Abeokuta road via Sango Ota is a scene of confusion with unplanned road works stalling the flow of traffic. These tales of woe are replicated in other parts of the countryAdekunjo (2014).

All these carnages caused by truck drivers on all these roads in the south-west and south-east of the country are equally happening in the north-west road corridors of the country, especially the Abuja-Kaduna and Kaduna-Zaria road corridors which is a major corridor from the south-west, south-east and south-south part of the country to the north-west part of the country. For example, The Daily Trust Newspaper of 31<sup>st</sup> January, 2017 wrote an article on the study area. The article titled “Two Tanker-Driver ‘joints’ where deaths visit daily” stated that crushing human beings to death in Maraban Jos and Tafa by moving vehicles is a recurrent decimal. Weekly Trust reports how the two tanker-driver ‘joints’ are becoming the dilemma of both residents and passersby.Tafa and Maraban Jos in Kagarko and Igabi local government areas of Kaduna State have been nightmares of motorists plying the Zaria-Kaduna-Abuja expressway for a long time. The obstruction cause by heavy lorries and tankers, which are parked on the highway at those areas is a serious cause for concern for both motorists and residents of the

areas. Tanker and truck drivers, who move goods and petrol from the South to the North, and vice versa, have since turned the edges the highway into a garage of sorts.

In a chat with the Vice-Chairman of Petroleum Tankers Drivers, He confirmed it that FERMA has constructed two garages; one at Maraban Jos and the other one at Tafa,” AlhajiMaduguKamba, Vice Chairman of the Petroleum Tankers Drivers (PTD), Maraban Jos chapter, said. “I can only talk on behalf of the PTD’s members. We are willing to relocate to the new garage because it is even more convenient for us but there is no way we can ask our members to go into that garage in its present condition. The garage needs to be cleared because it is now bushy and it has to be tarred. If we move into that garage the way it is now, it would definitely going to affect our vehicles as there is the tendency of our trucks to be choking in the mud.“Our national chairman, Gambo Tilde, is aware of our problems in Tafa and here in Maraban Jos. He has told the government that we would not go into the garages built at those areas until they are put into shape. What they did was just fencing of the large fields. Even an empty truck cannot move into that garage without facing problem not to talk of a fully-loaded tanker. The places are muddy.

“If the government,” Kamba continued, “can finish the construction of the garages, I know that our national leadership would direct the immediate relocation. We are willing to move into those garages. We are parking by the road side because it is our only option. A lorry or tanker driver needs some rest after a very long journey. It is the practice everywhere in the world. It is true that people lost their lives here through numerous accidents that happen almost every day but we’re addressing that problem. We have now asked our drivers to stop parking on the road.

This is to allow effective visibility. If you look at the road now, you'll find out that one can see the upcoming vehicles from a reasonable distance.

The inability of the State Governments to complete these new truck parks in Mararaban Jos and Tafa which has forced the truck drivers to converge on the road in the study area (at times spending days there) thereby constituting nuisance and a source of danger to the host community. However, in their stay in the study area, they are engaged in different socio-economic activities in the area. These socio-economic activities definitely have an effect on the socio-economic development of the study area. It is a comparative analysis of these trucking activities between Mararaban Jos and Tafa that this study undertook.

### **1.3 Research Questions**

From the above, the researcher studied how trucking activities (as a result of their converging in the study area) has impacted on the socio-economic development of Mararaban Jos and Tafa which are two designated truck rest station towns along the Abuja - Kano road corridor. This study therefore attempted to answer the following questions arising from the problem focus of the study:

1. What are the impacts of these truck drivers on trading activities in these rest stations?
2. What are the trucking facilities available for truck drivers in these rest stations?
3. How has the activities of the truck drivers in the rest station affected the socio-economic activities of these rest stations?
4. Are there negative environmental impacts of trucking on these rest stations?

### **1.4 Aim and Objectives.**

This study is on comparative analysis of socio-economic activities of trucking Mararaban Jos and Tafa, Nigeria along Abuja- Kano road corridor. Based on this, the specific objectives

of the study are to:

- i. assess the effects of trucking on economic activities in the rest stations.
- ii. Evaluate/identify facilities available for trucking in the rest stations.
- iii. assess the effects of truck drivers on the socio-economic of the study areas and
- iv. assess the impact of trucking on the environment in the study area.

### **1.5 Significance of the Study**

This study, a comparative analysis of socio-economic trucking activities between Mararaban Jos and Tafa in Kaduna State, Nigeria is to provide an insight into how truckers impact on the socio-economic development of their rest stations. Generally, many studies have been conducted on the socio-economic impact of road transport on a community, Jose *etal* (2007) writing on the socio-economic benefits of roads in Europe concluded that there is a need to shift away from the old concept of the road being merely the place for motorists to drive their vehicles and accept reality that this sector is one of the most important for modern economies, generating levels of turnover and employment which cannot be ignored. Also, Deborah, Ashely and Henry (2006) writing on roads and poverty reduction, concluded that when road transportation enhances mobility they do so in association with wheeled or motorized transport easing people's movement and making them faster and capable of achieving longer distance. This according to them can be poverty-reduction when the time saved and distance bridged provided either greater economic opportunities or better access to social services or useful social contacts. Equally, Shane (2013), writing on the economic evaluation of heavy vehicle rest areas concluded

that the provision of well-planned heavy vehicle rest areas is fundamental to the efficient and safe operation of interstate freight routes.

The fact that to the best of the researcher's knowledge, none of these studies have compared the effects of trucking on socio-economic activities in Mararaban Jos and Tafa makes this study an interesting one. It is hoped that the information generated in the course of this work would not only be useful for formulating policies on transportation in general and heavy goods vehicular movement in particular, it will also be useful for research institutes, government agencies and Non-Governmental Organizations. It is also hoped that it would serve as a basis for carrying out other studies on other transport corridors. The study will also serve as a contribution to existing knowledge on transportation.

#### **1.6 Scope and Delimitation of the Study.**

The study area is the two designated truck rest stations located along the Abuja - Kano road corridor. Therefore, the scope of this study is limited to the comparative analysis of socio-economic activities of trucking between the two rest stations. Equally, the study will be limited in scope to a study of how trucking activities have affected socio-economic activities in these two communities.



## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1. Introduction**

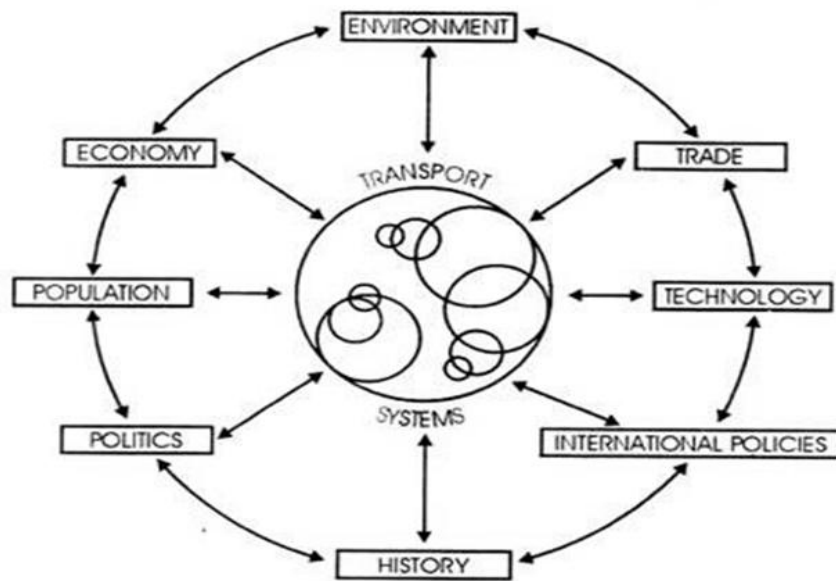
This chapter undertakes a review of literature on transport development, the concept of truck rest station and transport and socio-economic development as a basis for developing the researcher's idea on the general concept of the study. The review of literature, in addition, aimed at providing detailed account of earlier studies in order to identify gaps that exist in the literature, which this research attempts to fill.

#### **2.2 Transport Development**

In the reconstruction of a region or a nation, transport systems invariably play a vital role. The growth and development of transportation provides a medium, contributing to the progress of agriculture, industry, commerce, administration, defense, education, health or any other community activity. Many of the regional characteristics that are influencing the layout of the

existing transformational system are the creation of their antecedent transformational features, Raghav (2013).

The present-day transport network has evolved out of the past framework because as trail evolves successfully into the pioneer dirt road, then into the improved farm road and finally, into the present day paved highways with heavy motor traffic. Many factors are involved in the development of a transport system. The present-day transport system of a country or a region cannot be explained by one factor alone. In fact, services of interrelated factors are responsible for the development of transport system as depicted in Figure 2.1.



**Figure 2.1:** Factors influencing the development of transport system.

White and Senior (1983), in their book entitled, *Transport Geography* considered five basic factors, which influence the growth and development of transport systems and the ways in which changes take place. These are:

1. The historical factor – this involves the location and pattern of systems, technological development, and institutional development and settlement, and land-use patterns.
2. The technological factor – the technological characteristics of each major transport mode are considered together with a discussion of the effects of technological advances.
3. The physical factor – this includes physiographic controls upon route selection, and geological and climatic influences.
4. The economic factor – the structure and nature of transport costs are examined, together with service quality and methods of pricing and charging.
5. Political and social factors – these include political motives for transport facilities; government involvement in capital, monopolies and competition, safety, working conditions and coordination between modes; transport as an employer and the social consequences of transport developments.

The above mentioned factors affect transport in different ways, influencing each other as well as affecting transport systems directly and indirectly. Transport systems themselves, together with the physical environment within which they are set, also influence all these different areas of human activity. Each factor may operate in a positive, negative or neutral way; each may affect transport on different scales, from the local to the global; and two basic dimensions time and space are involved.

**The following table indicates examples of some of these factors:**

<i>Scale</i>	<i>Environmental</i>	<i>Historical</i>	<i>Technological</i>	<i>Political</i>	<i>Economic</i>
Local	Soils/drainage Geomorphology	Settlement Culture	Roads	Enterprise adminis- tration	Employ- ment core zones
Regional	Attitude crop environment	Colonies	Railways	Trade	Road/rail competition
Continen- tal	Distance	Colonial- ism	Sea routes	Indepen- dence	Markets
Global	Oceans	Isolation	Energy, air transport, telecommuni- cations	Neo- colonialism	Inter- dependence Prices Demand level

**Table: 2.1:** Some examples of factors involved in the development of transport system

In considering the relative importance of factors affecting transport in a particular county or area, geographers not only use general models but also emphasizes the diversity of place, and the specific combination of factors, which help to explain the development pattern of a transport system.

### 2.3. Models of Transport Development:

Several conceptual models have been devised as aids to the understanding of the development of transport systems and their counterparts in their approach. Ekstrom and Williamson (1971) recognize an initial phase, with the introduction of a new transport mode, followed by a spread phase with spatial diffusion of the network and a coordinating phase where the new and existing modes become integrated. These three may be followed by a concentration phase, involving an emphasis upon certain flows along selected routes. Finally, there is possibility that certain routes may decline or demise, termed as the liquidation phase.

Lanchene Model (1965) has been developed to explain the development of transport system upon a hypothetical isotropic plain (Figure 2.2). It is just like Losch's approach to the evolution

of an economic landscape, progressing from an initial network of paths and trails arranged in a grid pattern to the selective growth of towns and villages and culminating in a smaller number of high-order settlements connected with high-grade routes such as railways and highways.

### 2.3.1. Taaffe, Morrill and Gould (TMG) Model (1963):

Taaffe, Morrill and Gould, in 1963, undertook a comparative analysis of the development of transport in developing countries and they were able to show that certain broad regularities permitted “a descriptive generalization of an ideal typical sequence of transportation development”. Their spatial model of transport network development in developing countries has proved to be a valuable help in the understanding of transport development and has been widely applied. The model which Taaffe and his colleagues devised was based upon Ghanaian and Nigerian experience, but it has been found to be applicable to other developing lands, for example, in Latin America.

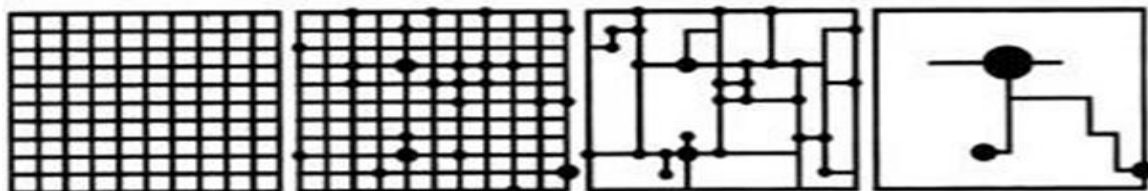


Figure 2.2. Basic sequence of network development and settlement growth according to Taaffe, Morrill and Gould (TMG) model (1963).

Taaffe et al. identified six stages in their sequence of transportation development. Figure 2.3 illustrates the sequential stages in the evolution of the transport network. The first stage consists of scattered settlements and small ports along a coast, which arose from colonial occupation. Such coastal settlements developed trading functions, though in the beginning these were of a very limited nature and, in consequence, their hinterlands were very restricted. Furthermore, there was little lateral inter-connection between the scattered settlements, except for those

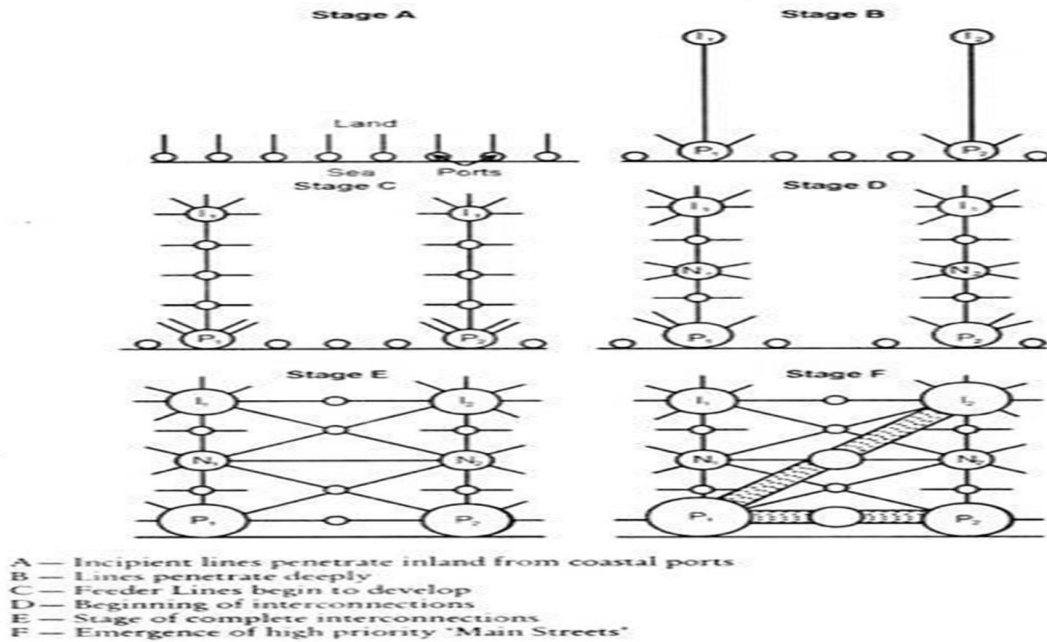
effected by native fishing craft of occasional trading ships. The second stage evolved slowly but gradually as lines of inland penetration developed and some of these which linked up mining settlements or centers of population became more important than the others.

With the emergence of these major lines of penetration, often linked to the best located of the coastal ports, port concentration begins to develop and these commence to grow at the expense of their neighbors, some of which eventually disappear as trading centres or at best linger on as relict ports. This second stage goes on, hand in hand with the growth of an efficient administrative system and, more particularly, with the expansion of production for export.

The third stage is marked by the development of 'feeder' routes which focus more particularly upon the main ports and the more important centres in the interior. At the same time, as the growth in the export trade stimulates economic expansion generally in the hinterland, a number of intermediate centres begin to develop along the major access routes. In the fourth stage, these intermediate centers begin to develop into nodes which become focal points for feeder networks of their own.

The beginnings of lateral interconnection also takes place with lands between the major ports and the major inland towns being affected. Stage five sees the emergence of complete interconnections as the various feeder networks grow around the ports, major inland centres and main-line nodes and begin to link up.

Finally, in stage six, as the economy becomes more developed and integrated, all the principal centers and many of the minor centers are linked together in the transport system, while a number of high priority trunk routes develop which link the largest or most important centres.



**Figure 2.3.** A model for the development of a transport network in a developing country

Aloba (1983) has applied the Taaffe, Morrill and Gould model to a rural area of West Africa as shown in Figure 2.4.

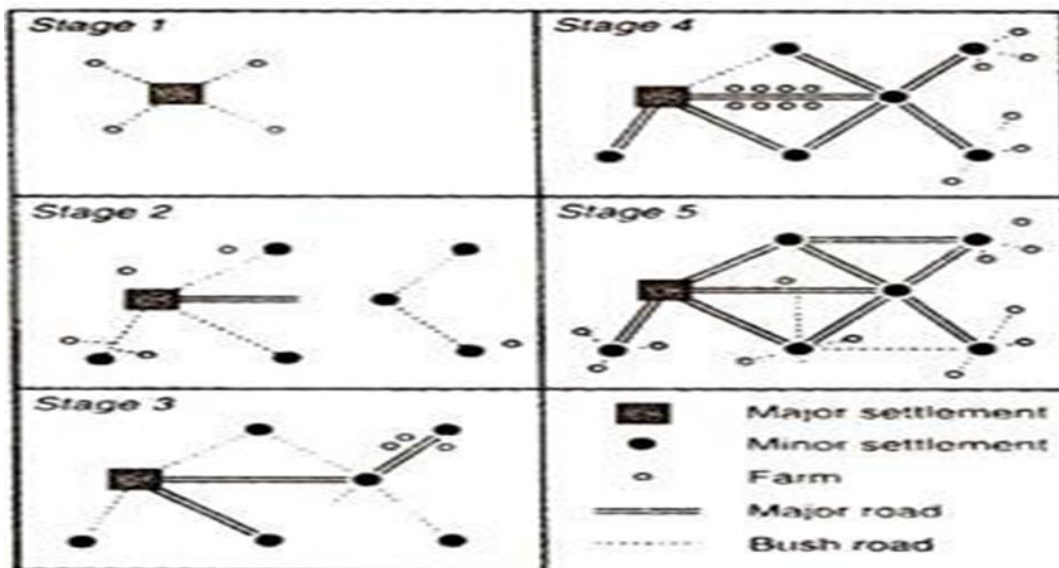


Figure 2.4. Gould's spatial exploration model (1960).

### **2.3.2. Gould's Spatial Exploration Model (1966):**

The behavioral model was proposed in 1966 as an alternative to the Taaffe, Morrill and Gould concepts of transport development. It incorporates a random approach and is based upon a simulation of search theory, with the development of a transport network within an area, which contains resources and hazards, or constraints, indicated by isorithms of environmental quality.

The developer aims to tap the resources of a previously unexploited area, depicted as a square, by building roads from a port on the coast, which forms one side of this square. As road building proceeds so the developer will encounter the resources and the constraints, such as mountains or rivers, within the environment. In stage one capital is invested in roads, which diverge from the port in straight lines.

In stage two, information on the nature of the resources or of the hazards encountered by the advancing roads is fed back to the development who may react in one of two ways. The resource already tapped may be exploited by investing in all-weather roads, or the search may be continued for other resources by extending the road network. Stage three comprises the construction of further links following the principles outlined in the first two stages (Figure 2.5).



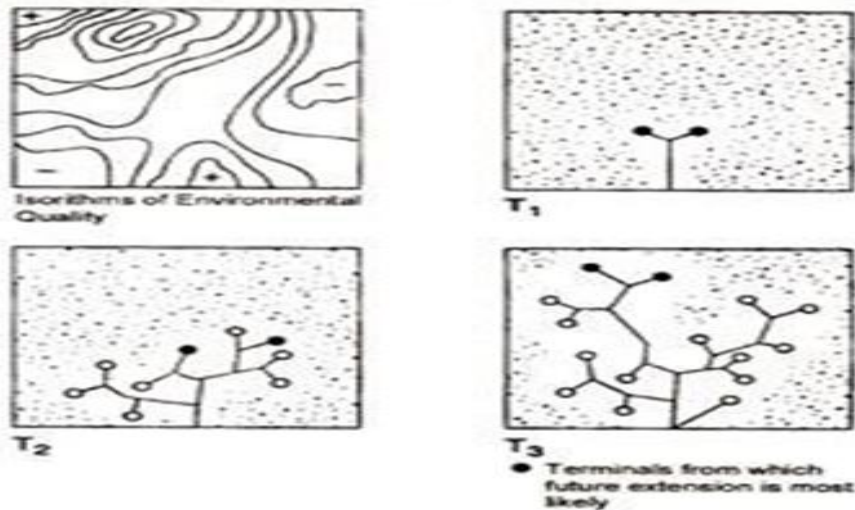


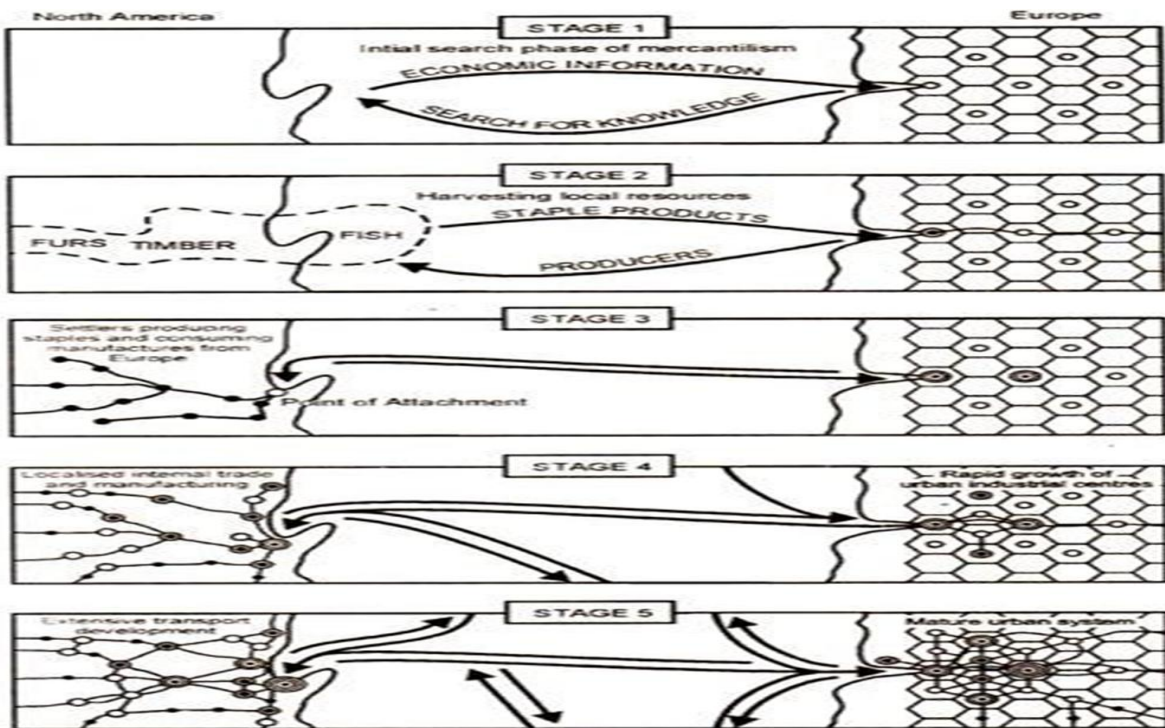
Figure 2.5 Gould's simulation of spatial exploration in time periods T<sub>1</sub> T<sub>2</sub> T<sub>3</sub>

### 2.3.3. The Vance Model (1970):

Based on his work on the eastern seaboard of America, Vance (1970) developed a five-stage 'mercantile' model to illustrate the development of transport links and the growth of the urban hierarchy in North America (Figure 2.6). Although primarily concerned with trade, his model is important in that it stresses the impact of exogenous forces on the evolution of transport networks and their associated spatial patterns.

In the initial stage, an accumulating of wealth in Europe prompted overseas expansion of an exploratory nature. Stage 2 sees the beginnings of the transatlantic trade routes based on the one-way trade in staple products such as fish, furs and timber. From 1620, permanent settlement occurs in North America; this results in Atlantic trade in both directions as settlers begin to produce commodities for export and consume manufactured products from a rapidly industrializing Europe (stage 3). Internal transport links are limited but all are externally orientated, a process that results in linear patterns both along the coast and stretching into the interior.

The 4th stage of the model is characterized by the development of internal trade and an internal manufacturing industry. The final stage of the model is reached when internal trade dominates North America and is matched by a mature transport and urban system in Europe. Although North America was eventually to lead the world in transport developments, the historical evolution is still apparent in both its transport network and its urban system.



**Figure 2.6.** Vance's mercantile model

### 2.3.4 The Rimmer model (1977):

Using terminology derived from Brookfield (1972, 1975), Rimmer identified four phases in the evolving interrelationships between metropolitan and Third World countries in transport terms.

1. A pre-contact phase involved no links between a Third World country and a distant power in the advanced world. Within the Third World country, a limited network of tracks, together with navigable waterways, supported a relatively restricted socio-economic and political system.
2. An early colonial phase, secondly, involved the establishment of direct contacts by sea between advanced and developing countries but did not produce radical changes in Third World societies, Europeans being largely content to dominate sea transport routes and to establish foothold settlements such as trading posts and garrisons.
3. A third phase of high colonialism involved more fundamental changes including the introduction of roads and railways, port facilities and inland transport nodes, and the diversification of economic activity (including industrialization and commercial agriculture) and settlement patterns (including rapid urbanization).
4. A fourth neo-colonial phase involves a substantial further diversification of the economic development surface of the Third World country and continuing (if modified) trade links with the former metropolitan power. The modernization of the transport system in the Third World country involves, at this stage, elements of rationalization, adaptation and selective investment in response to changing demands. There is, however, no radical adjustment to the systems inherited from earlier phases.

#### **2.4. Transportation of Goods by Road**

Effective transport networks are key components of the investment climate enabling people and goods access to markets and reducing cost of doing business Olaleye (2010). Furthermore, Olaleye (2010) contends that more than half of African roads including Nigeria are not

motorable for more than half of the year. There is no doubt that such poor state of many African roads and transport network becomes a limiting factor to the ability of many African countries to compete favorably and effectively on the global competitive markets.

Africa is poorly serviced with roads; the road density is on the average 5km per 100 square kilometer which is low when compared with other developing regions such as Latin America and Asia with 12km and 18km respectively per 100 square kilometer (African Development Bank Report, 2003). This difference is partly the result of different levels of development in general, but it also reflects the basic geographic fact that Africa is a very large continent, often with vast distances between the main population and production centers. Connecting the different parts of Africa through road networks is thus, in the best of circumstances, a Herculean task.

The relatively sparse road network does not signify a lack of importance of road transport. On the contrary, decades of under-capitalization, poor management and general neglect of the railways have propelled road transport to the most important means of transport in Africa by far. Road transport accounts for over 80% of all freight and passenger movements in Africa and there are no signs that this position will be threatened during foreseeable future (African Development Bank, 2003).

The socio-economic development of any country can hardly be possible without an efficient and effective transport system. This is because goods should be transported from origin to destination at minimal costs and time (Ubogu, 2011). Ubogu (2011) further affirms that interregional and international transportation of freight requires an effective multimodal

transportation system. Furthermore, he stated that in Europe, intermodal freight transport has been considered as the most prospective, competitive and environmentally friendlier alternative to uni-modal road freight transport in medium to long distance corridors. (Banister, 1998) also stated that transport plays a crucial role in industrial and commercial organizations, in the economic prosperity of countries and regions, and in allowing people to develop their own lifestyles.

In Nigeria, rail transport system used to be the major mode of mass transportation of passengers and freights across cities in the country before the 1970's. However, rail traffic declined from a historic high of 3 million tons of freight traffic and 15 million passengers per annum in the past to barely 75,000 tons in freight and 750,000 passengers in the country of over 160 million people, (Tijjani and Odumosu, 2013).

Thus, as a result of the way rail transportation is organized and administered in Nigeria, the sector is characterized by restriction of non-Government participation, heavy reliance on Federal Government grants and allocations, low level of service, deterioration and ageing facilities, dwindling level of funding and dependence on narrow gauge tracks constructed during the beginning of last century. This has necessitated an almost complete modal shift of long distance passenger and freight traffic to road leading to fast deterioration of roads, high cost of road maintenance and high level of road traffic accidents.

Records have shown that in terms of competitiveness in freight movement, the rail mode of transportation in Nigeria (that is supposed to be ahead in terms of medium and long distance haulage) is far behind the road mode. While for the carriage of freight an average of about 5,000

tankers are involved in wet cargo haulage to move about 150 million litres of fuel and 2,500, trucks are involved in dry cargoes plying Nigeria roads daily Olagunju (2011). The rail mode on other hand witnessed an increase in freight carried from 1990 to 1991 and between 1992 and 1994 it decreased. It slightly rose in 1996 afterward, there was an unprecedented upsurge with an all-time height in 1998 this was not sustained hence it plummeted down below the level it was in 1996 which led to a continuous decline in freight carried with insignificant rise in some period (Ubogu, 2011).

## **2.5 The Concept of Rest Stations.**

Rest stations were originally established primarily because during the early development of the interstate, often no other facilities at exist were available particularly in rural areas. Rest stations were built along the interstate to provide both car and truck drivers with a place to take a short break and to use the restroom facilities without leaving the interstate. The rest areas were spaced about every 50 miles or one hour driving time apart (National Transportation Safety Board, 2000). In transporting freight by road, some heavy truck drivers are required to drive for extended periods. This has resulted in fatigues (which has been recognized as a workplace safety issue for many truck driver) setting in, (Road Transport Association, 2010) necessitating a rest station for these truck drivers to rest and refresh before continuing on their journey. The development of heavy goods vehicle rest areas has certain objectives which include:

- i. Addressing the need for truckers to take rest breaks on freight journey, therefore recognizing the road as an integral part of their workplace.
- ii. Developing a network of major heavy goods vehicle rest areas on key freight corridors with required amenities to ensure that truckers are well rested, particularly on longer

journeys.

- iii. Assist truckers to comply with fatigue legislation.
- iv. Reduce the proportion of road accidents involving heavy goods vehicles by assisting in the management of heavy goods vehicle drivers fatigue.

Truck drivers often drive for long distances and often through periods when they should naturally be sleeping. Government regulations (or fatigue management guidelines) require drivers to have short rest breaks of 30 minutes (or two 15 minutes) for every five hours of driving (National Transport Commission, 2004). In Nigeria, fatigue has been recognized as an important factor responsible for many crashes involving heavy goods vehicles and other road users as most of these crashes occurred after six hours of continuous driving (Olagunju, (2011).

## **2.6. Transport and Socio-Economic Development.**

Transport contributes directly to economic activity and employment through bus, rail, road, air and maritime services. It also has a large indirect impact via all the other sectors and activities in the economy that depend on and use these various modes of transport to move people and goods around, nationally and internationally, in an efficient and safe manner (Mary, 2010). Transportation links together the factors of production in a complex web of relationships between producers and consumers. The outcome is a more efficient division of production by exploitation of geographical comparative advantages, as well as the means to develop economies of scale and scope.

Transport has affected economic development from the beginning of human civilization. Economic development focused on the confluence of transport systems. Early cities grew up on natural bays and ports and on rivers and lakes where transport was available. Romans built

roads to unify and provide access to their far-flung empire. Geographic characteristics such as proximity to oceans, seas and waterways, plains, mountains and the location of oases defined early transport systems e.g, the "Silk Road" went from oasis to oasis, and city to city, where there were no reliable water or road routes (World Bank, 2015).

Transportation is a requirement for every nation regardless of its industrial capacity, population size or technological development. Moving goods and people from one place to another is critical to fostering economic growth, according to Obi, (2009), a country's transportation system is comparable to the blood circulatory system in humans. The blood circulatory system is essential for carrying oxygen, glucose and other essential nutrients to all the cells in the body. If something were to happen to blood circulation as in the case of anemia, as in children it might cause failure to grow and thrive as compared to children of their age. Obi, (2009) further said that all these symptoms are also exhibited by an economy with poorly developed and maintained transportation system with failure to thrive being one of the chief symptoms exhibited. For an economy to thrive, it would need an efficient transport system to move goods and people within every corner of its borders. An efficient transport system facilitates the movement of goods and people cheaply and quickly which is vital in production in a vibrant economy. The more efficient the transport system is the lower the cost of transport, and invariably the lower the cost of goods and services (Obi, 2009).

Transportation development that has taken place since the beginning of the industrial revolution has been linked to growing economic opportunities. At each stage of human societal development, a particular transport mode has been developed or adapted. However, it has been



observed that throughout history no single mode of transport has been solely responsible for economic growth. Instead, modes have been linked with the direction and the geographical setting in which growth was taking place. For instance, major flows of international migration that occurred since the eighteenth century were linked with the expansion of international and continental transport systems. Transport has played a catalytic role in these migrations, transforming the economic geography of many nations.

Concomitantly, transportation has been a tool of territorial control and exploitation, particularly during the colonial era where resource-based transport systems supported the extraction of commodities in the developing world (Rodrigue and Notteboom, 2009). A lot of argument has been raging as to the relationship between transportation and development. According to Rodrigue and Notteboom (2013), the relationship between transportation and economic development is difficult to be formally established and has been debated for many years. In some circumstances, transport investments appear to be a catalyst for economic growth while in others; economic growth puts pressures on existing transport infrastructures and incite additional investments. Also, Litman (2010), is of the view that transport policy and planning decisions often have significant economic development impacts by affecting Government and consumer expenditures, employment opportunities, resource consumption, productivity, local environmental quality, property values, affordability and wealth accumulation,

In furtherance of the above, efficiency of a road transport system is more important than the scale of the road infrastructure. For example, a high quality inter-regional highway supports economic development, but once it exists, expanding its capacity to reduce congestion has

positive as well as negative impacts because it stimulates automobile dependency (fewer travel options and sprawl which tends to increase cost and reduce efficiency), Poverty is very often far worse in rural areas than in urban centers, as a result of lack of integration with urban centers due to lack of adequate accessibility and mobility; and local roads and tracks are often impassable during the raining seasons, thereby proving it very difficult and in some cases nearly impossible for rural families to have access to the local rural economy. Therefore, intra-regional road linkages may always bring development within the region and improve market system and local economies especially in the developing countries.

However, the moment an inter-regional highway is introduced, weak indigenous businesses and firms are open to strong competition from multinational and well-established companies from outside the region which may overrun the market. In all, going by the words of Litman (2010), high quality public transport provides many economic benefits and so can be cost effective provided there is sufficient consumer demand and supportive land use policies.

According to Muktar (2001), it is universally recognized that transport is crucial for sustained economic growth and modernization of a nation. Adequacy of this vital infrastructure is an important determinant of the success of a nation's effort in diversifying its production base, expanding trade and linking together resources and markets into an integrated economy. It is also necessary for connecting villages with towns, market centers and in bringing together remote and developing regions closer to one another. Transport therefore, forms a key input for production processes and adequate provision of transport infrastructure and services helps in increasing productivity and lowering production costs.

Rodrigue *et al* (2006), opined that economic development is linked with transitions in passenger mobility from non-motorized (mainly walking) to motorized form of transportation. The initial stage of this transition involves the development of collective forms of transportation (tramways, subways, buses) while individual forms of transportation (mainly automobile) became more prevalent at a later stage. This is particularly linked with the growth of individual incomes where at some point individual motorized mobility becomes affordable.

Abdulkareem (2008) concluded that economic activities are primarily concerned with the production, distribution and consumption of goods and services, which are of value to human therefore people, must use the natural resources of the earth to satisfy their necessity of life, to provide food, clothing and shelter for the teeming population of the country. He further opined that these resources are not usually found all in one place and no location is well endowed with all the resources, thus the universal need to transport some of these natural resources from places where they are abundant to areas where they are needed but not available.

In another study, Ango, (1974), did not only observe an increase in employment opportunities, but also observed a change in the occupational structure among his respondents. He remarked further that people turn to other jobs like petty trading and small scale industries which call for road side location to serve the interior. Ango, (1974), concluded in His study that the change in occupational structure to some extent is responsible for the increasing number of settlements along the expressways.

Emphasizing on this argument, Mabogunje (1981) and Onakomaiya (nd) concluded that improved accessibility create a variety of ancillary employment, which range from vehicle repair

such as mechanic, vulcanizer, body builder and welder to auto electrician, battery charger and dealers of vehicle spare parts, plate number producers, commercial transport conductors, motor park attendant and to the development of vehicle assembly plant.

Judging from these arguments above, one may not be too far from reality to conclude that the sighting of transport facilities such as road, park etc, create different employment/business opportunities which people respond, and this in turn have a significant effect on the socio-economic structure of the place.

## **CHAPTER THREE**

### **STUDY AREA AND METHODOLOGY**

#### **3.1. Introduction**

This chapter access different socio-economic activities in the rest stations. Included in this chapter also is the methodology employed for this research work. Methodology used specified the guidelines and set of principles that guided the gathering of data and necessary information for the conduct of the study. This is done under the following headings: research methodology, data collection, types of data, and methods of data collection, reconnaissance survey, population of the study, sampling techniques and sample size and method of data presentation and analysis.

#### **3.2 Study Area.**

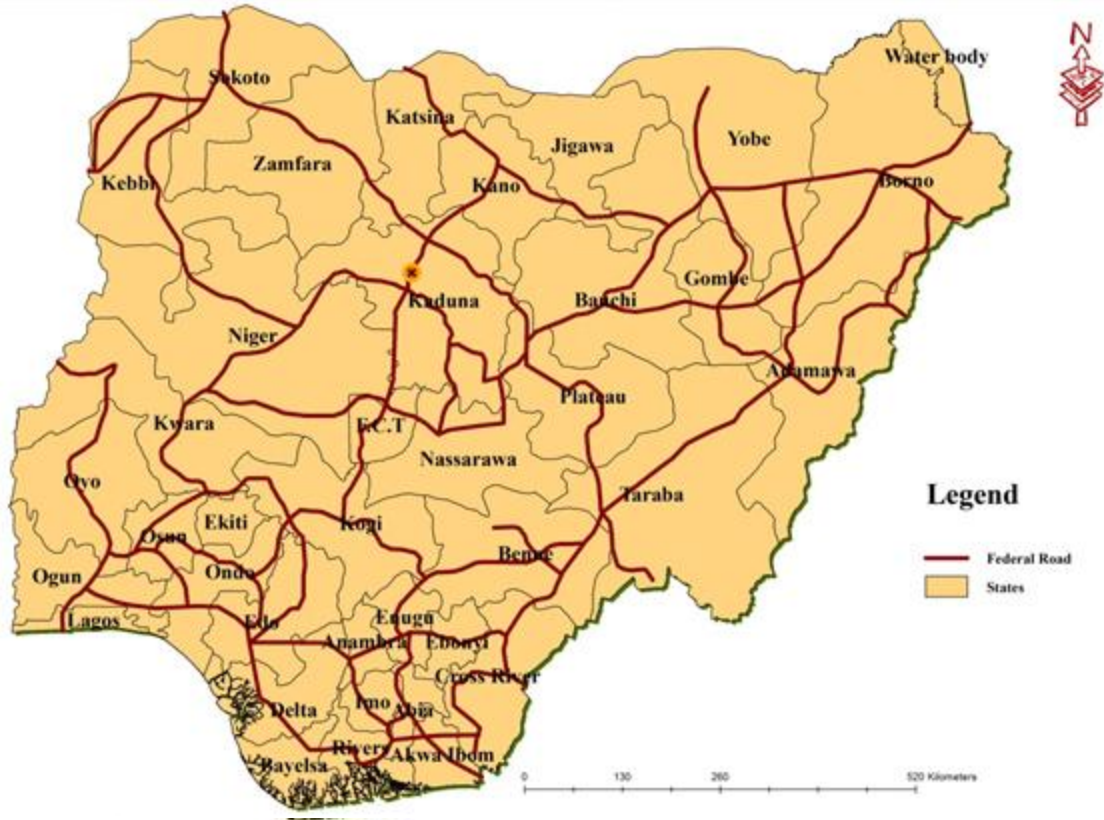
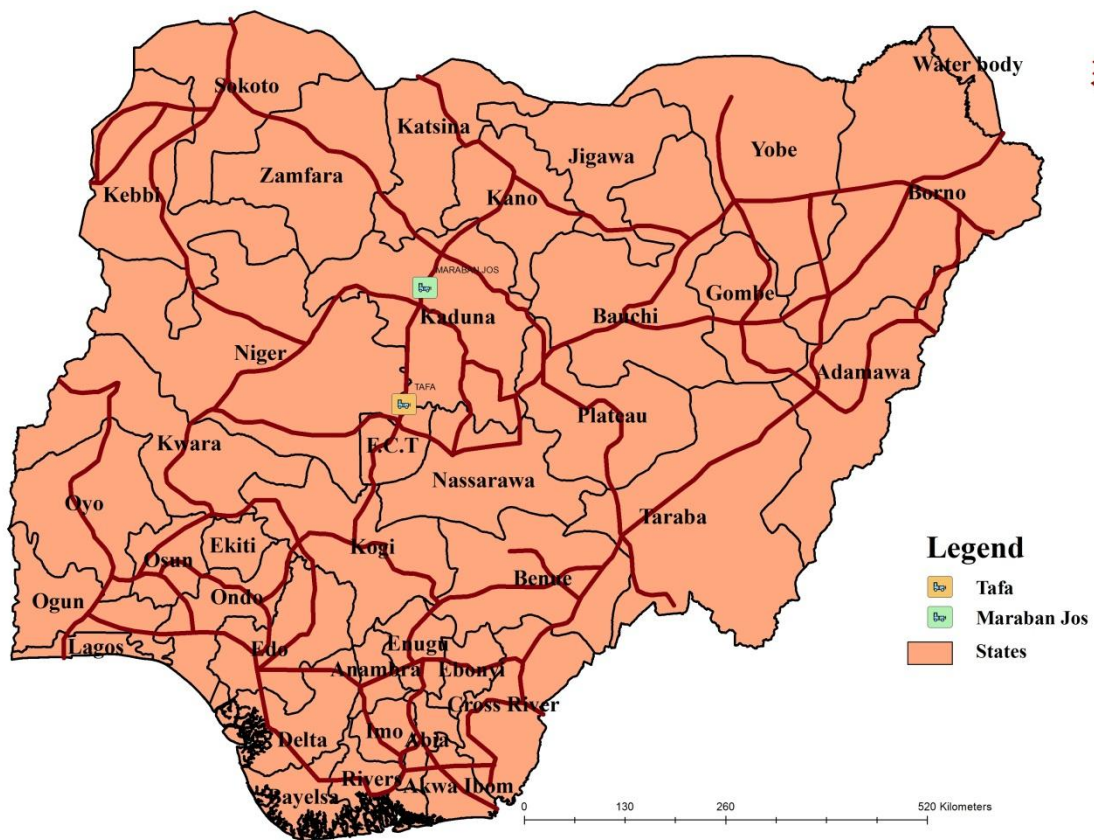


Figure 3.1. Road Map of Nigeria.



**Figure 3.2 Road Map of Nigeria showing the two study Area**

The study areas for the research work are the two towns along the Abuja-Zaria road corridor with designated truck parks. These towns are Tafa and Mararaban Jos both in Kaduna State, Nigeria.

### **3.2.1 Mararaban Jos.**

Mararaban Jos is in Igabi Local government area of Kaduna State with latitude and longitude  $10^{\circ}47'N/7^{\circ}46'E$ . It is a settlement with heavy concentration of trucks, ten to twenty minutes' drive to and from the city centre of Kaduna State. A predominant Hausa-Fulani settlement with houses on both sides of the express road.

The town plays host to a bank and a police station, the presence of drinking spots (beer parlor), comfort places, hotels, privately owned clinics and a primary health center (PHC) and

numerous patent medicine stores in the area is notably visible. Comfort places, drinking spots and hotels are located on one side of the settlement. Truckers making use of the stoppage point and their activities by this arrangement are expected to have little or no contacts and effect with the residential part of the community; in addition is the presence of commercial sex workers (CSW's) in large numbers in the town was noted.

Numerous petty trading activities and hawking of goods items was found to be going on in the community on both sides of the express road. An area office for the National Union of Petroleum and Natural Gas Workers (NUPENG) an umbrella body overseeing and protecting the interest of the petroleum tanker drivers is also located in the area signifying the recognition of the town as a stoppage point along the transport corridor. In addition a big truck garage containing numerous mechanic shades is present to address any faults that may develop from the trucks. At any point in time, there is an average of 298 heavy goods vehicles stationed in this town either for the drivers to rest or for minor/major repairs. Different types of commercial/economic activities that take place in Mararaban Jos are examined:

### **3.2.2. Agriculture/Animal Grazing in Mararaban Jos**

A lot of agricultural activities were identified in this area in the process of this research work especially in terms of farming activities, crops grown within this locality includes: maize, guinea corn, yam, etc, also, identified as cash crop of great importance to this town is sugar cane. Within this area, some Fulani herdsmen were also seen grazing about with their cattle.

### **3.2.3. Commercial activities in Mararaban-Jos**

This town has a weekly market which is usually patronized by outlying villages and towns, this market serves as a source of revenue for the local government area as it collects huge

amount of tax on market days from the traders that patronize it. Also a thing that can be easily noticed in the town is the presence of different kinds of stalls along the road where items ranging from provisions, spare parts etc are sold. Equally noticed was a huge number of restaurants, beer parlor, suya spots and tea spot (maishayi) which are points of attraction for truckers patronizing the town.

#### **3.2.4. Artisans/Technicians in Mararaban-Jos**

This town plays host to a high number of artisans/technicians especially those that have to do with the servicing and repairs of trucks, they include mechanics workshops, vulcanizer points, truck washing bays, battery chargers, panel beaters, etc, the huge number of them ensures that the truckers have all that they need for the servicing/repairs of their vehicle within the town.

#### **3.2.5. The truck parks in Mararaban Jos.**

There are two truck parks located in this town; one is located within the town (this is smaller in terms of size) with many mechanics shades/workshops for truck repairs within it. The other truck park (which is bigger in terms of size) is located in the outskirts of the town; this park is totally undeveloped without any infrastructure in it. The only evidence to show that it is actually a truck park is just the fencing round the site and the Federal Emergency Road Maintenance Agency (FERMA) mark on the fence. Discussion with staff of FERMA in the park revealed that there are plans for facilities such as restaurant, convenient, shops, mechanic workshops etc in the park. The FERMA staff further said that the present state of the park is as a result of a disagreement between the Local Government Authority and tankers drivers association over the allocation of plots in the park.



### **3.3.Tafa**

Tafa is a town also located in Kagarko Local Government Area of Kaduna State with its headquarters in Kagarko with latitude and longitude  $9^{\circ}27'N/7^{\circ}41'E$ . It has an area of  $222\text{km}^2$  and a population of over 53,874 (FGN, 1991). Located in this town is a truck park which is not in use. This has resulted in trucks making use of the town to park haphazardly on the road. Tafa experiences distinct dry and wet seasons with annual rainfall averaging 1,100mm. The maximum temperature is usually not more than  $94^{\circ}\text{F}$  is recorded between March and June, while minimum is usually between December and January. At any point in time, it is observed that there is an average of about 314 trucks parked in this town. The various socio-economic activities that people in this locality engage in are characterized:

#### **3.3.1. Agriculture in Tafa.**

The major occupation of the indigenous people in this town is farming. About 80% of the population are engaged in farming. The farm products include variety of fruits such as mango, cashew, locust beans, shea butter, Sugarcane and Legumes. Most of these foods are a source of cash for the farmers. Other major farming activities include planting of yam, cassava and rice, most of which equally serve as cash/food crops for the farmers.

#### **3.3.2. Animal Grazing/Herdsman in Tafa**

Another chief occupation of people in the area is animal husbandry which is a means of livelihood for the Fulani resident in the town. During an interaction with some herdsman in the community, it was discovered that there is no existence of law or regulations that controls their activities. It was observed that animal grazing cuts across all areas of the town.

#### **3.3.3. Market/Stall in Tafa.**

There is also a major market that operates once a week; this market is usually patronized by

villages within the study area. Also a noticeable form of marketing activities observed in this study area is the establishment of stalls along the road side. These road side stalls where things like spare parts etc are sold. These are the stalls that motorists (trucks drivers inclusive) usually patronize, another noticeable economic activity that takes place in the town is yams selling which is usually done on the roadside, with the women laying heaps of yam along the road shoulder.

#### **3.3.4. Artisans/Technicians in Tafa**

Artisans/technicians of different trades were also identified in the course of the survey; their activities include shoe repair, cottage industry, clothing mechanic workshop, vulcanizer shed etc. Noticeable and most general characteristic about their activity is that they practice under temporary structures as corrugated iron made stalls, most often by road side to attract patronage.

#### **3.3.5 The Truck Park in Tafa**

Located in this town is a park designated for trucks, however, just like the one in Mararaban Jos, it is completely undeveloped with nothing to actually show that it is a park for trucks save the FERMA painting on the fence stating what the place was actually meant for. Close examination of the inside showed that the park only serve as a point of turning for trucks whenever the need to make a U-turn arises for them.

#### **3.4. Research Methodology.**

The research methodology adopted for this study is the quantitative research method and in doing this, the researcher used the survey method for eliciting data from respondents. This survey was done using the instrument of questionnaire which was designed in such a way that the researcher was able to get the data that is required for the research work. Each of the questionnaires used were divided into three basic parts, the first part solicited for the biographical data of the

respondents, and the second part solicited for data on the spending/sales pattern of respondents, while the third part solicited for data on the social impacts of trucking in the areas. These questionnaires enabled the gathering of quantitative facts and figures from a known population.

### **3.4.1 Data Collection**

In order to effectively carry out this research work and achieve the desired aim through the various objectives of the study, questionnaires were designed for distribution to the target population in the two study locations. Also, a form was designed and used for traffic count in the two study areas, this traffic count was however limited to trucks as it concerns the study. Equally a form was designed and used to take a census of the various businesses relating to the activities of trucks in the study areas. Furthermore, interviews were carried out with some of the residents and some FERMA officials' met at the truck park at Mararaban Jos.

### **3.4.2. Types of Data.**

The data used for this research work were data that assisted the researcher in his findings.

Such data included:

- i. data from residents on the impact of truckers on their communities, such as their socio-demographic characteristics, participation in business activities, ownership structure of their business, their hours of operations, who their major customers are, social impact these truckers have on their communities and environmental impact of trucking on their community etc.
- ii. data from truckers i.e drivers, assistant drivers and drivers mate included their socio-demographic characteristics, their economic activities while in the rest station and

their reason for making use of the rest station etc

### **3.4.3 Sources of Data**

The sources of data for this research work is basically through the distribution of questionnaire and interview, this was used to source for primary data, while for secondary data, transport journals and text books were consulted. The data collected were specifically for the purpose of the research

### **3.4.4 Method of Data Collection**

Three methods of data collection were employed for this research work, these are:

- i. Questionnaire administration
- ii. Interview
- iii. Material sourcing from related literatures and internet.

With regards to the questionnaire and interview methods, questions were designed by carefully determining questions that bears on the objectives of the study. The questionnaires were then administered to the targeted population.

### **3.3.5 Reconnaissance Survey**

A reconnaissance survey was carried out in the two rest stations for two days in the third week of July, 2015 in order to get familiar with the terrain of the study area. During the survey, assessment of the nature of the study area was conducted; problems and issues related to the topic were examined. Efforts were made to ascertain the number of trucks that make use of the study area on a daily basis and to establish contacts for obtaining secondary data required for the study.

### **3.3.6 Population of the Study**

The targeted population for the study included the residents' of the study area and the

truckers that stopover in them for several purposes. Also included in the study population are official of FERMA and Local Government official of the two Local Government Areas where the research area is located.

### **3.3.7 Sampling Technique and Sample Size**

The projected population figure for Mararaban Jos and Tafa communities using exponential and a growth rate of 3.3 percent is 17, 834 and 53, 874 respectively. This is based on the 1991 census figure (the 1991 census figure was used because it was disaggregated at the community level). Sampling frame for the household survey covered selected adult residents in the two rest stations. Using the eight person household size prevalent in the rest stations, the total households in them amounted to 8,963. Therefore 134 households represent 1.5% of the total households in the rest stations were sampled as only rough estimate of the community residents. In distributing this figure among the two rest stations, a larger survey sample was taken from Tafa because it is relatively larger than Mararaban Jos, thereby requiring more samples.

In selecting the respondents in each of the rest stations, a combination of simple random sampling and systematic sampling techniques was employed. Random sampling was used to select streets, while systematic sampling was used in locating households. Starting with the first household on every street, every 3<sup>rd</sup> numbered house on each street was picked to get the sample location for the administration of questionnaire. Based on the number of sample size, 101 (75%) copies of questionnaire were administered in Tafa and 34 copies (24%) were administered in Mararaban Jos.

With regards to the sample size and sampling techniques for the truckers, a cluster sampling technique, (a probability sampling method) was utilized for questionnaire administration. This

encompasses a time-location-sampling (TLS) technique. Grouping (cluster) of the comfort places, drinking spots and hotels visited by the truckers while in the rest stations was created first that took into consideration the time the truckers making use of the rest stations visits these places while in the rest stations. The time-location-sampling technique utilized provided the opportunity to reach the members of the target population who access this locations at a given point in time when in the rest stations.

The hours of 7.00am to 9.00am and 6.00pm to 8.00pm was found to be the peak time truckers making use of the rest stations could be easily assessed during the initial reconnaissance survey conducted. Therefore, all target population at the enumeration points between the hours of 7.00am to 9.00am and 6.00pm to 8.00pm who consented to participate in the study were administered the questionnaire until the sample size was gotten during the exercise.

In order to arrive at the right sample size for the truckers in the rest stations, a vehicular count was done for a period of one week within the hours of 7.00am to 9.00am and 6.00pm to 8.00pm. A total of 4172 was counted in Mararaban Jos and 4396 was also counted in Tafa giving a time average of 298 and 314 trucks for Mararaban Jos and Tafa respectively. This gave a total of 1224 truckers (at an average of two truckers per truck). 61 trucker representing 5% of the total truckers in the rest stations were sampled as a rough estimate of the truckers opinion on the impact of trucking on the socio-economic development of their rest stations. This figure was administered almost equally among the rest stations with 30 (49.2%) administered in Mararaban Jos and 31 (50.8%) administered in Tafa.

#### **3.4.8. Method of Data Presentation and Analysis**

Data generated from this study were presented and analyzed using tabular presentation and percentage, also statistical relationship between some variables was determined using SPSS V20 for their cross tabulation.

## **CHAPTER FOUR**

### **DATA PRESENTATION AND ANALYSIS**

#### **4.0**

##### **4.1 Introduction**

This chapter deals with the presentation and analysis of data collected from the field, with regards to the questionnaires administered to residents and truckers in the study area, a total of 34 copies of questionnaire was administered to the residents in Mararaban Jos and 18 copies of this was recovered, while in Tafa a total of 101 was administered out of which 78 copies were recovered. Also, 30 copies of questionnaire were administered to truckers in Mararaban Jos out of which 28 were recovered, while in Tafa, 31 copies of questionnaire were administered to truckers and all were completely recovered. The presentation of the analyzed data is into sections: which includes: socio-demographic characteristics of truckers, truckers economic activities while the second section presents the socio-demographic characteristics of sampled residents, sampled residents economic activities, sampled resident perception of social impact of truckers on their community and environmental effects of trucking on the communities. Also, certain variables were cross tabulated and their result analyzed

##### **4.2 Socio-Demographic Characteristics of the Truckers in Mararaban Jos and Tafa.**

This section present and analyze the socio-demographic characteristics of truckers in the study area. The variables included the composition in terms of sex, age, marital status, educational qualification, occupation, ethnicity and religion.

##### **Table 4.1: Sex composition of Truckers**

Variable	No. of Respondents	Percentage		
Sex	Mararaban Jos	Tafa	Mararaban Jos	Tafa
Male	28	31	100	100
<b>Total</b>	<b>28</b>	<b>31</b>	<b>100%</b>	<b>100%</b>

Source: Field work 2015.

Table 4.1, reveals that all the truckers in Mararaban Jos and Tafa are male; this shows that the trucking profession in Nigeria is still a male dominated profession.

**Table 4.2 Age bracket of truckers**

Age	Mararaban Jos	Tafa	Mararaban Jos	Tafa
<20		21	4.3	6.5
20-29	6		21.4	12.9
30-39	10		35.7	32.3
40-49	8	11	28.6	35.4
50-59	0	30		9.7
60>0		10		3.2
<b>Total</b>	<b>28</b>	<b>31</b>	<b>100%</b>	<b>100%</b>

Source: Field work 2015.

Table 4.2 above shows the age brackets of trucker, the study reveals that age group of the bulk of the truckers' lies between the age brackets of 30-39 and 40-49 (middle age region) which account for 35.7% and 26% in Mararaban Jos and 32.3% and 35.4% in Tafa respectively

**Table 4.3. Marital status of truckers.**

Marital Status	Mararaban Jos	Tafa	Mararaban Jos	Tafa
Single	9	8	28.1	25.8
Married	13	17	46.4	54.8
Divorced	6	4	21.4	12.9
Widow/Widower	0	20		6.5
<b>Total</b>	<b>28</b>	<b>31</b>	<b>100%</b>	<b>100%</b>



**Source: Field work 2015.**

Table 4.3 above on the marital status of the truckers shows that majority of the truckers are married 54.8% in Tafa and 46.4% in Mararaban Jos. Very few of the truckers 6.5% are widow/widower in Tafa while none was found to be widow/widower in Mararaban Jos. An interesting fact about this finding is that despite the facts that the bulk of the truckers are married, there is a high presence of commercial sex workers in the study area who are usually patronized by most of these truckers.

**Table 4.4. Educational status of truckers**

<b>Educational Status</b>	<b>Mararaban Jos</b>	<b>Tafa</b>	<b>Mararaban Jos</b>	<b>Tafa</b>
Non Formal Education	15	553.6	16.1	
Primary Education	42	14.3	6.5	
Junior Secondary	7	1525	48.4	
Senior Secondary	2	27.1	22.6	
Tertiary	0	20	6.5	
<b>Total</b>	<b>28</b>	<b>31100%</b>	<b>100%</b>	

**Source: Field work 2015**

Table 4.4 on the educational status of truckers' shows that the trucking profession is still being considered as a profession for school dropouts in Nigeria. Majority of the truckers in Mararaban Jos have no formal education (53.6%), while majority of them in Tafa (48.4%) only have junior secondary school education. While just 6.5% in Tafa had tertiary education, none in Mararaban Jos had tertiary education.

**Table 4.5. The occupational status of truckers**

<b>Occupation</b>	<b>Mararaban Jos</b>	<b>Tafa</b>	<b>Mararaban Jos</b>	<b>Tafa</b>
Driver	14	15	50	48.4
Assistant mate	10	9	35.7	20.0
Drivers mate	4	7	14.3	22.6

<b>Total</b>	<b>28</b>	<b>31100%</b>	<b>100%</b>
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**Source: Field work 2015**

Table 4.5. above shows that about half of the truckers are drivers as 50% in Mararaban Jos and 48.4%, in Tafa accounted for this category. Also, while 14.3% are drivers mate in Mararaban Jos, it is 22.6% in Tafa. They are responsible for keeping the interior of driver's cabin clean, ensuring that the truck's lubricant is at gauge every morning, they also serve as security guard for the trucks at night while the drivers are asleep in a nearby motel/hotel. They perform all these duties in addition to their main duty of learning the art of truck driving.

**4.3 Socio-Economic Activities of Truckers in Mararaban Jos and Tafa.**

This section examines the socio-economic activities that truckers engaged in whenever they make a stop in the study area. It also examines the main purposes of truckers stopping; time spent in the area, shop of patronage and truckers main expenses while in the area and their main purpose for choosing the area.

**Table: 4.6: Socio-economic activities of truckers at rest stations.**

<b>Main Activities</b>	<b>Mararaban Jos</b>	<b>Tafa</b>	<b>Mararaban Jos</b>	<b>Tafa</b>
Vehicle maintenance	14	17.5	54.8	
Vehicle cleaning/washing	5	17.9	16.1	
Rest	1	3.6	9.7	
Rest with women	3	410.7	12.9	
Eating/drinking	5	17.9	6.5	
<b>Total</b>	<b>28</b>	<b>31100%</b>	<b>100%</b>	

**Source: Field work 2015**

Table 4.6 shows that the major activities performed by the truckers as they stop at the two rest stations are vehicle maintenance activities such as oil gauging, tyre gauging/vulcanizing e.t.c. This category accounted for 54.8% and 50% for Tafa and Mararaban Jos respectively. This is probably due to the need for truckers to ensure that their trucks are in good conditions as a result of the deplorable state of the road they travelled. The need to eat/drink rank next as the main activity of truckers in Mararaban Jos 17.0%, while in Tafa this category only accounted for 6.5%.

**Table 4.7 Time spent by truckers in the rest station.**

Stoppage Period	Mararaban Jos	Tafa	Mararaban Jos	Tafa
<4hrs	0	14.3	0	
1-2hrs	2	4	7.1	12.9
2-3hrs	7	625.0	19.4	
3-4hrs	6	9	21.4	29.0
4-5hrs	7	5	25.0	16.1
1 day >2	77.1	22.6		
<b>Total</b>	<b>283</b>	<b>100%</b>	<b>100%</b>	

Table 4.7 Shows the number of hours spent while in the rest stations; the study reveals that the process of vehicle maintenance usually takes between 3-5 hours depending on the level of maintenance to be carried out. This is why 29.0% of truckers in Tafa usually stop there for between 3-4 hours, while 25% respectively for truckers in Mararaban Jos stop for between 2-3 hours.

**Table 4.8: Truckers' main expenses at the rest stations.**

Main Expenses	Mararaban Jos	Tafa	Mararaban Jos	Tafa
Vehicle maintenance	9	1132.1	35.5	
Vehicle vulcanizing	1	43.6	12.9	
Refueling	7	325.0	9.7	
Vehicle washing /Cleaning	4	414.3	12.9	
Eating/drinking	5	517.9	16.1	
Relaxation	2	47.9	12.9	
<b>Total</b>	<b>28</b>	<b>31</b>	<b>100%</b>	<b>100%</b>

**Source: Field work 2015**

Table 4.8 shows that the importance of having their trucks in good working condition from origin to destination is a fact that is never overlooked by the truckers. This is one of the reasons why vehicle maintenance accounted for the main expenses of truckers in the rest stations, accounting for 35.5% and 32.1% in Tafa and Mararaban Jos respectively. While vulcanizing accounted for the least of expenses in Mararaban Jos 3.6% refueling at 9.7% accounted for the least expenses in Tafa.

**Table 4.9 Truckers main purpose of stopping at the rest stations.**

Purpose	Mararaban Jos	Tafa	Mararaban Jos	Tafa
Presence of Business partners.	5	71	7.9	22.6s
Presence of good Relaxation spot.	8	62	8.6	19.4
Presence of good Repair workshop	15	18.	53.6	58.1
<b>Total</b>	<b>28</b>	<b>311</b>	<b>100%</b>	<b>100%</b>

**Source: Field Work, 2015.**

**Table 4.9** shows that for truckers to use the rest stations as a rest station/stopping point there has to be factors that serve as a point of attraction to them. Majorly this factor(s) are usually related to their main purpose for being on the road. This perhaps explains why the presence of good truck repair workshop is the main purpose for choosing the rest station. This accounted for 58.1% and 53.6% in Tafa and Mararahan Jos respectively. Also the presence of good relaxation spot accounted for 19.4% in Tafa while the presence of business partners accounted for 17.9% in Mararaban Jos.

#### **4.4 Inventory of Trucking Facilities in Mararaban Jos and Tafa.**

This section examines the trucking facilities that are available in a rest station and comparing them with a checklist of facilities expected at a rest station. Truck rest station, also known as transport café in the United Kingdom and as a travel center by major chain in the United State is a Government or commercial facility which provide refueling, rest (parking) and often ready made food and other services to motorist and truck drivers. Smaller rest station might consist of only a parking area, a fuelling station and perhaps a diner restaurant. Larger rest station might have convenience stores of various sizes, showers, etc.

**Table 4.10 Trucking Facilities in Mararaban Jos and Tafa.**

<b>Facilities</b>	<b>Nos. in Mararaban Jos</b>	<b>Nos. in Tafa</b>
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Designated parks for trucks	2	1	
Trucks repair workshop	21	34	
Truck washing bay	7	11	
Trucks tow trucks		9	6
Crane	4	7	
Truck waste disposal facilities	0	0	
Hotels/Motels		12	9
Restaurants		42	53
Truck tires repair points		18	34
Video arcade		0	0
internet facility		0	5
Atlas/map shops		0	0
idleAire		0	0
<b>Total</b>	<b>119</b>	<b>160</b>	

**Source: Field Work, 2015**

From Table 4.7, there are two designated truck parks in Mararaban Jos, one is located within the town and very small in terms of its size, the other is located at the outskirts of the town and it is much more bigger but completely undeveloped. This has made truckers to park their trucks within the town especially on the road and beside the median divider. This has distorted the aesthetics of the town. Tafa on the other hand has just one designated truck park and it is undeveloped, this has also made truckers to use the town as their parking lot equally distorting the aesthetics of the town. The study also revealed that due to the bad nature of the roads these trucks go through, there is the need for truckers to repair or service their trucks. Tafa has 34 of workshops to cater for such needs while Mararaban Jos has 21. Some of these workshops have tow trucks and crane attached to them, in all, there are 9 tow trucks and 4 cranes in Mararaban Jos and 11 tow trucks and 7 cranes in Tafa. Equally catering for the washing/cleaning needs of the truckers are 11 washing bays in Tafa and 7 in Mararaban Jos

The fatigue associated with trucking necessitated the need for these truckers to rest and refresh after some hours of driving. Tafa has 9 hotels/motels and 53 restaurants, while Mararaban Jos has 12 hotels/motels and 42 restaurants. However in the process of this

research work, it was revealed that facilities like truck waste disposal facility, internet facility, atlas/maps shops/air conditioning facility (for heating & cooling truck cabins through external source of power) are not available in these rest stations.

#### 4.5. Socio-Demographic Composition of Residents in the Mararaban Jos and Tafa.

This section takes a look at the socio-demographic characteristics of respondents who are residents in the rest stations; the section analyzes them in terms of their sex, age marital status, occupational, education, and ethnic and religion composition.

**Table 4.11: Socio-Demographic Characteristics of the Resident.**

Sex	Mararaban Jos	Tafa	Mararaban Jos	Tafa
Male	12	50	66.7	64.1
Female	6	28	33.3	35.9
<b>Total</b>	<b>18</b>	<b>78</b>	<b>100%</b>	<b>100%</b>

Source: Field work 2016

Table 4.8, shows the socio-demographic characteristics of the residents of the study areas. The fact that the rest stations are located in the northern part of the country where women participation in activities outside their matrimonial home is frowned at is more or less responsible for 66.7% and 64.1% of respondents in Mararaban Jos and Tafa being males. Also just 35.9% and 33.5% from Tafa and Mararaban Jos are females.

**Table 4.12: Showing age bracket of Respondents**

Age	Mararaban Jos	Tafa	Mararaban Jos	Tafa
<20		0	9	0
20-29		4	20	22.2
30-39		7	18	38.9
40-49		4	22	22.2
50-59		2	6	11.0
60>		1	3	5.6
<b>Total</b>	<b>18</b>	<b>78</b>	<b>100%</b>	<b>100%</b>

Source: Field work 2015.

Table 4.12 shows that majority of the respondents fell within the active age brackets of 30-39 and 40-49 as this two age brackets make up 61.1 % in Mararaban Jos and 51.3% in Tafa respectively. While the age bracket with the least percentage is age 60 years and above as Mararaban Jos has 5.6% and Tafa 3.8%.

**Table 4.13. Marital status of Respondents**

Marital Status	Marraaban Jos	Tafa	Mararaban Jos	Tafa
Single	2	17	11.1	21.8
Married	13	42	72.2	53.8
Divorced	2	14	11.1	17.9
Widow/Widower	1	3	5.6	6.4
<b>Total</b>	<b>18</b>	<b>78</b>	<b>100%</b>	<b>100%</b>

**Source: Field work 2015**

Table 4.13 revealed that the bulk of the respondents are married 72.2% and 53.8% in Mararaban Jos and Tafa. On the other hand 5.6% and 6.4% are Widow/widower in Mararaban Jos and Tafa respectively.

**Table 4.14 Occupational status of respondents**

Occupation	Mararaban Jos	Tafa	Mararaban Jos	Tafa
Civil Servant	1	13	5.6	16.7
Business Operator	9	18	50	23.1
Artisan	5	21	27.8	26.9
Self Employed	3	6	16.6	7.7
Mil/Paramilitary	0	7	0	9.0
Retiree	0	4	0	5.1
Unemployed	0	9	0	11.5
<b>Total</b>	<b>18</b>	<b>78</b>	<b>100%</b>	<b>100%</b>

**Source: Field work 2015**

Similarly, the study shows that business operators and artisans constitute the major form of occupation in the rest stations, as they operate to cater for the needs of the truckers that make stopovers in the rest station. Indeed, 50% and 23.1 % of accounted for business operators in Mararaban Jos and Tafa respectively, while 27.8% and 26.9% are for artisan in Mararaban Jos and Tafa respectively. The domination of these forms of occupation could be attributed to the absence of industries, Government Corporations, of parastatals in the rest stations.

**Table 4.15 The educational status of respondents**

Educational Status	Mararaban Jos	Tafa	Mararaban Jos	Tafa
Non formal education	4	15	22.2	19.2
Primary	2	13	11.1	16.7
Junior secondary	7	21	38.9	26.9
Secondary	5	24	27.8	30.8
Tertiary	0	5	0	6.4
<b>Total</b>	<b>18</b>	<b>78</b>	<b>100%</b>	<b>100%</b>

**Source: Field work 2016**

**Table 4.15 shows that** In terms of their educational qualification, majority of the respondents in the reststations fell within the groups with both junior secondary school certificate and senior secondary school certificate, constituting 66.7% and 57.7% in Mararaban Jos and Tafa while none of the respondents in Mararaban Jos had tertiary qualification. The predominance of these levels of education can be attributed to the absence of tertiary educational institutions in the area and the fact that the economic activities in the area does not support higher educational certificate.

#### **4.6 Economic Impact of Trucking on Mararaban Jos and Tafa**

This section analyzes the economic impact of trucking on economic activities in the reststations. This was done by looking at the various business activities in the stations in terms of ownership status, period of operation, major customers of businesses and the impacts of trucking on business.

**Table 4.16: Types of businesses respondents are engaged in.**

Types business Engaged in.	Mararaban Jos	Tafa	Mararaban Jos	Tafa
Mechanic	2	16	11.1	20.5
Vulcanizer	3	9	16.7	11.5
Car washer	3	10	16.7	12.8
Trading	5	26	27.8	33.3
Restaurateur	2	8	11.1	10.3
Brothelier	2	5	11.1	6.4



Others	1	4	5.6	5.1
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**Total18                      78100%                      100%**

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**Source: Field work 2015**

Table 4.16 shows that the constant congregation of trucks in the rest stations has in oneway or the other encouraged the development of different types of business enterprises to caterfor both the truckers and their trucks. Trading is the major type of business found in the rest station as it makes up33.3% and 27.8% of business in Tafa and Mararahan Jos. This is followed by mechanics whichaccounted for 20.5% in Tafa while car wash and vulcanizer each takes up 16.7% in MararabanJos.

**Table 4.17 Ownership structure of the business**

Ownership status of business	Mararaban Jos	Tafa	Mararaban Jos	Tafa
Yes	14	52	77.8	66.7
No	4	26	22.2	33.3
<b>Total18</b>	<b>78100%</b>	<b>100%</b>		

**Source: Field work 2015**

**Table 4.17** shows that 77.8% in Mararahan Jos and 66.7% in Tafa arethe owner/operators of the business, while 22.2% in Mararahan Jos and 33.3% Tafa are notowners ofthe business.

**Table 4.18 Period of operation of the business.**

Period of Operation	Mararaban Jos	Tafa	Mararaban Jos	Tafa
During day time	3	23	16.7	29.5
During night time	1	17	5.6	21.8
Night/day time	14	38	77.8	48.7
<b>Total18</b>	<b>78100%</b>	<b>100%</b>		

**Source: Field work 2015**

**Table 4.18** Reveals the fact that most of these truckers constantly target a place where truckers gather for thenight usually makes most of these businesses to operate far into the night as truckers are always arriving at any moment in time. This is why most of the businesses, 77.8%and48.7%in Mararaban Jos and Tafa usually operate their business at both day and night

time. However just 21.8% and 5.6% in Tafa and Mararaban Jos operate their business solely at night time.

**Table 4.19 Major customers of the business**

Major customers	Mararaban Jos	Tafa	Mararaban Jos	Tafa
Truck drivers	8	28	44.4	35.9
Truck motor boys	3	19	16.7	24.4
Truck passengers	2	18	11.1	23.1
Residents	5	13	27.8	16.7
<b>Total</b>	<b>18</b>	<b>78</b>	<b>100%</b>	<b>100%</b>

**Source: Field work 2015**

Table 4.19 Reveals that the impact that these truckers have on sales within the rest station can never be overemphasize as they tends to be the main attraction in the rest stations. The study revealed that 44.4% and 35.9% in Mararaban Jos and Tafa identified truckers as their major customers. While 11.1% in Mararaban Jos identified truck passengers as their least customer.

**Table 4.20. Impact of trucking on businesses in the rest stations**

impact of trucking on business	Mararaban Jos	Tafa	Mararaban Jos	Tafa
Increased Profit	11	42	61.1	53.8
No Impact	0	7	0	9.0
Attracts more customers	7	29	38.9	37.2
<b>Total</b>	<b>18</b>	<b>78</b>	<b>100%</b>	<b>100%</b>

**Source: Field Work 2015**

Table 4.20 reveals that the impact of truckers on business in the rest station can be said to be positive as 61.1% and 53.8% in Mararaban Jos and Tafa agreed that trucking has increased their profit margin significantly. Also, 38.9% and 37.2% in Mararaban Jos and Tafa agreed that trucking has attracted more customers to their business. However, very few (9.9%) in Tafa disagreed that trucking has any impact on their business.

#### **4.7. Social Impact of Trucking on Mararaban Jos and Tafa**

This section analyzes the social impacts of trucking on the rest station, taking a look on the types of civil disturbance experienced in the rest stations, frequency of occurrence of these civil

disturbances, period of occurrence, time of occurrence, major cause, parties involved,,impact of trucking on the rest station and general assessment of trucking on the rest station.

**Table 4.21: Types of civil disturbances experienced in the rest stations.**

<b>Types of Civil disturbance experienced</b>	<b>Mararaban Jos</b>	<b>Tafa Mararaban Jos</b>	<b>Tafa</b>	
Political crisis	1	14	5.6	17.9
Social crisis	13	52	72.2	67.9
Ethno-religious crisis	4	11	22.2	14.2
<b>Total</b>	<b>18</b>	<b>78</b>	<b>100%</b>	<b>100%</b>

**Source: Field work 2015**

Table 4.21, reveals that the congregation of these truckers on these rest stations and their interactions with residents of the area generates some form of civil disturbance in the communities due to the differences in culture and traditions of the residents and the truckers. In fact 72.7% and 67.9% in Mararaban Jos and Tafa respectively agreed that the major types of civil disturbance they usually experience in the area are social crisis such as fighting among the truckers or between truckers and resident of the rest stations

**Table 4.22 Frequency of occurrence of civil disturbance in the rest stations.**

<b>Frequency of civil Disturbance</b>	<b>Mararaban Jos</b>	<b>Tafa Mararaban Jos</b>	<b>Tafa</b>	
Very frequent	6	32	33.3	39.7
Frequent	8	20	44.4	25.6
Not very frequent	3	12	16.7	15.4
Once in a while	1	15	5.6	19.2
<b>Total</b>	<b>18</b>	<b>78</b>	<b>100%</b>	<b>100%</b>

**Source: Field work 2015**

Table 4.22 shows that with regards to the frequency of occurrence of civil disturbance in the rest stations, 44.4% in Mararaban Jos agreed that these disturbances usually occur frequently. In Tafa 39.7% agreed that the civil disturbance usually occur very frequently, this is probably as a result of the fact that these drinking joints operate far into the night, allowing the truckers to get drunk.

**Table 4.23 Period of occurrence of these civil disturbance**

Period of occurrence of civil disturbance	Mararaban Jos	Tafa	Mararaban Jos	Tafa
January-March	12	27	66.6	34.6
April-June	2	30	11.1	38.5
July-September	1	14	5.6	17.9
October-December	3	7	16.7	38.5
<b>Total</b>	<b>18</b>	<b>78</b>	<b>100%</b>	<b>100%</b>

**Source: Field work 2015**

**Table 4.23** Shows that with regards to the temporal occurrence of these social disturbances, majority 66.7% in Mararaban Jos and 34.6% in Tafa agreed that it normally occurs between the months of January-March. A noticeable trend on the question is that the bulk of the respondents agreed that these social disturbances usually occur during the dry months when farmers are idle.

**Table 4.24 Major causes of these civil disturbances**

Major cause of civil disturbance	Mararaban Jos	Tafa	Mararaban Jos	Tafa
Religion tension	1	5	5.6	6.4
Rumor of insurgency	0	0	0	0
Drug abuse	3	7	16.7	9.0
Fight over parking space	2	5	11.1	6.4
Fight over union dues	0	5	0	6.4
Fight over women	8	40	44.4	51.2
Fight as a result of Drunkenness	4	10	22.2	12.8
Other social vices	0	6	0	7.8
<b>Total</b>	<b>18</b>	<b>78</b>	<b>100%</b>	<b>100%</b>

**Source: Field work 2015**

**Table 4.24.** Above reveals that the major cause of civil disturbances in the two rest stations is fight over women as 44.4% in Mararaban Jos and 51.2% in Tafa identified it as the major cause. This is possibly due to the fact that most of these truckers in the course of their journey from

origin to destination engage in some forms of business activities (purchase of wood for resale, carrying of passengers etc) thereby have more money to play around with.

**Table 4.25 Parties involved in the civil disturbance**

Parties involved in the civil disturbance		Mararaban Jos	Tafa	Mararaban Jos	Tafa
Truck drivers vs Truck drivers	4		10	22.2	12.8
Truck drivers vs Motor boys	3		14	16.7	17.9
Union vs Truck drivers	2		10	11.1	12.8
Residents vs Drivers/motor boys	9	44	50		56.5
<b>Total</b>	<b>18</b>	<b>78</b>	<b>100%</b>	<b>100%</b>	

Source: Field work 2015.

Table 4.25 reveals that the major parties involved in these civil disturbance is usually the truckers and residents of the rest stations as 50% in Mararaban Jos and 56.5% in Tafa agreed to this

**Table 4.26 Impact of trucking on social life in the rest stations.**

Impacts of Trucking on Social life in your Community		Mararaban Jos	Tafa	Mararaban Jos	Tafa
It attracts women of easy virtues		5	15	27.8	19.2
It attracts night clubbing	2	18	23	11.1	
it attracts sales of hard drugs	5	21	26.9	27.8	
It attracts drinking Joints	5	13	16.7	27.8	
It attracts the operation Of brothels		1	11	5.6	14.1
<b>TOTAL</b>	<b>18</b>	<b>78</b>	<b>100%</b>	<b>100%</b>	

Source: Field work 2015

Table 4.26 reveals some undesirable social impacts that these truckers have on these reststations as they make daily stop over. In Mararaban Jos for instance, 27.8% agreed that it attracts women of easy virtues, while 27.8% agreed that it attracts the sales of hard drugs. In Tafa on the other

hand 26.9% agreed that it attracts sales of hard drugs to the place, while 23.1% agreed that it attracts night clubbing to the place.

**Table 4.27 General assessment of truck drivers on the rest stations,**

<b>General assessment of truck drivers your community</b>	<b>Mararaban Jos</b>	<b>Tafa</b>	<b>Mararaban Jos</b>	<b>Tafa</b>
It brings business <sup>9</sup>	24	50	30.8	
It causes hold ups <sup>2</sup>	17	11.1	21.8	
It causes social disturbance <sup>3</sup>	13	16.7	16.7	
It breeds bad boys and girls <sup>4</sup>	24	22.2	30.9	
<b>Total</b>	<b>18</b>	<b>78</b>	<b>100%</b>	<b>100%</b>

**Source: Field Work, 2015**

**Table 4.27** Reveals the general assessment of the impact of truck drivers on the community, 50.0% in Mararaban Jos and 30.8% in Tafa agreed that it has a positive effect on business in the area. However on the negative effect 11.1% in Mararaban Jos agreed that they are responsible for traffic hold ups in their community, while 16.7% in Tafa agreed that it causes social disturbance in their community.

#### **4.8 Environmental Impact of Trucking on Mararaban Jos and Tafa.**

This section analyzes the environmental impacts of trucking on the rest stations. This will be examined from the impact trucking on traffic hold-up, open defecation, dirty dumps, soil degradation, air pollution and poor aesthetics.

**Table 4.28: Environmental Impacts of Trucking on the Study Areas.**

<b>Variables</b>	<b>Mararaban Jos</b>	<b>Tafa</b>	<b>Mararaban Jos</b>	<b>Tafa</b>
Traffic holdups <sup>4</sup>	27	22.2	34.6	
Open defecation <sup>7</sup>	20	38.9	25.6	
Dirt Dump <sup>3</sup>	9	16.7	11.5	
Soil degradation <sup>0</sup>	5	5	6.4	
Air pollution <sup>3</sup>	7	16.7	9.0	
Poor aesthetics <sup>1</sup>	10	5.6	12.9	
<b>Total</b>	<b>18</b>	<b>78</b>	<b>100%</b>	<b>100%</b>

**Source: Field Work, 2015**

Table 4.28 shows the environmental impact of trucking. The non-development of the truck parks in the rest stations and its ancillary facilities such as convenience for the truckers use means that most of the time they defecate in the open space whenever they are pressed. Indeed 38.9% and 25.6% in Mararaban Jos and Tafa respectively identified open defecation as a major environmental impact of trucking on their community. Also the fact that the designated truck parks are not developed means that these trucks are usually parked on the main highway in the town thereby causing traffic holdups in the rest stations. It is not surprising that 22.2% in Mararaban Jos and 34.6% in Tafa attested to this. Other environmental impacts identified included soil degradation occasioned by indiscriminate oil spillage, air pollution and poor aesthetics.

**4.9 CROSS TABULATION OF SOME VARIABLES.**

In this section, certain variables were cross tabulated in order to discover if there is any relationship between them.

**Table 4.29: Cross Tabulation of Age Bracket and Marital Status of Truckers in Mararaban Jos.**

		Singles	Married	Divorced	Total
	< 20			004	
Age Bracket of Truckers in Mararaban Jos	20-29			106	
	30-39	100	10	10	
	40-49	026	8		
<b>Total</b>		<b>913</b>	<b>628</b>		

**Source: Field work 2015.**

From table 4.29 above, it can be seen that not much relationship exists between the age bracket and marital status of truckers in Mararaban Jos as the truckers are well distributed within the two variables.

**Table 4.30: Cross Tabulation of Age Bracket and Occupational Status of Truckers in Mararaban Jos.**

	Drivers	Assistant Drivers	Motor Boys	Total
Age Bracket of Truckers in Mararaban Jos	< 20	4	0	4
	20-29	6	0	6
	30-39	6	0	6
	40-49	4	4	8
<b>Total</b>	<b>14</b>	<b>10</b>	<b>4</b>	<b>28</b>

**Source: Field work 2015.**

Table 4.30 above reveals that in cross tabulating age bracket and occupation of truckers in Mararaban Jos drivers have more spread among the age brackets as they make up half of the respondents.

**Table 4.31: Cross Tabulation of Age Bracket and Marital Status of Truckers in Tafa.**

	Singles	Married	Divorced	Widow/ Widower	Total
Age Bracket of Truckers in Tafa	< 20	2	0	0	2
	20-29	4	0	0	4
	30-39	2	8	0	10
	40-49	9	2	0	11
	50-59	0	2	1	3
	60 >	0	0	1	1
<b>Total</b>	<b>8</b>	<b>17</b>	<b>2</b>	<b>1</b>	<b>28</b>

**Source: Field Work**

Table 4.31 above reveals that in cross tabulating age bracket and marital status of truckers in Tafa, there seems to be a relationship between the age brackets 30-39 and 40-49, as this two age bracket make up the married truckers and they are over half of the truckers in Tafa.

**Table 4.32: Cross Tabulation of Age Bracket and Occupational Status of Truckers in Tafa.**

	Drivers	Assistant/ Drivers	Motor/ Boys	Total
Age Bracket of Truckers in Tafa	< 20	2	0	2
	20-29	4	0	4



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30-3991010  
40-4908311  
50-590033  
60 >0011

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**Total159731**

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**Source: Field work, 2015**

Table 4.32 above reveals that in cross tabulating age bracket and occupational status of truckers in Tafa, there is a relationship between the youthfulness and driving as the age brackets <-20, 20-29, 30-39 make up almost half of the truckers in Tafa.

## **CHAPTER 5 SUMMARY, CONCLUSION AND RECOMMENDATIONS.**

### **5.1. Summary**

In carrying out this research work, a total of 134 questionnaires were distributed to the residents of the two rest areas, with 33 going to Mararaban Jos and 101 going to Tafa of the numbers distributed to the areas, 18 were recovered from Mararahan Jos, while 78 was recovered from Tafa. Also, a total of 61 were distributed to drivers, assistant drivers and driver's mates in Mararahan Jos and Tafa. 30 were administered in Mararaban Jos and 31 administered in Tafa of this, 28 was recovered from Mararahan Jos and 31 recovered from Tafa. The questionnaires recovered were then presented and analyzed using tabular presentation. In the process of analysis, it was discovered that the truckers making use of the rest stations were mostly males as the profession is still dominated by males in the Country. It was also discovered that majority of the truckers are within the middle age brackets (30-39 and 40-49) this means that the trucking profession requires some forms of physical strength. Equally, it was discovered the truckers that make use of the rest stations are fairly composed of the three major ethnic groups in the country. Also, in the process of analysis it was discovered that the major reason for truckers

stopping in the rest stations is for vehicle maintenance; this is also their main expenses while they are in the rest stations.

Furthermore, in the process of analysis, it was observed that trucking is impacting greatly on trading/business in the rest stations. This is as a result of the fact that majority of the trading/business activities in the rest stations are related to trucking; with most of the business operator agreeing that truckers are their major customers and that trucking has a great impact on their profit margin.

In terms of trucking facilities available for truckers in the rest stations, in the process of analysis, it was discovered that the truck parks in the rest stations are totally undeveloped. With regards to the social impact of trucking on the rest stations, analysis showed that trucking is majorly responsible for social crisis in the rest station. This is usually caused by the abuse of hard drugs and alcohol. With regards to the environmental impact of trucking on the rest stations, analysis also revealed that traffic holdups, open defecation and air pollution are the major environmental impact of trucking on these rest stations.

## **5.2 Conclusion.**

Based on the findings of this study, it can be concluded that trucking in the town of Mararaban Jos and Tafa have a positive effect on their socio-economic development. This was reflected by the numbers of economic activities that derive their existence on activities related to trucking. Furthermore, it was discovered that in these two rest stations, the stoppage of these trucks in the town served as a source of employment for some youth in the area, with some serving as apprentice in places like mechanic garages, washing bays for these trucks and spare parts shops.

Another noticeable conclusion of this research work is that the presence of restaurant industry in the two towns. Comparing this industry in the two towns it was discovered that they were mainly frequented by the truckers, these restaurants serve as a source of employment and income for the residence of these towns. Existing side by side with the restaurant are the tea seller (maishayi) whose stall usually serves as meeting points for drivers, assistant drivers and driver's mates especially at night.

Despite the entire positive conclusion drawn on the impact of trucking on the impact of trucking on the socio-economic development of these two rest stations, several negative conclusions were also drawn. Chief of which is the traffic hold-ups in the rest stations, the presence of illicit hard drug market in the towns, presence of high rate of prostitution, soil degradation and the haphazard parking of these vehicles in the towns which seriously distort the ambiance of the town.

It can therefore be concluded that trucking in rest stations when compared has an almost equal effect on the socio-economic development of the two rest stations.

### **5.3. Recommendations**

Based on the findings of this research work the following recommendations are hereby suggested to concerned authorities for implementation, and it is believed that if implemented could go a long way in improving the socio-economic well-being of not only the residence of the research areas, but also that of the drivers, assistant drivers and driver's mate that stop over in town. These recommendations are:

- The development of the designated truck parks located in the rest stations, this development should be a holistic one which will entail providing all necessary facilities required by truckers in the park.
- Relocation of truckers from within the town to the truck park after the parks have being developed.
- The encouragement of small scale business operator within the town to enable them expands their business thereby creating more employment and generating more profit for the residents' and also serving as a source of revenue for the local council areas in form of taxes.
- The discouragement of the illicit hard drug trade in the towns which has caused untold hardship on these towns and even resulted in a number of accidents.
- The discouragement of the illegal prostitution going on in these towns as this will greatly help in reducing the spread of HIV/AIDS.

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### ***QUESTIONNAIRE***

Dear Respondent,

This questionnaire is designed for a study titled "Comparative Analysis of the Effects of Trucking on the Socio-Economic Development of Mararaban Jos and Tafa" it is aimed at a comparative analysis of the effects of trucking on the socio-economic development of these stations. Therefore your responses are primarily going to be used for academic purpose only. Thanks for your cooperation.

Researcher.

### **RESIDENTS QUESTIONNAIRE**

#### **SECTION ONE: BIO DATA**

[1] Gender: [A] Male [B] Female [2] Age: [A] <20 [B] 20-29 [C] 30-39 [D] 40-49 [E] 50-59



[F]60and>

[3]Marital Status: [A] Single [B] Married [C] Divorced [E] Widow/widower.

[4]Occupation: [A]Civil servant [B]Business operator [C]Artisan [D] Self-employed [E] Retiree[F]Military/Paramilitary [G] Unemployed.

[5]Educational Status: [A]Non-Formal [B]Primary [C]Junior Secondary [D] Senior Secondary [E] Tertiary

[6] Ethnicity: [A]Hausa/Fulani [B] Yoruba [C]Igbo [D] others (specify)

[7] Religion: [A] Christian [B]Islam [D] Traditional [D]others (specify)

## **SECTION TWO: ECONOMIC ACTIVITIES:**

[8]Whattypeofbusiness activity(s) doyouengage in, inthe community? [A]

Mechanic [B]Vulcanizer [C]Carwasher [D] Trading [E]Restaurateur [F]Brothelier  
[G] Others (specify)

[9]Areyoutheowner ofthebusiness? [A]Yes[B]No

[10] If yes, what are your working hours in the station [A] During day time [B] During night Time [C] Bothdayandnighttime.

[11] Whoareyour customers? [A]Truck drivers [B] Truck Motor boy[C]Truck passengers [D] Residents ofthearea.

[12]What inyour ownopinion istheeffect oftrucking onyour business? [A]Increases profit margin [B] Noeffect on business [C]ithelps toattract other customers tothe area.

## **SECTION THREE:S0CIAL IMPACT OFTRUCKERS ONTHE REST STATIONS.**

[13]Whichtype ofcivil disturbance doyounormally experience inthecommunity?

[A]Political crisis[B]Social crisis [C] Ethno religious crisis.

[14]Howfrequent is theoccurrence ofthese civil disturbances? [A]Very frequent [B]

Frequent [C]Not veryfrequent [D] Once inawhile.

[15]Atwhich period oftheyear doesthese civildisturbance occurs? [A]January-March [B] April-June[C]July-September [D] October-December.

[16]Atwhatperiod ofthedaydoesthese social disturbance occurs? [A]Moring hours [B] Afternoon [C] Night hours.

[17]What are themajor causes ofthecivil disturbance? [A]Religiontension [B] Rumor ofinsurgency [C]drug abuse[D]Fight over parking space [E]Fightover union dues [F]Fightoverwomen [G]Fightasareult ofdrunkenness[H] other social vices.

[18]Whoaretheparties normally involved inthese fights? [A]Truck driversvs truckDrivers [B]TruckDriversvs motor boys [C]Union vstruck drivers [D]Residents vsTrucks Driver/Motor boys.

[19] What are the effects of truck drivers parking in the area? [A] It attracts women of easy virtues [B] It attracts night clubbing [C] It attracts sales of hard drugs [D] It attracts drinking joints [E] It attracts operation of brothel.

[20] Generally, how can you assess the effects of truck drivers in the area [A] It brings business [B] It causes hold ups [C] It causes social disturbances [D] It breeds bad boys and girls.

**SECTION FOUR: ENVIRONMENTAL EFFECTS OF TRUCKING ON THE REST STATIONS.**

[21] On a scale of 1-5, (1 being the lowest effect and 5 being the highest effects) how can you rank the following environmental effects of trucking on your community?

	Environmental Effects of Trucking on your community	Ranking				
		1	2	3	4	5
1	Traffic Hold up					
2	Open defecation					
3	Dirty dump					
4	Air pollution					
5	Poor aesthetics of the community					

[22] State what you want the Government to do to your community that would encourage more truckers to patronize your community

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**QUESTIONNAIRE**

Dear Respondent,

This questionnaire is designed for a study titled Comparative Analysis of the Effects of Trucking on the Socio-Economic Development of Mararaban Jos and Tafa. It is aimed at a comparative analysis of the effects of trucking on the socio-economic development of their rest station. Therefore, your responses are primarily going to be used for academic purposes only.

Thanks for your cooperation

Researcher.

**TRUCKERS**

**QUESTIONNAIRE**

**SECTION ONE:BIODATA**

- [1] Gender: [A] Male [B] Female [C] NoResponse
- [2] Age:[A]<20[B]20-29 [C]30-39 [D]40-49 [E]50-59 [F]60and>
- [3]Marital Status: [A]Single [B]Married [C]Divorced [D] Widow/widower
- [4]Educational Status: [A]Non-Formal Education[B] Primary School [C] Junior Secondary School [D]Senior Secondary School [D]Tertiary.
- [5]Occupation: [A]Driver [B]Assistant Driver [C] Driver’s Mate
- [6]Ethnicity: [A]Hausa/Fulani [B]Yoruba [C]Igbo [D]others (specify)
- [7] Religion: Christianity [B]Islam [C] Traditional [D] others (specify)

**SECTION TWO:TRUCKERS ECONOMIC ACTIVITIES WHILE INTHEREST STATIONS.**

- [8]Whattypeofactivities doyouengage inwhile inthearea? [A]Vehicle maintenance [B] Vehicle cleaning/washing [C]Rest alone [D]Restwithwomen [E]Eating/drinking
- [9]Howmany hour(s) doyou spend inthisreststation? [A]<1hrs[B] 1-2hrs [C]2-3hrs. [D] 3-4hrs[E]4-5hrs.[F] Morethanaday.
- [10] Doyouhave any particular shop(s)/place(s) youpatronize? [A] Yes[ B ] No.
- [11]Onascaleof1 - 5 (1beingthelowesteffectand5 beingthehighesteffect)howCanyou rankyour differenttypesofexpenseswhenyouareinthiscommunity?↵

	Different types of expenses	Ranking				
		1	2	3	4	5
1	Vehicle servicing					
2	Vehicle vulcanizing					
3	Refueling					
4	Vehicle cleaning/washing					
5	Eating/drinking					
6	Relaxation					

- [12]Whydoyouchoose thisreststation? [A]Presence ofbusiness partners [B]Presence Of good relaxation spot [C] Presence of good truck repairs facilities
- [13] How can the rest station be made more attractive to truck drivers?

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**VEHICULAR COUNT CHART: DATE.....**

S/NO.	7.00AM-9.00AM	6.00PM-8.00PM
