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**UNIVERSITY FOR DEVELOPMENT STUDIES**

**ASSESSMENT OF THE CONTRIBUTION OF TRICYCLE  
TRANSPORTATION BUSINESS TO THE GROWTH OF THE LOCAL  
ECONOMY OF THE WA MUNICIPALITY**

**CLETUS GALYUON**

**UDS/MDM/0411/16**

UNIVERSITY FOR DEVELOPMENT STUDIES



**2019**

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**BY**

**CLETUS GALYUON**

**(UDS/MDM/0411/16)**

UNIVERSITY FOR DEVELOPMENT STUDIES



**A THESIS SUBMITTED TO THE DEPARTMENT OF GOVERNANCE AND  
DEVELOPMENT MANAGEMENT IN PARTIAL FULFILMENT OF THE  
REQUIREMENTS FOR THE AWARD OF MPhil. DEGREE IN DEVELOPMENT  
MANAGEMENT.**

**2019**

**DECLARATION**

I hereby declare that this thesis is the results of my own original work and that no part of it has been presented for another degree in this noble university or elsewhere.

Candidate's Signature ..... Date.....

Name: Cletus Galyuon

I hereby declare that the preparation and presentation of the thesis was supervised in accordance with the guidelines on supervision of thesis laid down by the University for Development Studies.

Principal Supervisor's Signature..... Date.....

Name: Dr. Sulemana Mohammed



## ABSTRACT

Transportation is considered as a key factor in the socio-economic growth of any country. The main mode of public passenger transport in the Wa Municipality had been mainly mini buses (trotro). A new transport system called the tricycle transportation system was introduced, to complement the commercial transportation system in the Municipality. This study was conducted to assess the contribution of the tricycle transportation system to the growth of the local economy of Wa Municipality. Data was gathered from a sample of 329 respondents. Questionnaires, interviews and observations were the data collection tools employed in the study. The data gathered were analyzed quantitatively and qualitatively. The study found that: the tricycle transportation business has created employment for 104 out of the 232 respondents. The tricycle transportation business had also reduced the long waiting time for vehicles by businessmen/women and this had contributed to increased productivity by way of increased labour hours, improved accessibility, and increased income of beneficiaries. It was again found that the tricycle transportation had enhanced mobility for the poor and vulnerable groups who do not have their own personal means of transportation. High returns (sales) demanded by owners from operators was identified as the most challenging issue facing tricycle drivers in the Municipality. The study concluded that the introduction of tricycle transportation business has contributed significantly to the economic growth of the Wa Municipality through employment creation, business growth and easy movement of people and goods. Again, it concluded that even though the tricycle transportation in the Municipality is contributing to economic growth, its operations are illegal. It was recommended that the GPRTU and other stakeholders should collaborate to regulate commercial tricycle operations in the region.



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## DEDICATION

I dedicate this work to all those who contributed to my success in this thesis writing.



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## LIST OF ABBREVIATIONS

AFDBG	African Development Bank Group
CBA	Cost Benefits Analysis
DVLA	Driver Vehicle License Authority
FPLM	Faculty of Planning and Land Management
GNA.	Ghana News Agency
GPRTU	Ghana Private Road Transport Union
GPS	Ghana Police Service
GSS	Ghana Statistical Service
HOD	Head of Department
ISSER	Institute of Statistical, Social and Economic Research
MASLOC	Microfinance and Small Loans Centre
MoFA	Ministry of Food and Agriculture
MTTD	Motor Transport Traffic Department
NRC	National Regulatory Commission
NRSC	National Road Safety Commission
NZP	New Zealand Policy
OECD	Organizations for Economic Co-operation and Development
PROTOA	Progressive Transport Owners Association
SSA	Sub-Saharan African
SSATP	Sub-Saharan African Transport Policy Program
STC	State Transport Company
TTB	Tricycle Transportation Business
TTS	Tricycle Transportation System
WMA	Wa Municipal Assembly



## CHAPTER ONE

### INTRODUCTION

#### 1.1 Background of the Study

According to Amegashie (2015) and Barnes (2005), transportation is defined as the activity which primarily is concerned with providing an increasing human satisfaction through the changing of geographical location and the position of people and goods. Transportation is considered a key factor in the socio-economic growth of any country (Oduro, 2012; Healey and Ilbery, 1990). Efficient transportation does not only facilitate spatial interaction and reduces the friction of distance, but it is also a precondition for effective economic, social and political development of a country (Keskinen, 2007; Healey and Ilbery, 1990). Transportation irrespective of mode makes it possible for goods and people to access services and facilities across national boundaries. There is a very strong relationship between economic growth and transportation (Rodrigue, 2017; Gillen, 1996).

Agyemang and Panford (2006) cited Taaffe et al (1973) as saying that, economic growth of underdeveloped countries is a crucial factor for improvement of internal accessibility through the expansion of transportation networks that are important factors of economic growth. Agyemang and Panford (2006) were of the view that many social and political forces influence the process of transportation networks that are important factors for economic growth. In spite of its importance, there appears to be considerable setbacks in transportation growth, especially in developing countries as a result of the high financial requirements expected in meeting its cost. This has led to the slow pace of economic growth in most countries in Africa, of which Ghana is no exception. Rodrigue (2017) said that, transportation and the movements of people, goods and information have always been fundamental components of the economic and social life of societies.



Contemporary economic processes have been accompanied by a significant increase in mobility and higher levels of accessibility.

Transportation is also a commercial activity that derives benefit from operational attributes such as costs, capacity, efficiency, reliability and speed (Rodrigue 2017). Transportation systems are evolving within a complex set of relationships between transport supply, reflecting the operational capacity of the road network and transport demand, the mobility requirements of an economy (Bardi et al, 2006: Rodrigue 2017). Economic growth has always been dependent on increasing the capacity and rationality of transportation. Because of the way in which contemporary cities and towns are planned and operated, there is usually a physical distinction between home and work, forcing people to move to work, to study and to leisure, and also to move temporarily for other activities. Commerce requires the transport of people to conduct business (Bardi et al, 2006).

Government has recognized the role transportation plays in Ghana in terms of economic growth and as a result has enacted an Act to regulate its activities (Agyemang and Panford 2006; Rodrigue 2017). According to the Road Fund Act 1997 (Act 536), a reliable and affordable road transport system plays a key role in the socioeconomic development of Ghana. Road transportation forms an important part of the social safety net, facilitates the distribution of wealth through trade and employment opportunities in both urban and rural communities (Road Fund Act 536, 1997). This means National target for economic growth also relies on transportation.

Considering the rapid growth of Africa's population and cities, the demand for this small business (tricycle transportation business) will surely explode in the coming years (Levy and Wong, 2010). Known by several names, the tricycle business is growing in popularity across Africa (especially in the low and lower middle-income countries). Its many names on the continent include: Tuk-tuk





(Eastern Africa - Kenya, Ethiopia, Tanzania), Pousse-pousse (Madagascar), Keke (Nigeria), Raksha (Sudan), and Mahama Can Do and Nyaaba lorry in (Northern Ghana) (Levy and Wong, 2010).

In many developing countries such as Asia, motorcycles and tricycles are used as the main means of transportation, especially, among low-income urban dwellers and the poor (Dinye and Ahmed, 2015). The resort to motorcycles and tricycles as an alternative means of transport in solving urban mobility problems of towns in Northern Ghana has introduced varying dimensions of issues including traffic accidents and safety on the roads, registration issues, and employment and maintenance activities. Various researches have been conducted on the issues of motorcycle traffic accidents, motorcycle traffic management in motorcycle dependent cities, commercial motorcycle operations among others (Banthia et al, 2006; Adesanya, 1998). In the Wa Municipality, the tricycle transportation business (TTB) has literally taken over as the main commercial transportation system. Rodrigue (2017), there is a very strong relationship between economic growth and transportation. Njoh (2000), said the transportation sector overlaps with almost all other sectors of the economy. According to the Ghana Statistical Service (2018), there has been a consistent increase in GDP in 2016-2017. In 2016, GDP from transport increased from GHS 3837m to 3853m in 2017 (GSS, 2018). The contribution of tricycle transportation to the growth of the local economy is the focus of this study.

## 1.2 Problem Statement

According to Bardi et al (2006) and Rodrigue (2017), a growing share of the wealth is linked to trade and distribution. As transportation has positive impacts on socioeconomic systems, there are



also negative consequences such as congestion, accidents and mobility gaps. Some segments of society lack adequate access to employment, health care, schooling, shopping and many more. Recent years have also seen a growing recognition that certain segments of the society are disproportionately affected by transportation-related issues (Hanson and Giuliano, 2004). Developing transportation systems has been a continuous challenge to satisfy mobility needs, to support economic development and to participate in the global economy (Rodrigue, 2017).

The mode of transportation in the Wa Municipality had been mainly mini buses trotro. From a pre-research survey in 2016, the urban transportation system mainly with ‘trotro’ in the Wa Municipality had been very poor. This limited peoples’ access to work places, health care centers, schools and market centers. The trotro route was mainly from Bamaho UDS Campus to UDS Old Campus (Sombo) leaving the other areas isolated. Residents around Wa Polytechnic, Airstrip area, and other places did not access the “trotro” to and fro their residency. This had a negative effect on the growth of the local economy of Wa Municipality, since transportation systems are closely related to socio-economic changes (Rodrigue 2017). Residents, Visitors, and travelers faced transportation problems in the Municipality. With the trotro, one could not go out to any place in the night when the person did not have his or her personal means of transportation because the trotro drivers used to close as early as 6.30pm. Travelers could not also go to their various destinations when they arrived as late as 10 pm. This situation propelled travelers to sleep at the station till next day because they were afraid to be attacked by criminals who always patronized in the night. Banjo et al., (2012) argued that people who cannot move themselves and their goods cannot pursue economic and social activities.



Originally, Asia was known to be the continent which used tricycle as their major means of transportation. But in recent times, tricycle transportation has gained a solid root in African countries such as Kenya, Nigeria, Tanzania, and Ethiopia and more recently in Ghana. There is evidence currently on integration of tricycle transportation in the Municipality as it is in urban transportation system in the poor and lower middle-class countries. In the Northern part of Ghana, Wa Municipality specifically, the tricycle transportation now dominates the urban and rural transport system (Dinye and Ahmed, 2015, Afukaar and Dery, 2017) and this has gained a solid root in the transportation sector. Barely three years after its introduction, it has taken over the Regional Capitals of the three Regions in Northern Ghana as the preferred means of commercial transportation (GNA, 2017).

Various studies have been conducted on transportation in Ghana and for that matter Wa Municipality in the Upper West Region from diverse perspectives. For instance, Dinye and Ahmed (2015) looked at the motorized transportation in urban areas in the Northern Ghana. Also, Aikins and Akude (2015) worked on the impact of tricycle transportation in the agricultural sector. Mukhtar et al (2015), Bonsu (2015) and Ipingbemi and Adebayo (2016) also did a study on tricycle transportation which centered on urban transportation. Studies that have been conducted on tricycle transportation did not provide a comprehensive data on the indicators of economic growth with regards to the tricycle transportation in the Wa Municipality. This study however looks at how individuals and businesses have benefited from the introduction of the tricycle transportation business and the various ways that it has contributed to economic growth in Wa Municipality. The study therefore assesses the various transportation systems and how reliable and efficient they contribute to economic growth in the Wa Municipality. Again, in the context of the Wa Municipality, very few empirical works have been done on the contribution of tricycle



transportation. It is based on this background that the study seeks to assess the contribution of TTB to the growth of the local economy, of Wa Municipality of the Upper West Region.

### **1.3 Research Questions**

#### **1.3.1 Main Research Question**

The main research question to the study is: what is the contribution of Tricycle Transportation Business (TTB) to the growth of Local Economy of Wa Municipality?

#### **1.3.2 Sub Research Questions**

- a. How has the introduction of the tricycle transportation business influenced economic activities such as employment creation, businesses efficiency and mobility enhance in the Municipality?
- b. What are the challenges facing the growth of the tricycle transportation business in the Wa Municipality?
- c. What can be done to improve the tricycle transportation business in the Wa Municipality?

### **1.4 Research Objectives**

#### **1.4.1 Main Research Objective**

The main research objective of the study seeks to find out the contribution tricycle transportation business plays to the growth of local economy in the Wa Municipality.



#### **1.4.2 Sub Research Objectives**

- a. To determine how the introduction of tricycle transportation business has influenced economic activities such as employment creation, businesses efficiency and mobility enhance in the Wa Municipality.
- b. To identify the challenges facing the growth of the tricycle transportation business in the Municipality.
- c. To find out strategies that can be used to improve tricycle transportation business in the Wa Municipality.

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

Whereas there is the observation that TTB has helped reduced the transportation challenges in the Wa Municipality, there is no empirical findings regarding the extent to which the Municipality has benefited from their operations and much more importantly, how the tricycle transport have contributed to the growth of the local economy. This study therefore is timely and relevant in providing concrete information on how the tricycle transportation business has contributed to the local economy of the Wa Municipality which the benefits could be replicated in other districts.

The challenges and risks associated with the drivers and passengers of the tricycle operations will be appraised and highlighted and recommendations made for their safe and enhanced operations in the Municipality. This study would likely create an awareness to investors as to the importance of investing into the tricycle transportation business in the Wa Municipality and this will further ease the transportation challenges of the area. The outcome of this study would serve as a guide



for policy makers and planners to identify the major transportation routes of tricycles and how to improve them to enhance economic activities in the Municipality.

Given the topical nature of transportation system and its related issues, this study would not only prompt other researchers but would also enhance their interest to do further research in the area, with this study serving as the basis. By and large, the study will add to the knowledge base of literature and society. This study would guide policy makers like planners and geographers to consider how important a reliable transport system is to the growth of an economy in their policies.

### **1.6 Scope of the Study**

This study was conducted geographically in the Wa Municipality of the Upper West Region of Ghana. It focused on finding out how the introduction of the tricycle transportation business has influenced economic activities in the Municipality, the challenges of tricycle transportation business in the Wa Municipality and how to improve the tricycle transportation business in the Wa Municipality.

According to DVLA (2017), tricycle transportation business had been in existence in the Municipality since 2012. The passenger tricycle (Mahama Can Do) started operating as commercial transportation system since 2015 whiles the freight tricycle has been in the system since 2012. The selected tricycles for this research were the registered tricycles in the Municipality since 2012. 2012 was chosen with the reason that, it had been observed that the Nyaaba Lorry/Motor King had been operating since 2012 whiles the 'Mahama Can Do' started operating in the Municipality since 2015. The study therefore covers a five-year period (2012 to 2017) but will be centered the more on 2015 to 2017. The periods chosen (2015 to 2017) were capable and have enough evidence to address the problem as Streatfield (2009) stated that, "too much long-



term, far-reaching impact will be difficult to achieve and monitor; too much short-term, limited impact will not allow you to use the full potential of the result expected”. This actually helped the researcher to collect data that could monitor the efficiency of TTBs and appraise the effects of their services on users and the local economy of the Wa Municipality.

### **1.7 Organization of the Study**

This report is organized into five chapters. Chapter one looked at the Introduction of the study which is made up of background information, statement of the problem, research questions, research objectives, significance of the study, scope of the study and organization of the study.

The literature review is presented in Chapter two and is done on concepts and theories on the topic and pays attention to the research objectives. Chapter two also illustrates the conceptual framework of the study.

Chapter three constitutes the methodology of the study. It is made up of study design, study area, population, sample/sampling techniques, data collection instruments, data analysis and presentation methods and ethical considerations.

Analysis of data and discussions together form chapter four. This chapter analyzes data gathered from the field in line with objectives of the study for logical presentation. The analysis also takes into account the literature reviewed on the topic. The summary and conclusion of the study go into chapter five. Recommendations of the study are also captured in this chapter.

### **1.8 Key Terms**

The following terms used in the study are defined for better understanding of the study.



**Business:** is an economic activity whose main purpose is to make a profit. A business is an enterprise that provides products or services desired by customers. The people who create businesses may see an opportunity that is not already known or offered by other people or firm (Madura 2007).

**Contribution:** Contribution means what has been added to something to make it more developed or advanced.

**Commuters:** commuters in this study refers to the passengers of the vehicles (tricycle). Commuting is an activity of traveling some distance such as work, funeral, visit, church and for leisure and other places.

**Communication:** Communication refers to how or the mode of transporting information. How information gets to its final destination, how it is being delivered.

**Challenges:** challenges are the problems that are faced by users of the tricycle, be them drivers, passengers and regulators of the tricycle transportation system. The challenges explain the adverse effects on businesses and economic growth.

**Tricycle:** A tricycle, often abbreviated to trike, is a human-powered (or gravity-powered) vehicle. Some tricycles, such rickshaw trike (for passenger transport) and freight/goods trikes, are used for commercial purposes (Quellin, 2011).

**Transportation:** It is the movement of people or goods from one place to another through several modes. It could be through road, water, or air. Transport enhances movement of people and goods and facilitates national integration and development in general (Girvan, 2007).





**Local economy:** an economy is an area of the production, distribution, or trade, and consumption of goods and services by different agents. The local economy is how a confined society; region or state depends on its local activities for survival. The main issues that the local society, region or state is capable of doing to achieve or enhance development.

**Growth:** Growth refers to an increase in an activity. Growth refers to a positive change in size, and/or maturation, over a period of time.

**Economic growth:** Economic growth is a factor of economic variables, social variables, and political variables. An improvement in people's standard of living and societal growth. Economic growth is a dynamic concept which involves the steady process of increasing productive capacity of the economy (Clarke, 2003:28).

**Urban transportation:** movement of people or goods within urban or a developed or developing areas.

**Regulators:** Regulators are the institutions or agencies responsible for directing/monitoring the operations of the transportation system in the Wa Municipality.

**Tricycle drivers:** tricycle drivers are the people who drive or operate the tricycle for commercial purpose. They are people who do this work all the time not part time. These are people who have taken this business as their main occupation.



## CHAPTER TWO

### 2.0 LITERATURE REVIEW

#### 2.1 Introduction

Chapter two of the study reviewed scholarly works on transportation and tricycle transportation system with its focus on local and national economic growth. The chapter gives a detailed explanation on the various concepts of transportation, the Local Economic Development (LED), theories of transportation and other relevant areas. It also reviewed issues on how tricycle transportation affect/influence business activities. The challenges that are faced in the tricycle transportation system are also reviewed with possible ways of improving them. The literature review also touches on the various regulatory policies transportation system in Ghana.

#### 2.2 Concept of Transportation

Transportation primarily involves the movement of goods and people. Since it is an activity which enables a person or a company to provide service to another person or company, it stands to reason that there must be rules of engagement or an understanding as to what sort of relationship should relate and govern the undertaking. Transportation creates, opens access to education, social facilities, health, industry, business, and commerce (Amegashie, 2015; Yeboah, 2015). For example, various studies revealed that public transport (paratransit) is more heavily influenced by the number of jobs in the city's downtown area than by almost any other factor (Barnes, 2005). The demand for travel takes place in a multidimensional setting. More recently, researchers have paid greater attention to other dimensions of choice, such as residential and job location, household automobile ownership, the time of day at which trips are taken, parking locations, and the duration of activities for which travel is undertaken, hence the introduction of the tricycle (Barnes, 2005). Furthermore, travel is a derived demand, usually undertaken not for its own sake



but rather to facilitate a spatially varied set of activities such as work, recreation, shopping, and home life (Small and Verhoef, 2007; Obateru, 2005).

### **2.3 Mode of Transportation**

Transportation modes are an essential component of transport systems since they are the means by which mobility is supported. A wide range of modes are grouped into three broad categories based on the medium of their activities: land, water, and air (Bardi et al, 2006; and Keskinen, 2007). Each mode has its own requirements and features and is adapted to serve the specific demands of freight and passenger traffic (Delta Regional Authority Report (DRA), 2008). This gives rise to marked differences in the ways the modes are deployed and utilized in different parts of the world. At the same time, however, passenger and goods activity is becoming increasingly separated across most modes (Rodrigue, 2017).

According to Eddington (2006), the creation of the transportation network influences economic geography, such as the location of its economic activity. The transportation network influences the location of industry, they revolutionize passenger movement and are critical in the creation and growth of many urban areas. The subsequent development of the strategic road network plays a key role in the relocation of new, light industries, attracted by market access and new clusters. At an urban/metropolitan level, there is strong evidence that enhancements

inaccessibility to or in particular areas can have major effects on the location and pattern of development. In the longer term, accessibility changes can influence the form and density of the urban area, including the balance between the use of different transport modes (including walking and cycling for shorter trips and public transport for longer trips) (NZP, 2014).



## 2.4 Transportation Systems in Ghana

As a result of the significant contribution transportation plays in the socio-economic growth of the country, the government of Ghana has recognized it and has formed a Ministry to craft policies that will make possible provision to market centers, health facilities and socio-economic centers to enhance regional integration, cooperation and good governance (Ministry of Transport Annual Report, 2017).

Bus transportation is the primary mode of public transport in nearly every major city of Africa. Bus transport infrastructure is the modest, comprising mostly central terminals, bus shelters or stops, and in a few cases special bus lanes and streets (African Public Transport Association, 2010). The motor vehicle fleet in urban areas comprises private cars, buses, trucks, motorcycles and intermediate forms of transport (such as cars and bicycles). Private cars are concentrated in the urban areas, where average incomes are higher (African Public Transport Association, 2010).

According to a report by Adams (2004), majority of the vehicles used in Ghana are second hand buses. These are economically unwise for the country to continue to encourage in the intra-urban transportation system. Vehicles which are generally old aged, expensive to run-consuming much fuel and needing more repairs and are the cause of numerous road accidents in Ghana (Adams, 2004), It is therefore clear that vehicles found in the Southern part are in good shape and are not expensive to run and does not consume much fuel and requires less repairs. Old aged vehicles require more and frequent repairs and are the main causes of accident (Bonsu, 2015). However, Tamale in the Northern Region recorded the highest old aged vehicles in Ghana, and has led to the rampant causes of road accident in the Northern Region (Bonsu, 2015). The used and old-aged vehicles in the Southern part are always disposed to the Northern part and these old and poorly



maintained vehicles produce deadly emissions and are environmentally unsuitable (Gillen, 1996). This introduction of the tricycle transportation system in the Northern Region has contributed to the reduction in road accidents in Ghana especially in the Northern part because people prefer patronizing the TTB than the trotro (GNA, 2017).

## **2.5 Tricycle Transportation System in Africa**

The tricycle transportation system is one of the vehicles on road transportation system which has recently taken a pave in the transport system especially in Asia and Africa. A tricycle, often abbreviated to trike, is a human-powered (or gravity-powered) three-wheeled vehicle. Some tricycles, such as cycle rickshaws (for passenger transport) and freight trikes, are used for commercial purposes, especially in the developing world, particularly Africa and Asia (Quellin, 2011). In the West, tricycles are used primarily for recreation, shopping, and exercise. Tricycles are favored by children and senior adults alike for their apparent stability versus a bicycle; however a conventional trike has poor dynamic lateral stability, and the rider must take care when cornering to avoid tipping the trike over (Quellin, 2011).

Tricycles are taxi like modes that rely on comparatively slow, light weight vehicles that provide lower quality services than exclusive ride taxis, although at considerably cheaper fares. In contrast to large vehicle services, they generally complement rather than compete with formal buses, trotros and taxis (Cervero, 2000). Other attributes such as entrepreneurialism, small or ageing vehicles usage for operation, low performance service and high level of competition typical of paratransit modes are also peculiar to tricycle (Cervero, 2000).

According to John (2011) the bike2clean programme in Uganda, has been made with the production of tricycles. The tricycles are used for garbage collection, and are produced in the



workshop (Reinders, 2016). There are two main types of tricycles in Ghana which are used for commercial purposes. They are the cycle rickshaws (passenger tricycle) “Mahama Can Do” as popularly known in the Northern part of Ghana and freight tricycle which is also popularly called as “Nyaaba Lorry” (Motor King) in Ghana.

### 2.5.1 Mode of Tricycle Transportation in Ghana

According to Guillen and Ishida (2003), tricycles are of different modes. In Africa, Ghana to be specific, there are two main modes of tricycle, which are the passenger and freight tricycle (Njoh, 2007). The tricycles are vehicles with powerful diesel engines, and fuel tank capacity of 10.5 litres. Physically, tricycles innovate motorcycle by extending its seat and adding an extra shock absorber. It seats 3-5 passengers (including the driver) per trip and its owner/driver organizational association does not have any internal policies on the use of helmet or other identifiable paraphernalia such as the use of colored motorcycle drivers’ jackets (Greene, 2011).

**Plate 2.1: A passenger tricycle**



Source: Field survey, 2017.

Urban delivery trikes (freight trikes) are designed and constructed for transporting large loads. These trikes include a cargo area consisting of a steel tube carrier, an open or enclosed box, a flat platform, or a large, heavy-duty wire basket (Quellin, 2011). These are usually mounted over one or both wheels, low behind the front wheel or between parallel wheels at either the front or rear of the vehicle to keep the centre of gravity low. Other specific design considerations include operator visibility and load suspension. Many, but not all, tricycles used for the purpose of vending goods such as foodstuffs, machines and other goods (Quellin, 2011).

*According to Greene (2011)*, many freight trikes are of the tadpole configuration, with the cargo box (platform and many others) mounted on the front wheels. Freight trikes are designed for indoor use in large warehouses or industrial plants. The advantage of using freight trikes rather than a motor vehicle is that there is no exhaust, which means that the trike can be used inside warehouses. Common uses include; delivery services in dense urban environments, food vending in high foot traffic areas (including specialist ice cream bikes) Guillen and Ishida, 2003) and this is really common in the Wa Municipality where it is used for distributing bread and other food products. Its uses also include: recycling collections, warehouse inventory transportation, food collection.



**Plate 2.2: Freight tricycle (Motor King/Nyaaba lorry)**



Source: Field Survey, 2017.

## 2.6 Factors Accounting for the Growth of Tricycle Transportation System in Developing Countries

The tricycle transportation is widely used in South Asia and Southeast Asia, and Africa where it provides essential employment for recent immigrants from rural areas, generally impoverished men (Njoh, 2007). In the 1990s and first decade of the 21st century, rickshaws (tricycle) became increasingly popular in Africa, where they provides urban transportation, novelty rides, and serve as advertising media (Greene, 2011). Guillen and Ishida (2003) also added that passenger tricycle is used as a means of transportation to places like office, market, school, hospital, recreational centers and other activities which were performed by taxis.





The vehicles are suitable for intra-city commuting and commercial passenger carriage with low fuel consumption (Declan, 2012). Tricycles can be found in many developing countries and some developed countries. In certain parts of Egypt tricycles are used to access long streets where the use of taxi would be uneconomical, but not necessarily in poorer areas (Declan, 2012). Similarly, tricycles are one of the most popular modes of transport in Bangladesh, Cambodia and the Gaza. They are present all over India and some part of Africa where they provide cheap and efficient transportation (BBC News, 2006).

The transportation system in any nation is determined by the socio-economic and political needs of the society (Ayodele, 2009). Whereas the rate of growth in the nation's social and economic sectors far exceeds the provision of transport infrastructure and services that the people demands. As such, available resources in the transport sector cannot cope with the increasing movement needs of the people (Ayodele, 2009). Since there is a ban, on the use of the motorcycle in some cities at a time there is a rapid increase in urban population, the need for the tricycle as a means of transportation has become obvious for urban transport in most developing countries (Sun, 2009).

In realization of the contribution of tricycle transport to urban transportation, the Federal Road Safety Commission (FRSC) organized a one day stakeholders forum for agencies and operators of tricycles in Nigeria (Ayodele, 2009) and the theme of the forum was "Ensuring Safe Operations of Tricycles in Nigeria". In the forum, the Corps Marshal and Chief Executive of the FRSC saw the tricycle as having been accepted by various state governments in the country as a means of poverty alleviation and the need to regulate its operations for improved safety on the roads (Declan, 2012). The authorities in the FRSC in Nigeria realized that the tricycle has become a household name playing a pivotal role in the urban transportation system of the country. They also realized that the tricycle transport ease transportation problems and create avenue for self-employment of



the unemployed and the jobless as commercial tricycle scheme popularly known as Keke Napep (Ayodele, 2009). According to Bamedele (2016), increasing the growth of commercial of the tricycle transportation system could attribute to some intrinsic benefits such as door-to-door service, easy movement during traffic congestion, have the ability to travel on poor roads network, and other social benefits to the people. This therefore means that, most at times the theoretical aspect is been degenerated by transportation experts on the traffic relevance of the tricycle, especially as a commercial means of providing mobility. However, most related aspect of transportation and its benefits such as employment has led to the introduction of the tricycle transport in most developing countries and it is fast extending to consider in almost all international issues (Bamedele, 2016).

According to the Ghana News Agency (2017), the tricycles have been nicknamed "Mahama Kambo" in appreciation of the role that ex-president John Dramani Mahama played in introducing the machines to Ghana and more specifically the three Northern Regions. The passenger tricycle was named after him as 'Mahama Can Do' because the people in the North realized that the tricycle transport was actually performing a role that the other transport systems couldn't perform (GNA, 2017). Currently, tricycle has become the major means of transport in the Northern Ghana and has taken over the urban transport system in Wa Municipality (WMA, 2017).



## **2.7 Tricycle Transportation and Local Economic Development (LED)**

According to Mensah et al, (2013), in pursuit to achieve national development goals, there is an increasing recognition that could only happen when the goals are translated into actions at the sub-national levels and by active involvement of local actors. Local Economic Development (LED) is a bottom up approach to economic growth through the recognition of the economic potentials of

every area (Mensah et al, 2013). Although LED as a model dates back to the 1960s and 1970s, to stress on enterprise development, improving infrastructure, building local partnerships, and generally promoting an inclusive and dynamic framework became the key strategy (World Bank, 2003). Transportation is one of the infrastructures that was identified by Davis and Catherine (2005) as one of the infrastructures for improving LED. Concerning the role LED plays, Adebayo and Taibat (2006), in their view added that the role of LED within an economy includes, setting up, running and supporting transportation network that could improve development.

Transportation systems have a lot of potentials to reduce the poverty of people in rural areas given the necessary attention (IEA, 2006). Improvement in transportation systems as a local development tool rests on the assumption that improving transport infrastructures will increase rural peoples' incomes, which in turn, will increase the people's ability to access basic social services (Fraser, 2009). Adebayo and Taibat (2006) state that, the essential mission of LED is to enhance transportation networks (Rodrigue, 2017) which in return can create jobs, promote and support small and medium-sized enterprises, improve the economic context and opportunity of the territory, and use businesses as a weapon in the fight against poverty (Adebayo and Taibat, 2006). In Ghana, LED is carried out by the District Assemblies (DAs) which have been mandated by the constitution to pursue the overall development of the district (Dere, 2001). Under the local government system of Ghana, local authorities have been given the authority to plan, support productive activities, develop basic infrastructure (Mensah et al, 2013).


According to Helmsing (2001), LED, consists of three strategies namely; Community Economic Development (CED), Locality Development (LD) and Enterprise Development (ED). Helvetas and Anembom (2005) opined that transportation infrastructure is one of the strategies needed to enhance local and community development. In simple terms, Helmsing (2001) sees CED as the



process by which local people build infrastructures that interconnect profitable business with other interests and values. In this strategy, describing how the community should change and organizations look for ways to make their actions and investments improve through the movement of goods and services from one location to another (Perry, 2003).

## 2.8 Tricycle Transportation Systems and LED Initiatives in Ghana

Tricycle transportation business are seen as strategies that are used for empowerment, developing existing local enterprises and connecting human wealth through transportation to enhance their economic base (Sun, 2009). The economic base in the view of Helmsing (2001) and Schmitz (1995) refers to those activities which are used to change the situation of individual in a locality through efficient (transportation). This economic base can be enhanced by the promotion of small to medium enterprises by having in place connected services such as transportation and freight (Helmsing, 2001). Microfinance and Small Loans Center (MASLOC) is one of the authorities in Ghana which provides productive activities in the Municipalities. They introduced the tricycles to people in a locality to help reduce their poverty and unemployment in Northern Ghana (MASLOC, 2017). Tricycle transportation system has been one of basic transportation infrastructures which has given much attention in the Municipality due to the role it plays in LED (WMA, 2017).



Čapkova (2005) in explaining LED initiatives listed a lengthy menu of possible local initiatives and classified them into five broad categories: financial tools; property related tools; marketing; infrastructure development; and providing technical and information assistance Dinye and Ahmed (2015) in their opinion also came out clear that tricycle transportation business is one of the initiatives in Northern Ghana in engaging youth in employment, poverty reduction and other values. To add to the above, LED initiatives include: ensuring the functionality of local

infrastructure in order to boost transporting goods and services. As result Hill and Nel (2004) are of the view that, the aim of any LED initiative is to increase the number of jobs available to the various communities through the creation or encouragement of enterprise and business activity (tricycle transport business). To achieve this, it is important that local entrepreneurial resources are mobilized so that the jobs created can be occupied by the local, poorer communities (Blakely, 1994). In fact, using tricycle transportation as a LED strategy is beneficial in considering the context of this study and as noted by Njoh (2007), tricycle transportation remains vital to growth and poverty reduction in Municipalities.

## **2.9 Theories of Transportation and Development**

### **2.9.1 Transportation and Economic Development Theory**

This theory was proposed by Rodrigue and Notteboom (2017). According to the theory development is related at the welfare of a society through appropriate social, political and economic conditions. The expected outcomes are quantitative and qualitative improvements in human capital (e.g. income and education levels) as well as physical capital such infrastructures (utilities, transport, telecommunications). While in the previous decades, development policies and strategies tended to focus on physical capital, recent years has seen a better balance by including human capital issues (Lau1996). Irrespective of the relative importance of physical versus human capital, development cannot occur without both as infrastructures cannot remain effective without proper operations and maintenance while economic activities cannot take place without an infrastructure base

(Rodrigue and Notteboom, 2017).



The highly transactional and service oriented functions of many transport activities underline the complex relationship between its physical and human capital needs. Because of its intensive use of infrastructures, the transport sector is an important component of the economy and a common tool used for development (Notteboom, 2017). This is even more so in a economy where economic opportunities have been increasingly related to the mobility of people, goods and information (Lau 1996). A relation between the quantity and quality of transport infrastructure and the level of economic development is apparent. High density transport infrastructure and highly connected networks are commonly associated with economic growth (Lau 1996). The writers argued that when transport systems are efficient, they provide economic and social opportunities and benefits that result in positive multipliers effects such as better accessibility to markets, employment and additional investments. When transport systems are deficient in terms of capacity or reliability, they can have an economic cost such as reduced or missed opportunities and lower quality of life. At the aggregate level, efficient transportation reduces costs in many economic sectors, while inefficient transportation increases these costs. In addition, the impacts of transportation are not always intended and can have unforeseen or unintended consequences. For instance, congestion is often an unintended consequence in the provision of free or low cost transport infrastructure to the users (Lau 1996).



Transportation provides market accessibility by linking producers and consumers so that transactions can take place. A common fallacy in assessing the importance and impact of transportation on the economy is to focus only on transportation costs, which tend to be relatively low (Banister and Berechman, 2000). Transportation is an economic factor of production of goods and services, implying that it is fundamental in their generation, even if it accounts for a small share of input costs. This implies that irrespective of the cost, an activity cannot take place without

the transportation factor. Thus, relatively small changes in transport cost, capacity and performance can have substantial impacts on dependent economic activities. An efficient transport system with modern infrastructures favors many economic changes, most of them positive. Transport also contributes to economic development through job creation and its derived economic activities. According to Notteboom (2017), a large number of direct (freighters, managers, shippers) and indirect (insurance, finance, packaging, handling, travel agencies, transit operators) employment are associated with transport. Producers and consumers take economic decisions on products, markets, costs, location, prices which are themselves based on transport services, their availability, costs, capacity, and reliability

(Banister and Berechman, 2000).

### **2.9.2 Transportation and Local Economic Theory**

This theory was proposed by Standing Advisory Committee on Trunk Appraisal (SACTRA) the secretary of State of the United Kingdom in 1996. The theory was designed to explain the effect of transportation on local development.

Traditionally, transportation has been thought of in terms of derived demand, implying that the basic connection runs from the level of activity in the economy to the demand for transportation.

The theory suggests that people and businesses demand transportation in order to enable them to carry out their desired activities (African Association of Public Transport, 2010). This is too simple, however, since changing the provision of transportation enables changes in the location and composition of activities in an area, individuals and businesses are enhanced. For individuals, this might be reflected in changes in commuting patterns or holiday destinations. For businesses,



the impact might be felt in terms of new sources of supplies, reorganization of production or access to more distant markets (African Association of Public Transport 2010).

Transportation can facilitate economic activity, and it is this which establishes the need to consider the impact on economic growth of proposals to invest in transportation infrastructure. Economic policies generally aim to promote an efficient use of resources - defined as land, labour and capital; in general, we might expect that improvements in transportation contribute to using resources more efficiently but are costly to provide (Njoh, 2007). Changes in transportation costs have economic effects through their influence on regional patterns of commerce, on incentives to invest and to innovate, on the location decisions of firms, on the commuting and migration decisions of households. These effects are felt also through other costs to the economy such as pollution and congestion. From the perspective of policymakers, transportation provision has distributional implications, and may also be a key ingredient in terms of addressing issues of social exclusion, defined as the exclusion of disadvantaged groups from participation in society (Njoh, 2007).

Transportation patterns are sometimes advocated on the grounds that they will create jobs in assisted areas, which are targeted by government as locations in which additional employment is socially beneficial. Where this applies, the implication is that employment creation is not seen as the criterion by which to appraise schemes but as something additional to the benefits captured by Cost Benefits Analysis (CBA) (Notteboom, 2017). Conventional economic analysis assumes market clearing, thus prices adjust to balance demand and supply, with excess demand (supply) being eliminated by an increase (reduction) in prices (African Association of Public Transport, 2010). Once a labor market has cleared, the wage rate reflects the opportunity cost of a worker, thus what he/she could earn in alternative employment and her/his value to an





alternative employer. The suggestion that transportation schemes could create employment would be ill-founded and so there could be no addition to benefits obtained through CBA for job creation (Notteboom, 2017).

Transport has throughout history been a spur to expansion; better transport allows more trade and a greater spread of people (Bardi et al, 2006). Rodrigue (2017) noted that transportation systems are composed of a complex set of relationships between the demand, the locations they service and the networks that support movements. Such conditions are closely related to the development of transportation networks, both in capacity and in spatial extent. Societies have become increasingly dependent on their transport systems to support a wide variety of activities; ranging, among others, from commuting, tourism, supplying energy needs, to distributing parts and final goods (Rodrigue, 2017).

Even though the two theories identified in the study are in relation to economic growth which well explains the main variables in this study. However, transportation and local economy growth theory was adopted for the study. This was chosen because it critically explains how transportation has improved the economic growth of Wa Municipality through the creation of employ, business growth and mobility.



## 2.10 Conceptual Framework of the Study

Figure 1.1: Link between Transportation and Economic Growth

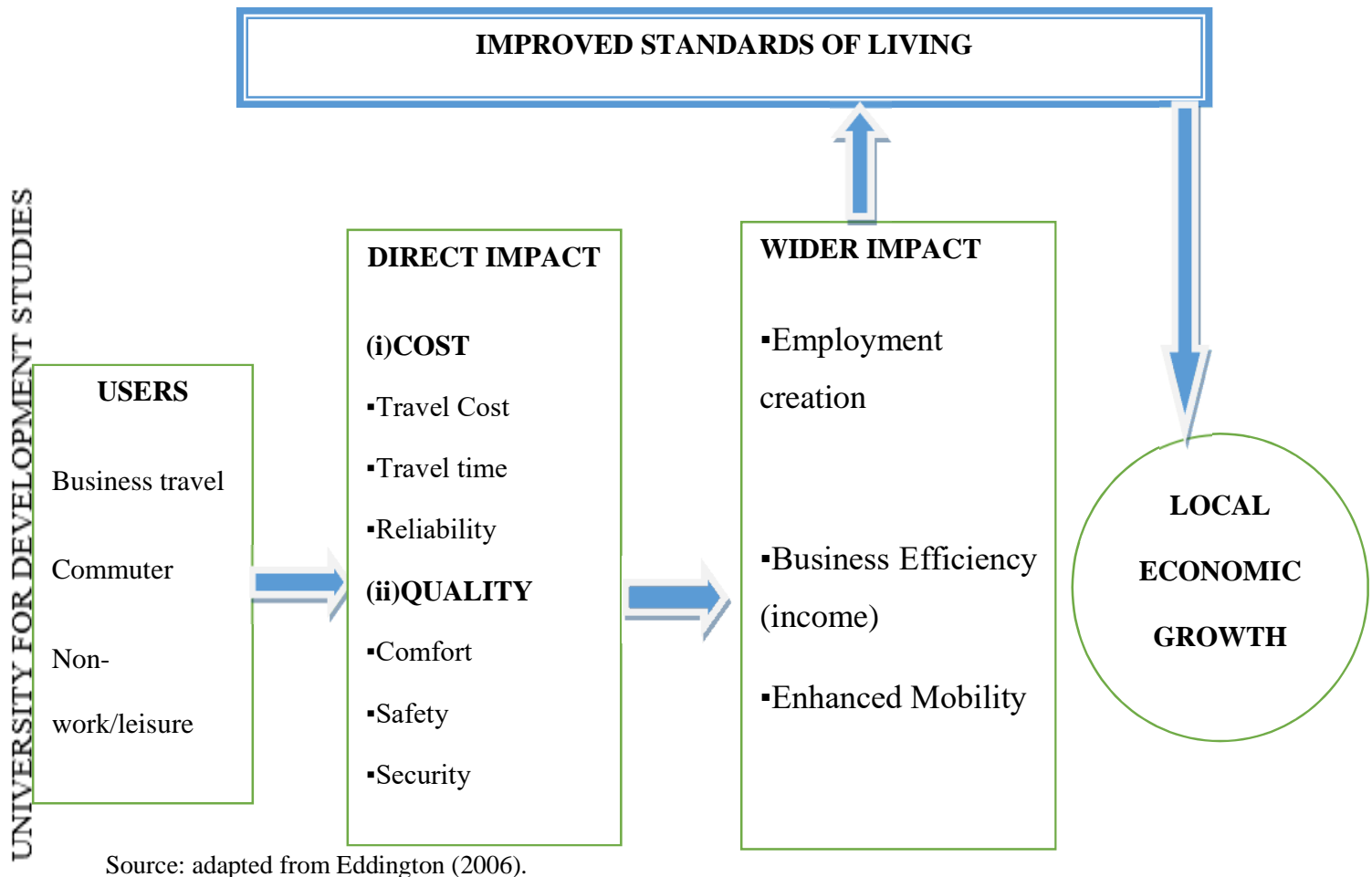


Figure 1.1 presents the conceptual framework which links transportation to economic growth and of a local economy.

According to World Bank (2017) and Healey and Ilbery (1990), transportation is a crucial driver of economic growth and social development. It connects people to jobs, education, and health services; it enables the supply of goods and services around the world; and allows people to interact and generate the knowledge and solutions that foster long-term growth. Rodrigues (2017) also

postulated that transportation has a strong influence on the spatial structure at the local, regional and global levels. The conceptual framework clearly explains how people use transportation for their daily activities. And these has been linked to the tricycle transportation where people use the tricycle transport for their business travel, for carrying goods, joining it to recreational centres and other places (Rodrigues, 2017). The intervention of the availability of the tricycle transport gives the users some direct benefits through, reduction in awaiting time, less cost charge, reliability, safety, security and very comfort. All these in the long run have some benefit which are not only associated to the users but to the entire economy (Rodrigues, 2017).

### **2.9.1 Link between Transportation and Economic Growth**

Rostow (1960) argues that transportation system influences the loading of goods and passengers, leisure/stress of waiting travel cost and time as well as the type of vehicles that ply the road and these in turn influence economic growth. It therefore leads to:

► **Employment Creation.** Transportation facilitates geographic and employment mobility in response to unstable economic activity such as forces of globalization, new technological opportunities, and increasing the labour market (Hoyle, 1973). Transportation creates employments in so many ways such as fuel attendants, personnel for road maintenance and other employment opportunities (Hoyle, 1973). People are needed to fix in all these areas mentioned for employment where there is efficient transportation. Nationally, transportation improvements are unlikely to have a large effect on the employment rate, though may do so in some local circumstances but the TTB has been a reliable source of employment in the Wa Municipality for quite some time now (Dinye and Ahmed, 2015).



► **Business Efficiency.** Efficient transportation leads to time savings and improved reliability for business travelers, freight and logistics operations businesses are able to increase in efficiency. Increasing business investment and innovation by supporting economies of scale or new ways of working (Tseng et al, 2005). A change in regulations could help investors to increase the level of their business and also finds new ways of making the business attractive (Rodrigue and Notteboom, 2017).

► **Enhanced Mobility.** Mobility is very important in undertaking businesses and other economic growth indicators. The effects of mobility could enhance or affect negatively the performance of a business or a person's activities. A well connected, so significant competition impacts are most likely to be felt from the integration of markets globally (McQuald et al, 2003). Easy movement improves the standard of the peoples living which will increase economic growth of the Municipality since good standard of living is an indicator of economic growth according to Rodrigue and Notteboom (2017).

### **2.10 Effects of Efficient Transportation on Economic Growth**

Transportation system influences the economic growth of an economy. Economic growth is a factor of economic variables, social variables, and political variables. Transportation is a component of a social variable which gives social benefits to the majority (NESDB, 1997).

Economic growth is a dynamic concept which involves the steady process of increasing productive capacity of the economy through transportation (Clarke, 2003: 28). Economic growth is not static in that it cannot be measured in snapshots of time, but can only be captured by analyzing productive capacity over a period of time. The long-term economic growth of a nation can be attributed to the growth of measured factor inputs, such as physical capital, labor and human capital, and to technical progress (improving improvements in efficiency) (Lau, 1996:63).



Indeed, the existing transport facilities for trade are completely outward-looking with the result that transport infrastructure and services have been little developed and the physical network poorly integrated. African cities have been experiencing huge population increases in the past decades and this has made the demand for transportation very high (African Association of Public Transport, 2010). Such fast-growing cities face enormous challenges in terms of infrastructure provision and the need to cope with the increasing demand for transport. In a rare effort focusing on Africa, Njoh (2000) found that the higher a country's investments in transportation (measured in terms of road density per capita), the higher it's GDP/GNP (a proxy for economic growth). This finding is intuitively and theoretically appealing, especially when the transport sector is taken to encompass "all productive activities undertaken to realize the socio-economic function of transportation" (Njoh, 2000: 293).

Transportation and economic growth is most desirable indicators in improving the standard of living of people (Bonsu, 2015). Economic growth is associated with improving health outcomes, food intake, shelter, clothing and other basic needs. The individual standard of living is a function of personal income and society's standard of living is a function of national income. Difficulties with interpersonal comparability, distribution levels and equity notwithstanding, national income are a suitable index for measuring standard of living (Dowrick, 1994; Mazumdar, 2000).

Transportation therefore becomes very necessary in computing economic growth because it is the way of transporting goods to enhance social welfare (Slesnick 2001). The relationship between economic growth and social welfare may include aspects of diminishing returns so that at a particular point in time, economic growth no longer adds to social welfare but actually reduces it (Manning, 2001). Standard of living is a narrow economic measure of society's welfare. In some countries around the globe, transportation system contributes much in terms of GDP where Ghana



is not exclusive. Where an individual is able to move or transport goods and services in order to perform their economic duties adds up to the living standard theory (Slesnick 2001; Latouche 1996).

## **2.11 Transportation System and Economic Activities**

A transportation indicator is a measure of change over time in the transportation system or in its social, economic, environmental, or other effects. Every day, governments, businesses, and individuals make many transportation investments and decisions. Location and development decisions are also heavily influenced by transportation (National Research Council, 2002). It is often noted that, given initial level of real per capita GDP, factors such as lower government consumption, higher levels of human capital, lower inflation, better law enforcement and improvements lead to higher economic growth (Oosterbann et al, 2002).

The relationship between government size and economic growth has been extensively studied. Karras (2001) suggests that government activities may accelerate or hinder economic growth. This depends on the net impact of the activities. The negative impact of government size on economic growth is due to the inefficiency of government, excess tax burden and the distortions of market-based incentive system as government becomes relatively larger (Anaman, 2004). The positive impact of government is largely due to the correction of various forms of market failures, the development of physical infrastructure and the establishment of a legal administrative system necessary for the economy to function (Ghali, 1998). Increasing government size often negatively affects economic growth especially for developing countries Barro (1991) and Guseh (1997) but may also increase economic growth. According to Anaman (2004), relatively small sizes of government hamper economic growth, moderate government sizes enhance economic growth and very large government sizes stifle economic growth. Some of the indicator of economic growth



includes; employment, business growth/activities, mobility and many others which are driven by the activities of the TTS.

### **2.11.1 Transportation and Business Logistics**

Taniguchi et al. (2003) consider that there are three necessary targets that could be achieved by applying transportation Logistics: (1) mobility; (2) sustainability; (3) liveability. Mobility is ease of movement, which is the basic requirement for transport of commodities in urban areas. Goods are supposed to be delivered Just-In-Time. Therefore, the balance between sufficient road network capacity and reduced traffic congestion is a main issue. Concerning sustainability, which is more and more important, environmental issues and energy conservation would need to be taken into account. Liveability should be thought of for the residents. It involves an assessment of the conditions that are experienced and interpreted within an individual's life area, such as safety, peacefulness, attractiveness and charm (Taniguchi et al., 2003).

McQuald et al (2003) also in their study found at that there is no consensus concerning the effects of transport on business location and wider economic development. Changes in transport costs (including money, reliability and time costs) are influenced by new infrastructure, changes in infrastructure management or congestion/deterioration of existing infrastructure, as well as by the efficiency of transport operations (Fair and Williams, (1981). These will influence business productivity, innovation, access to knowledge and markets, regional patterns of commerce and the commuting and migration decisions of households etc. Hence they may affect the location decisions of businesses already located in an area (and their long term viability) as well as those thinking of setting up or locating there (Breheny, 1999). The integration and promotion of business activities have to involve transportation systems at various stages. The integration of various applications brings the convenience through promoting the system of information flow and



business operations. Customers and firms could make business more efficient and easier through the help of e-commerce and the Internet. However physical delivery still relies on the transportation system to finish the operations. The cost of transportation operation may be one-third of logistics costs. Meanwhile, transportation systems and techniques are needed in almost every logistics activity. Thus the reform of business patterns has to consider transportation systems (Breheny, 1999).

According to Wilson (1966), the extent of apparent economic opportunity in both the transport and non-transport sectors is a direct function of the resources that are made more accessible. There may be divergent effects between the sectors, due to rate and quality changes. The extent of the negative impact on transport of lower rates depends upon the elasticity of demand for transport and the behavior of unit costs with changes in volume. It is probably fair to say that the total amount of economic opportunity created varies inversely with rate levels, since the stimulus to increase production probably more than compensates for any possible increase in unit costs of providing transport service (Wilson, 1966). Thompson and Taniguchi (2001) concluded in their study that, logistics system has a more and more important position in our society activities, transportation and logistics systems have interdependent relationships that logistics management needs transportation to perform its activities and meanwhile, a successful logistics system could help to improve traffic environment and transportation development. Again, since transportation contributes the highest cost among the related elements in logistics systems, the improvement of transport efficiency could change the overall performance of a logistics system. Transportation plays an important role in logistics system and its activities appear in various sections of logistics processes. Without the linking of transportation, a powerful logistics strategy cannot bring its capacity into full play (Thompson and Taniguchi, 2001).





The role that transportation plays in logistics system is more complex than carrying goods for the proprietors. Its complexity can take effect only through highly quality management. By means of well-handled transport system, goods could be sent to the right place at right time in order to satisfy customers' demands. It brings efficacy, and also it builds a bridge between producers and consumers. Therefore, transportation is the base of efficiency and economy in business logistics and expands other functions of logistics system. In addition, a good transport system performing in logistics activities brings benefits not only to service quality but also to company competitiveness (Tseng et al, 2005).

### **2.11.2 Transportation and employment opportunities**

Transport, in particular the growth of road transport, has had a significant effect on both urban decentralization and the decline of remote rural areas through increased access to out-of-town developments. The effect of transport investment on remote rural areas is under debate. The fact remains that where transportation systems an urban area also sees continued employment (Turok and Edge, 1999). Breheny (1999), in a report for the TCPA, states that the urban cores of cities and towns are unlikely to regain their former status as centres of employment. This is mainly because there are only a few industrial sectors (banking & finance, catering, education and recreation & culture) that have remained in urban centres in any strength, and even among these there is expected to be some movement to decentralised locations (Breheny, 1999). For example, changes in technology will allow downsizing and 'back-officing' of financial service operations to relocate in cheaper locations outside urban centres which are associated with transportation

### **2.11.3 Transportation Investment**

Transport covers both investment in new and existing infrastructure and equipment and its management (e.g. service levels, congestion charging or regulation of air travel, including taxes).



Crucial to business location decisions are the current and expected levels of services provided by it (e.g. the quality, reliability, time and financial costs of journeys using it etc.) rather than simply the existence of infrastructure (Scottish Executive, 2002).

The cost structure of urban transportation is complicated for two reasons. First, because of the high density of activities and interactions in a city, urban transportation causes a variety of externalities such as traffic congestion, air pollution, noise, and that part of accident costs not borne by drivers. Second, consumers incur many different types of user costs in addition to user fees (tolls and fares) (Hoyle, 1973). For example, automobile users incur motor vehicle running costs (the cost of fuel, tires, engine oil, maintenance, and the value of vehicle wear-and-tear), the opportunity cost of travel time, and traffic accident costs (Kanemoto, 2006).

One reason for focusing on the spatial impacts of transport is that transport investment can play a major role in influencing the levels and types of development in specific locations/regions. This tends to be most prominent in metropolitan/urban areas, where inter-relationships between transport provision, land use and urban form are strong. A second (and related) reason is that transport investment is often as one of the most effective actions that governments can take to boost the economies of less economically buoyant regions through improving transport links both within the region concerned and to/from adjacent regions (New Zealand Perspective 2014).

Krugman (1991 and 1998) said that by reducing the cost of transporting goods between locations which decreases the effective 'distance' between two points transport improvements can promote trade, increase competition and variety, and facilitate specialization in economic activities. In a rare effort focusing on Africa, Njoh (2000) found that the higher a country's investments in transportation (measured in terms of road density per capita), the higher its GDP/GNP (a proxy for



economic growth). This finding is intuitively and theoretically appealing, especially when the transport sector is taken to encompass “all productive activities undertaken to realize the socio-economic function of transportation” (Njoh, 2000: 293).

Banister and Berechman (2000) argued that some conditions (economic, investment, political and institutional) must be present for economic growth to occur, but that the most important condition is the policy environment. The improved transport connection may either attract development or labour to the region, or it may encourage it to relocate elsewhere due to reduced transport costs, better access to markets, economies of scale or agglomeration economies among others. Thus, investing in transport infrastructure with a view to regenerating or assisting development in a specific region unless coupled with other resources (such as private capital), desirable economic or policy conditions may not achieve economic growth in that location.

## **2.12 The Contributions of TTB to Local Economic Growth**

Sustainable transportation systems make a positive contribution to the environmental, social, and economic sustainability of the communities they serve. Transport systems exist to provide social and economic connections, and people quickly take up the opportunities offered by increased mobility. The advantages of increased mobility need to be weighed against the environmental, social, and economic costs that transport systems pose (World Energy Council, 2007).

Transportation also contributes to economic development through employment and its derived economic activities. Accordingly, a large number of direct (freighters, managers, shippers) and indirect (insurance, finance, packaging, handling, travel agencies, transit operators) employment are associated with transport (Rodigue and Notteboom, 2017). Transportation provides market accessibility by linking producers and consumers so that transactions can take place. A common



fallacy in assessing the importance and impact of transportation on the economy is to focus only on transportation costs, which tend to be relatively low; in the range of 5 to 10% of the value of a good. Transportation is an **economic factor of production** of goods and services, implying that it is fundamental in their generation, even if it accounts for a small share of input costs. This implies that irrespective of the cost, an activity cannot take place without the transportation factor. Thus, relatively small changes in transport cost, capacity and performance can have substantial impacts on dependent economic activities (Rodigue and Notteboom, 2017).

The tricycle transportation business seems to have been one of the business contributing to economic growth of every country. Recently, a new means of transportation, tricycles “Keke Napep” was introduced for poverty eradication which was created to semi-power the poor, jobless and underemployed Nigerian to the next position in economic status. It was also meant to make transportation cheaper for inhabitants replacing the commonly used motorbike believed to cause a lot of accidents on major roads (Sun, 2009).

### **2.13 Influence of TTB on Business Activities**

According to the New Zealand transport report (2014), for business users of transport, deterioration in the supply of transport, leading to a rise in its generalized cost, will tend to raise the price at which businesses can supply the market. Similarly, an improvement in transport supply, leading to a fall in costs, will tend to lower the price. To the extent that these transport costs are passed on, the impact of changes in the cost of transport is felt by the purchaser of the final goods and services for which transport is an input.

In developing countries, vehicle ownership is low and dependency on public transport is high (Kumar, 2011). This situation has forced people and the market to develop creative solutions to



address daily travel needs, hence a resort to motorcycles for personal mobility in addition public transport (Dinye and Ahmed, 2015) and other business activities. The principal role of transport is to provide access between spatially separated locations for the business and household sectors, for both commodity (freight) and person movements. For the business sector, this involves connections between businesses and their input sources, between businesses and other businesses, and between businesses and their markets. The tricycle has been one of the easiest transport system in performing the principal roles (NZP, 2014).

According to Rodriguez and Notteboom (2017), transportation and it related markets infrastructure networks are seen as key drivers in the promotion of a more balanced and sustainable development, particularly by improving accessibility. Given that different areas have varying transport requirements for the distribution of products and/or the sourcing of inputs, the level of transport costs can influence the location of economic activity between towns, regions and even countries (Rodriguez and Notteboom, 2017). Tricycle transport has therefore become the most preferred mode of transport system in most developing countries due to it significant role in the transportation sector (Dinye and Ahmed, 2015). SACTRA (1999) noted that the supply side of the

system can be altered in a number of ways, including decisions relating to the following:

investment in, additions to, or improvements in, quality of the infrastructure stock (example new roads or railway lines or rail electrification), replacement of existing infrastructure assets (for example, resurfacing a road or renewing railway track), reductions in road capacity. In addition, better management of the asset base (clearing breakdowns faster, better management of traffic flows, new services making fuller use of existing infrastructure), changes in money costs (for example, tolls, parking charges, fuel prices), changes in regulations relating to the delivery of transport services (for example, changes in competition and regulations affecting entry to public



transport and taxi markets). SACTRA (1999). However, Njoh (2007) view contradicted that of SACTRA (1999), because the tricycle transportation infrastructures do not resort the indicators of SACTRA. Tricycle transportation is cheap to run and easy to meet the delivery of transport service.

#### **2.14 Tricycle Transportation Systems and Mobility**

The concept of mobility has been interpreted in a variety of ways, some inappropriately. In addition, the scale of application could have an important influence on the definition of mobility. For example, mobility at the metropolitan level might be defined differently than a mobility measure at the corridor or subarea level, which itself might be very different from mobility as perceived by an individual traveler (NRC, 2002). Mobility is very relevant in transaction of businesses and other economic growth indicators. The effects of mobility could enhance or affect negatively to the performance of a business or a person's activities. According to Dinye and Ahmed (2015), tricycle transportation enhances individual's ability to move freely. The tricycle transport system contributes to economic growth of every economy which undertakes its operations with effective measures. Yeboah (2015) also added that tricycle transportation is one of the essential transport systems that contribute to the growth in the agricultural sector in most developing countries like Ghana. As a result, tricycle transport contributes much to mobility in areas where tricycle transport is efficient and reliable. (Dinye and Ahmed, 2015).



According to Clarke (2003), commuting is a cost of economic growth. As cities become increasingly overpopulated, roads become clogged with increased numbers of private and public vehicles attempting to move large numbers of people. The end result is increased levels of wasted time spent commuting to and from work. The individual decision to commute to work in a private vehicle, rather than use public transport, is taken on grounds of convenience, comfort, and access. The demand for transportation within urban areas of developing countries, rise faster than the

increase in income which is usually well in excess of unit, per capita incomes are rising more rapidly than in the advanced economies, and urbanization rates are rising more swiftly (Jolley, 2002: 2).

### **2.15 Effects of TTB and Employment Creation/Job Security**

According to Rodrigue and Notteboom, (2017), there is a relationship between transportation and job creation as well as its effects on the local economic growth, the added value and employment effects of transport services usually extend beyond those generated by that activity; indirect effects are salient. For instance, transportation companies purchase a part of their inputs (fuel, supplies, maintenance) from local suppliers. The production of these inputs generates additional value-added and employment in the local economy. The suppliers in turn purchase goods and services from other local firms (Rodrigue and Notteboom, 2017).

Similarly, households that receive income from employment in transport activities spend some of their income on goods and services. These purchases result in additional local jobs and added value. Some of the household income from these additional jobs is in turn spent on local goods and services, thereby creating further jobs and income for local households. As a result of these successive rounds of re-spending in the framework of local purchases, the overall impact on the economy exceeds the initial round of output, income and employment generated by passenger and freight transport activities (Rodrigue and Notteboom, 2017). It also serves as a source of employment to the drivers of the tricycle transportation system, where these drivers are also being engaged in working to earn something for a living. This helps in the growth of local development through the reduction in unemployment (Rodrigue and Notteboom, 2017). It has even been attested by Sharma et al (2012) that TTB is a tool for generating employment for people in their own social



system. However, most of these tricycle drivers, owners and the regulators need to have a support service to become very vibrant in the transportation system (TS).

According to Small and Verhoef (2007), promoters of projects on transportation often like to highlight various benefits such as jobs created, real-estate development induced, economic activity attracted, or industrial activities made more efficient by a transportation improvement. Economic analysis has shown that most of such benefits are either transfers from other locations (for instance, economic activity moved from one location to another) or the conversion of transportation benefits, already measured in conventional cost-benefit analysis, to another form.

The TTB provides employment to the locals especially those within Regional basis, Municipalities, Districts and Local areas. This is because people have realized that it is a profitable sector which can help in increasing their income and standard of living as well as local development (Rodrigue and Notteboom, 2017). They furthered on that transport also contributes to economic development through job creation and its derived economic activities. Accordingly, a large number of direct (freighters, managers, shippers) and indirect (insurance, finance, packaging, handling, travel agencies, transit operators) employment are associated with transport (Rodrigue and Notteboom, 2017).



### **2.16 Tricycle Transportation and Agriculture Systems in Wa Municipality**

Transportation is a key necessity for specialization allowing production and consumption of products to occur at different locations. Transport has throughout history been a spur to expansion; better transport access allows more trade and a greater spread of people. Economic growth has always been dependent on increasing the capacity and rationality of transport. Ghana's national



economy is divided into three main sectors (agriculture, service and industries) (Africa Development Bank Group [AFDBG], 2005; SRID, 2011).

The motor tricycles over the past few years have gained considerable patronage and are seen to have great potential in helping overcome the transportation challenges faced by farmers (Etwire et al., 2014). According to Barwell (1996) and Starkey et al. (2002), the use of motor tricycles in some parts of Asia has helped improve access to economic and social services. They are employed to convey people from rural areas to market centres together with greater quantities of agricultural produce as well as being used by farmers to purchase fertilizer and seeds. Girvan (2007) posited that tricycle transportation is a necessary precursor to the development of agricultural productivity and has a unique role and relationship with agriculture development because of the characteristics of agricultural production, commodities and markets. Since agriculture is essentially the backbone of rural economy, the development of agriculture is as well essential to the introduction of the tricycle (Yeboah, 2015). The tricycle is used in transporting the harvest produce to the market centers in areas where there are no other vehicles such as Asia. To maximize agricultural development, transportation infrastructure is central (Yeboah, 2015). It has been indicated by several writers writing on the relationship between agriculture and transportation that increase in agricultural activities has increased the surge in demand for mobility in terms of passenger travel and movement of goods. Agricultural development cannot be effectively enhanced without an efficient transport network (Yeboah, 2015). This has made the tricycle transportation system one of the important transport systems in Ghana since it conveys products from the villages to the town.

Improving rural people's access to essential service requires improving mobility through better transport infrastructure and services and attention to the location, quality and price of facilities



(Dinye and Ahmed, 2015). Importance of rural transport are enormous, they accelerate the delivery of farm input and the services of extension workers, preventing excessive rural to urban migration with the attendant problems, facilitate the evacuation and marketing of produce from agriculture, ease of human movement within and outside the community, thereby reducing or eliminating repetitive movement and there increase in residual time for other activities, enhance the effectiveness of policy, reduce the level of wastage of agricultural produce which bring about reduction in prices, accelerate the delivery of basic needs to the rural majority, mobilizing the vest natural and human resource potential of rural sector, help the local population regain their lost ability of self-reliance especially in the area of food production (Afolabi et al, 2016).

The Wa Municipality still have only few vehicles and consequently, farmers find it difficult to transport their goods from the villages to the market center. The tricycle transport services therefore now concentrate on routes from villages to market towns and from towns to cities (regional capital) where there is a greater demand of the produce (GNA, 2017).

### **2.17 Challenges Facing Transportation System**

Transportation facilities are vital in an effort to reinforce a country's or a region's position within the global economic system. According to Njoh (2007), transportation cost constitutes one of the important determinants of the costs of doing business or an activity. Poor transport infrastructure in particular and poor communication facilities in general, tend to isolate countries, thereby preventing their ability to contribute in global production of transportation networks. Despite the global trend towards liberalization, the absence of efficient transportation systems, high transport costs, and promise to effectively limit the participation of African countries in the globalization process there is still the need to effectively manage transport system very well. Small and Verhoef



(2007), noted that transportation potentially affects the nature of the urban area itself. If transportation were costless, participants in an economy would have no economic reason to locate close to one another. The study of this influence is clearly germane to transportation policy. To analyze it fully requires the full power of disciplines such as urban geography, urban economics, and regional science, which seek to explain the shape of urban development.

Motorcycles as means of mobility have become issues for urban transport planners, especially among developing countries since it is taking over the urban transport system. While it is a valid mode for transportation and accessibility, it is not originally intended for public transportation. In fact, issues raised against tricycle-based public transport are that of traffic congestion, decrease safety and worsening environment. It is generally noted that private vehicle ownership tends to have a strong relationship with the economic situation of cities (Guillen and Ishida, 2003). Ipingbemi and Adebayo (2016), some operators complain of the escalating price of registration and lack of time because several hours would have to be devoted to it due to high level of bureaucracy involved. It follows, therefore that some of the vehicles may not be road worthy. The implication is that such vehicles are liable to frequent breakdown (with its attendant economic loss to both operators and passengers) and are vulnerable to road crashes. Possession of driving license and year of driving experience are important components of road safety. Ipingbemi and Adebayo (2016) added that only few operators have driving licenses. Some of the operators may not have gone through the required process of obtaining a license. Similarly, the fact that most of them do not possess a valid drivers' license implies that they may have learnt the art of driving through a friend or acquaintances. Studies have shown a positive relationship between possession of valid driver's license and traffic safety. Also, these tricycle operators are mostly underage drivers since



there on any strict regulations checking on them and they also cause road accidents (McKnight and Peck, 2003).

Extortion from law enforcement agents is one of the most important challenges confronting the three-wheeler tricycle operators (SSATP, 2014). Mostly these tricycles are not being provided with parking places because their activities are not yet incorporated into urban transportation planning in the country. Therefore, they park haphazardly on the road shoulders, at junctions (blocking entrance) and on the carriageway. This is dangerous for the operators of tricycles and other road users. Poor Parking (particularly on-street parking) is a major problem created by public transport in developing countries (Aderamo, 2012). Road deterioration is a hallmark of the Nigerian road transport system.

### **2.18 Transportation Planning, Local Development and Regulatory Policies**

Good transportation systems are required for the efficient movement of goods and people within the local economy. Increasingly, the transportation focus is being expanded to incorporate the notion of accessibility (African Association of Public Transport, 2010). The key issues are not the physical distance between economic and community activities but rather the ease and time required to access them. Transportation planning policies addresses the issues by creating the vehicular and pedestrian networks of land uses (residential, business, community) that enhances functionality and property values (Blakely and Leigh, 2013).

Urban transportation planning is designed to meet the end objective of addressing transport problems in terms of traffic movement, public transport, pedestrian, environment and parking, drivers' attitudes (Guillen and Ishida, 2003). Since transportation is such an important component of contemporary society, capable of producing significant benefits, yet giving rise to many



negative externalities, appropriate policies need to be devised to maximize the benefits and minimize the inconveniences. This, therefore, requires very good planning policies to regulate transportation system (Rodrigue, 2017). The tricycle transportation is therefore one of the most important transport system in most developing countries by policy makers when planning for the smooth running of transport systems (Dinye and Ahmed, 2015).

Forster and Garmendia (2010) postulated that compliance is also another way of ensuring that there is discipline on-the-road which ensure that there is a smooth and efficient in the transport system. Efficient in transportation system covers some loops which are normally created by ineffective public road regulation systems implemented by policy makers (Forster and Garmendia, 2010). By its nature, tricycle transportation system concentrates on ensuring an equitable distribution of people and business to the various destinations, typically through the wasteful operating procedures that are left out by the other transport systems (Barnes, 2005). Effective regulations in transportation system is a key aspect to consider when considering economic growth of a country through the transport sector (Small and Verhoef 2007). The wide differences of available public transport system in most developing countries explains why tricycles transport system are the most current mode of transport for personal mobility (Guillen & Ishida, 2003).

Understanding the process of local transport development, tricycles transport yields some useful insights as well as validate its role in the transportation order to economic growth and as a result requires some effective regulatory policies (Guillen & Ishida, 2003).

Infrastructure and accessibility is another given concept that explains why some public transportation gap exists and why innovative modes evolved. Thus, reviewing local transportation policy can provide insights on how the public sector integrates the evolution of different modes with the type of available infrastructure (Guillen and Ishida, 2003). According to Blakely and



Leigh (2013), local development system has traditionally focused on the ownership, regulation, and management of resources (land and buildings) placed upon it but less considered the transport systems. Local development systems highlight how transportation planning and urban designs in the tricycle transport systems are essential contributors to quality economic growth and overall quality of life (Blakely and Leigh, 2013),

### **2.19 Summary of the Review**

From the literature reviewed on the contribution of tricycle transportation to the growth of a local economy, it is concluded that tricycle transportation system has contributed to the growth of most developing countries transport systems. It has been observed that the tricycle transport system is commonly used in Africa and Asian continent and it has been helpful because most people were finding challenges in transporting or moving people or goods from one place to the other since there are only few cars in these areas. Again as a result of the low level of income and high level of poverty among these continents individual ownership of vehicle is only subject to very few people whilst the majority relies on the public means of transport.

However, the benefit of the tricycle transport in these countries has been very significant according to the literature reviewed. For instances, in Nigeria which is one of the most commonly used of the tricycle transport, most of the youth has been engaged in employments. This has led to a reduction of the unemployment level in the country. Again, in India it has been observed that most of their economic activities are undertaken using the tricycle transportation system.

It was observed that various studies focus specifically on motorcycle transportation in urban areas. These studies do not provide comprehensive data on issues regarding to its contribution on economic growth. Also, only few studies have been conducted on the contributions of tricycle



transportation business to the growth of a local economy in the Wa Municipality. For this reason, these contributions were assessed from the employment created, business efficiency and mobility enhanced through the introduction of the tricycle transportation system.

Again, due to the different dimensions involve in the transportation sector two theories have been reviewed to understand the concepts of transportation and how it contributes to economic growth within an economy. These theories are transportation and economic development theory and transportation and local economic theory. These theories were able to come out clear with the main indicators that contributes to the growth of an economy in transport system (Rodrigue, 2017) which clearly justifies the contributions of transportation to economic growth. A conceptual framework was then derived from the theory used for the study which clearly came out with the variables or indicators of transportation and how it relates to economic growth or development.



## CHAPTER THREE

### RESEARCH METHODOLOGY

#### 3.1 Introduction

Chapter four of the study is focused on how the data were collected and processed for the research. Methodology is termed as the focal point on which the research revolves. The methodology section educates researcher on the required approaches and instrument needed to undertake the research study (De Munck, 2009). The methodology allows researchers to be abreast with what to include and exclude in the study. It is the systematic, scientific and critical presentation of research methods in a convincing manner (Kumekpor, 2002). The methodology gives a detail of the approach used for the research. Emphasis is laid on the research design, population, sampling method and sample size, research variables and source of data.

#### 3.2 Research Design

Research design is the process of addressing research questions of a particular study. Research design is the glue that holds the research work together to address the research questions (Trochim, 2006 cited by Deming and Swaffield (2011). Flick (2002) stated that, the design of research could be qualitative, quantitative or a combination of both, which Johnson et al (2007:123) call the “mixed research design”. This research combines elements of both quantitative and qualitative data. Mixed research design is a technique for collecting, analyzing, and using both quantitative and qualitative research and design in a single study to understand a research problem (Creswell, 2012). When qualitative and quantitative research strategies are combined in a single research, the advantages of each design complements the other making a stronger research design which results to more valid and reliable findings (Bowen, 2002 cited in Perone and Tucker, 2003).





Considering the nature of the research objectives and the data to be gathered from the field, mixed method research approach would be used, mixed method approach is an approach for inquiry involving gathering both quantitative and qualitative data, mixing the two forms of data, and using distinct designs that may involve philosophical assumptions and theoretical frameworks. This form of inquiry is the combination of qualitative and quantitative approaches which provides a thorough understanding of a research problem, the objectives of this study therefore entails both qualitative and quantitative data hence a mixed research (Creswell, 2014). This approach clearly analyzed and provided the required data for the research objectives for the study. The research objectives assessed some form of statistical test and oral views from the respondents. Mixed method research design was adopted for this study; which drawn more on both qualitative and quantitative data` according to Creswell and Clark (2007). A convergent parallel mixed method research design was specifically adopted. Convergent parallel mixed method is where the researcher collects both forms of data roughly at the same time and then integrates the information in the interpretation of the results (Creswell, 2014).

### **3.3 Profile of the Study Area**

According to Ghana Statistical Service (GSS 2010), Wa Municipality is one of the eleven Districts or Municipal Assemblies in the Upper West Region (UWR) of Ghana. The economy of the Wa Municipality was dominated by the agricultural sector in the year 2000 to 2009. But the situation however changed in somewhere 2010 according to the Ghana statistical report and the concentration has now changed and centered on trade, industry and transportation.

According to GSS (2010) report, the economy of the Wa Municipality was made up of agriculture, forestry, and fishery where majority of the people (29.3%) were employed from the total population. Again, the service and sales sector also employed 25.7% of the people. With the



service and sales workers group, the percentage of females was 36.5% against 14.2% of the males. The female proportion was high and was as a result of low educational levels background. The transportation sector now serves as a very key contributor to local economic growth, where most of the youth engages as mechanics for a living (Youth Employment Agency, 2017).

### **3.3.2 Population**

According to the GSS (2010), 107,214 was the total population of Wa Municipality which formed 15.4% of the total population of the Upper West Region. Out of this figure, 52,996 (49.74%) were considered males while the remaining 54,218 (50.6%) were females.

According to the GSS (2010), the dependency ratio of Wa Municipality was 100:65, in other words for every 100 people aged 15-65 years, there was approximately 65 people depending on them for survival. The age group 15-64 is the group that is theoretically expected to be economically active and it contributes to household income in one way or the other. Wa Municipality has a youthful and productive population structure with a broad base which consists of a large number of the population that belong to ages 0-24 years. This youthful and productive population in the Municipality contributes greatly to the economic growth of the Municipality because they are energetic enough to work especially as drivers of the transport system.

### **3.3.3 Transportation System**

According to the GSS (2010), the transportation system in the Wa Municipality was made up of road and very limited air transport. The road network is about 385km comprising 256km altitude roads and 129km, surfaced roads (trunk tarred roads). The Municipality has four trunk roads linking Kumasi and Tamale, Dorimon and Burkina Faso, Lawra and Hamile and Tumu and Leo.



This is a strong advantage for enhanced trade and tourism. However, the conditions of these roads are bad and inhibit transportation services between Wa and these locations.

The Municipality has over 300 commercial/ private vehicle population and experiences over 200 vehicles for passage which ply the Municipality daily (GSS, 2010). The service providers are dominantly commercial operators which include: GPRTU, Metro Mass Transport, STC, OA, VIP and Private alliance transport. Another most predominant means of transport is the use of motorcycle and tricycle in recent times. Which lessens traffic situations but however causes accidents in the town (Dinye and Ahmed, 2015). It is incumbent that for the Municipality to tap the full benefits of all sectors, transportation requires a serious development intervention (GSS, 2010). In recent times the tricycle has also become one of the transportation system which is becoming the leading preferred transportation system in the Wa Municipality (DVLA, 2017). And this support the people in their daily economic activities through movement.

According to Kumar and Barrett (2008) mini buses (trotro) are the most common mode of public transit in most cities in Ghana and it was the main mode of transport in the Wa Municipality. However, motorcycles and tricycles which are used for commercial transportation in Ghana and other developing countries are growing very fast in recent years and this is because of the state of the road systems in these area are mostly very poor and it ability to meet a growing demand in the transport sector has been difficult (Foster and Garmendia, 2010). In the context of urban/metropolitan areas, there appears a compelling case whose effects are assessed along with the first round' effects on travel times, vehicle operating costs and safety benefits (NZP, 2014).

The recent transport system in the Municipality has been the tricycle transport. The passenger tricycle, which usually carry four passengers. Where two to three persons sit behind the driver,



close to each other (Guillen and Ishida, 2003). The fare for tricycle costs is almost twice that of ordinary transport system (trotro) because in most cases, it monopolizes certain routes. Tricycle are designed for servicing passengers living in areas where roads are not fully developed as well as during peak traffic hours in the urban city proper emerged (Guillen and Ishida, 2003).

Transporting agriculture produces from the farms to the market places has been one of the biggest challenges facing farmers in the Upper West Region of Ghana. Again the fact that Wa Municipality is the commercial hub in agriculture in the region, all agriculture produces are being transported to the Municipality. Agriculture is still seen as the largest and single contributor of GDP to the growth of the local economy and engages majority of the youth (WMA, 2012). Many of these farmers especially those in the nearby villages and around the Regional Capital carry their produce on their heads to the Wa market. The deplorable nature of roads linking the main market at Wa (The Regional Capital and Municipal Capital) to the adjoining small towns or communities means few vehicles ply the roads resulting in overloading and huge haulage cost (WMA, 2012) and this presents a huge problem to farmers affecting agricultural development in the district. Perishable crops like tomatoes, okra, pepper and onion get damaged in the course of transporting as a result of excessive heat resulting in loss of quality and reduction in farmers' income; eventually discouraging farmers in expanding their farm size the next growing season (Akanambe et al., 2013; MoFA, 2012).

Freight trike transportation contributes to transporting goods or loads from one place to another. Looking at the nature of transportation system in the Wa Municipality, the tricycle seems to be a very reliable means of transporting the farmers produce from their various communities to the main market areas to help solve the problems from losses. The number of vehicles that is, trunks



and goods cars are not many and the few that are in the Municipality are used as passengers' vehicle. The freight tricycle, as its main purpose is for carriage of goods and load help it transporting these farms produce to the market centres. According to Osman (2013) the introduction of the Motorking tricycle in the Upper West Region has been a blessing for rural farmers. It was a blessing because the drudgery associated with farmers traveling long distances to market their produce was going to be a thing of the past. This was because most roads linking a large number of communities in the Region were very deplorable, thereby making traveling on them very unpleasant. Farmers in the Region, indeed, took advantage of those tricycles, which also go by the name "Nyaaba lorry", which means the "grandfather's car" in the local Wala language, to cart their goods to various market centres to sell.

**Plate 3.1 Photos of motor kings showing it intended and unintended purpose in the Wa Municipality**





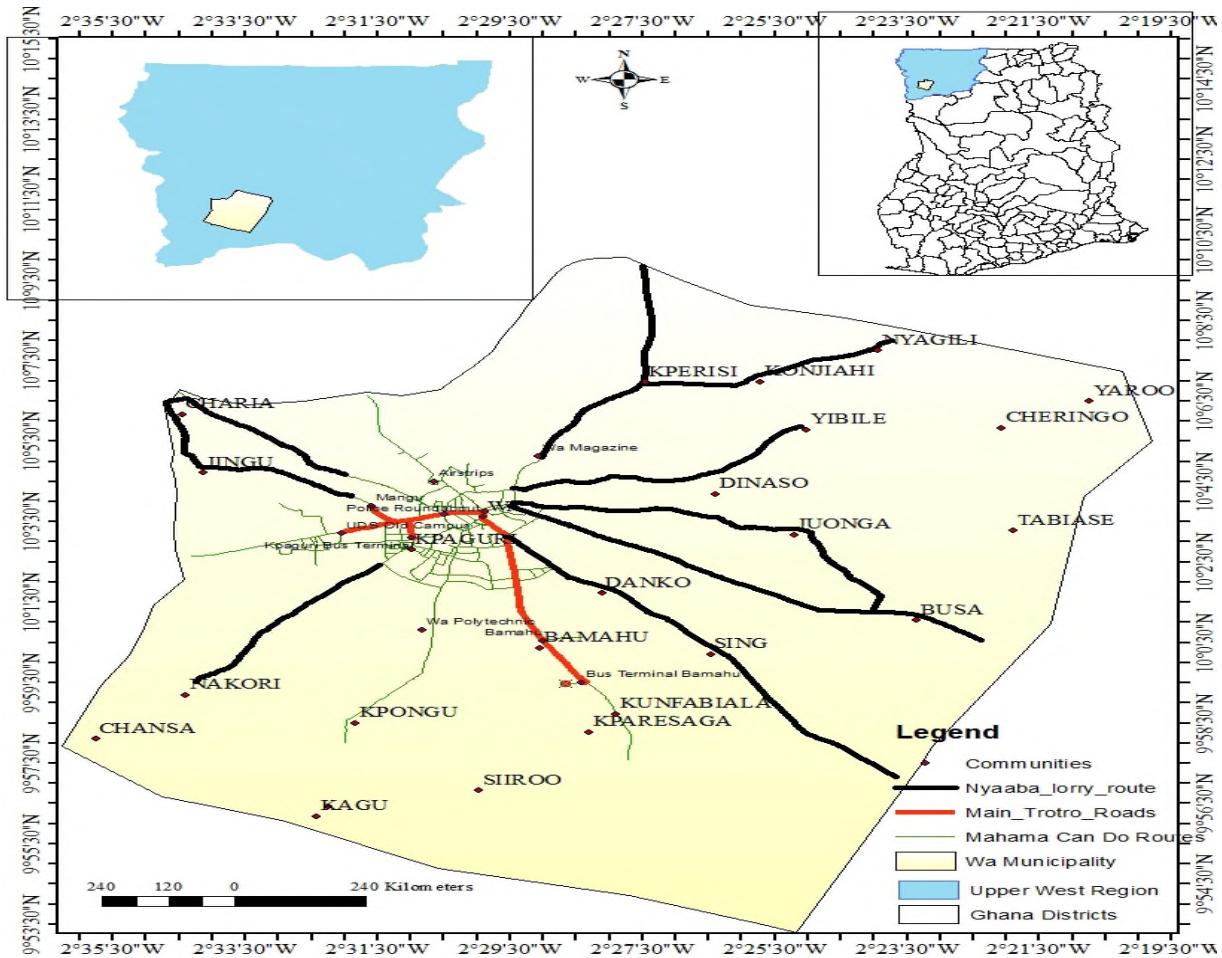
Source: Field Survey, January, 2018.

### 3.3.4 Industry

According to GSS (2010) report, majority of the population in the Municipality about 30.2% were into agriculture, forestry and fishing. Whereas the retailing sector; repairing of motor vehicles and motorcycles was also 20.6%, the manufacturing industry was also 12.5%. The sector has also helps in engaging majority of the youth in economic activities such as repair of motor vehicles and motorcycles which can help reduced high unemployment situation in the Municipality. The industry encompasses a lot of economic activities in the Wa Municipality according to GSS (2010) report.



**Figure 3.1 Map of Wa Municipality indicating the areas where the tricycle ploughs**



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Source: Author's Construct, (Using GIS, 2017).

### 3.4 Sources of data



Sources of the data is one of the sections in research which requires an attention. It is the engine when gathering reliable information in research. The sources of information for this study were mainly the primary and secondary sources of data. Sarantakos (2005) opined that the use of secondary sources for information in research are used to identify and fill research gaps when collecting primary data. Much as the secondary information provides relevant previously collected information on the problem under study. Secondary sources of data for this study were gathered

from: articles, published and unpublished journals, and documents on tricycle transportation from DVLA, MASLOC, Municipal Assembly. Primary data for the study was collected through the use of questionnaires, interviews guides and observations. Information which are gathered through a thorough investigation in the area of study is considered as first-hand hence is termed as primary data. The primary data relied on survey questionnaire, interviews and observations as the way of obtaining the necessary information needed for this study. The information derived here were collected directly from the field. The techniques used in the data collection were suitable and provided the researcher with what he actually wanted to gather from the field.

### **3.5 Sampling Size and Sampling Techniques**

#### **3.5.1 Sampling Units**

According to OECD (2003) sampling unit is one of the elements which an aggregate is divided for the purpose of sampling, each unit is being regarded as individual and indivisible when the selection is made. The unit of analysis is considered a major entity when in conducting a study especially when analyzing the data. Babbie (2005) also defined sampling units as elements about those people or certain types of people from whom information is collected for the analysis of the research. The units of analysis for this study included the tricycle drivers, passengers, owners of tricycles and regulators (Microfinance and Small Loans Center (MASLOC), Ghana Private Road Transport Union (GPRTU), Wa Municipal Assembly, Driver Vehicle and License Authority (DVLA), Ghana Police Service (Motor Traffic Transport Unit), dealers of the tricycles) of the transportation system in the Municipality.





### 3.5.2 Sample Size

Sample size determination is one of the critical aspects in conducting research which requires serious attention of the researcher. Somekh and Lewin (2005) referred to sample size as the crucial factor rather than the relative size or proportion of the population sampled. It is thus very important that in determining the sample size for a study, the researcher estimates the population under study and the size that will possibly represent such a population. Riche and Lewis (2003) observed that it is important to note that small-scale samples only work in qualitative research if good purposive or theoretical sampling has taken place. It is this that supports the use of small numbers because it ensures that the sample will be highly rich in items of the constituencies and diversity it represents.

In determining the sample size for this study, a pre-research survey was conducted, where the chairman of GPRTU in the Municipality indicated that, there were no effective regulatory policies on the operation of TTS in the Municipality. Therefore, tracking these tricycles were very difficult and as a result could not determine the exact total number of tricycles in the Municipality. Whilst Microfinance and Small Loans Centre (MASLOC) and the Wa Municipal Assembly (WMA) issued out some number of these tricycles to the people, most of them were also introduced by private Agents/dealers in the Municipality. The researcher therefore relied on the registered tricycles in the Municipality from DVLA. Table 3.1 shows the number of registered number of tricycles in the Municipality from 2015-2017.

**Table 3.1 Number of Registered Tricycles in the Municipality since 2015**

Type of Tricycle	2015	2016	2017	Total
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Nyaaba lorry (Motor king)	91	39	41	171
Mahama Can Do	5	63	318	386
Total	96	102	359	<b>557</b>

Source: DVLA (2017).

The sample size for the drivers of the tricycle was obtained by using the Yamin (1960) formula:

$$n = \frac{N}{1+Ne^2}$$

Where n= Sample size, N=Sample frame (557), 1= constant, e = margin of error (0.05)

$$n = \frac{557}{1+557(0.05)^2}$$

$$n=232$$

Hence at 95% confidence interval, the study required a sample of 232 for drivers to give fair and accurate findings. The total sample size for this study is 329. Table 3.2 shows the breakdown of the sample size for the study.



**Table 3.2 Sample Size for the study**



<b>Types of Respondent (s)</b>	<b>Description of Respondent(s)</b>	<b>Sampling Technique (s)</b>	<b>Number of Respondents</b>
Drivers of the tricycles	From each of the tricycles drivers. Proportionally, Mahama Can Do (160) (69%) and Motor King/Nyaaba Lorry (72) representing 31%	Multistage Sampling	232
Passengers	Passengers included all persons who join the tricycles for their activity.	Convenience Sampling	81
Owners	Tricycles owners were 10 where (7) were Mahama Can Do owners and (3) from Motor King/Nyaaba lorry Owners	Snowball Sampling	10

Regulators <ul style="list-style-type: none"> <li>▪ GPRTU/PROTOA</li> <li>▪ MASLOC</li> <li>▪ MUNICIPAL ASSOC.</li> <li>▪ DVLA</li> <li>▪ GPS</li> <li>▪ Private Agents (Retailers of the tricycles)</li> </ul>	Those institutions responsible for regulating the tricycle transportation system in the Municipality. One from each institution.	Purposive Sampling	6
Total			<b>329</b>

Source: Field Survey, February, 2017

The sample size used for the study is 329 as Crouch (1984) recommends that “minimum sample Sizes for quantitative and qualitative surveys are of the order of 300 to 500 respondents.” This makes the sample size ideal for the study.



### 3.6 Sampling Procedure

Baker (1994:154) refers to sampling as a “systematic method of selection”. Baker identified two types of sampling in social research: probability and non-probability sampling techniques and that the use of any of the two depends largely on the focus of the problem under study. For Baker, probability sampling is “the procedure in which the choice of respondents is guided by the probability principle in which every unit of the target population has an non-zero probability of

being included in the sample”. Twumasi (2001) noted that non-probability sampling techniques do not lend themselves to randomness. This study employed both probability and non-probability sampling. Multi-stage sampling was used under the probability whiles convenience sampling, snowball sampling and purposive sampling were applied under non-probability sampling.

### **3.6.1 Multi-stage Sampling**

According to Stephanie (2014), multistage sampling divides large populations into stages to make the sampling process more practical. A combination of stratified or cluster and simple random sampling is usually used. Multi-stage sampling (also known as multi-stage cluster sampling) is a more complex form of cluster sampling which contains two or more stages in sample selection. In simple terms, the tricycle drivers were divided into stratum in order to make primary data collection more manageable. Stratified Random sampling was used for the drivers where Mahama Can Do drivers were grouped separately from the Nyaaba Lorry drivers. This was done because the activities of these tricycles have some differences and it is important to group people as they may have different views or life experiences (Olsen and Marie. 2004). Having grouped them into their operational difference, simple random sampling was applied to select respondents for data collection from the Mahama Can Do and Nyaaba lorry drivers from their various associations.

This was done by randomly selecting them from their various stations spotted in the Municipality through the use of simple random sampling technique. This actually helped the researcher to get reliable balanced information from both groups on the activities of TTB since they operate in diverse ways.



### 3.6.2 Convenience Sampling

Convenience sampling was used for the passengers of the tricycle. The researcher collected information from the passengers by interviewing anyone who was found or joined the tricycle. Passengers to the tricycle transportation system are difficult to determine who joins it and when such person joins again and where. According to Bello and Zeberu (2015), convenience sampling is where the researcher chooses the nearest individual or respondent who happens to be available and accessible at the time of data collection. Respondents who were found in the tricycle were asked for some special information on the activities of the TTB. Since the total number of passengers who joins the tricycle cannot be obtained, the researcher therefore chooses the convenience sampling as the best sampling to get the necessary information for this study. According to Kyei (2016), where a population is infinite there is no need to apply any statistical formula in determining the sample size. 81 passengers were used on the convenience sampling because since they are not easily to be identify whether, being interview before prompted the researcher. However, the 81 respondents were easily assessed instead of picking a large number that could have led to repetition of the data required for this study. Even though, in normal sense the passengers are supposed to be more than the drivers but since the number of passengers cannot be ascertained, the researcher relied on the 81 respondents whom are convenience and easily to provide us with the information needed for the study.

### 3.6.3 Snowball Sampling

Snowball sampling which is alternatively known as network sampling is a non-probability sampling technique. This type of sampling is where a known member of the sample frame directs to another member with the same characteristics (Katz, 2006). The snowball sampling technique in this study was applicable because the elements for observation (owners of tricycles) were not



easy to be located. In this situation, the researcher relied the few known (owners) who in turn suggested and provided information about other respondents (owners) of the population they know; helping the researcher to locate such other respondents from whom to collect data. This type of sampling techniques begins with small but becomes larger as it is rolled on (Neuman, 2012). That is to say, it depends on referrals, once the initial sample respondent is established, as he/she nominates successive respondents. Snowball sampling is accumulative in nature as it adds to the sample, once it starts with the known members and they help in locating other elements. Snowball sampling is good for explorative studies like this one (Babbie, 2005; Battaglia, 2008). Since the researcher did not have a direct access to the owners of the tricycles, the drivers were therefore used as gate ways to get to the owners of the tricycle. The tricycle drivers were used as informants to identify, or put the researcher in touch with the owners of the tricycles whose access were difficult to arrive at.

#### **3.6.4 Purposive Sampling**

Purposive sampling is used in research to gather information which are cannot be provided by anybody but only from a category of people or group of people who are perceived and believed to have known more than the others. Purposive sampling is a non-probability sampling technique which provides the researcher a free will to select respondents who are believed to be equipped with accurate and reliable information about the subject matter to light up the questions under study (Patton, 1990). This type of sampling was employed by choosing key informants whom the researcher believe they can provide some important information. Battaglia (2008), postulated that using purpose sampling technique is to get a sample which can be upheld as “representative” of the population; arguing that representativeness in this sense does not have any agreed-upon statistical meaning, but defined along a given demographic features by which the researcher



applying his/her expert skill chooses non randomly the units that best represent the population. In reference to Battanglia, a total of 6 officials were selected from GPRTU, DVLA, GPS, MASLOC, Private agents and Municipal Assembly based on their role and in-depth knowledge about the operations of the tricycle transportation system in the Wa Municipality. This helped the researcher to gather all relevant information on how the tricycle transportation system can be improved as well as requirements to become tricycle operator.

### **3.7 Tools and Techniques for Data Collection**

Data collection techniques refers to the ways by which data is generated and process in the research study. Data-collection techniques allow to systematically collect information about objects of study (people, objects, phenomena) and about the settings in which they occur. In the collection of data, we have to be systematic. If data are collected haphazardly, it will be difficult to answer our research questions in a conclusive way (Kongmany 2009). Data collection techniques are categorized according to the type of analysis they support: qualitative or quantitative research. Qualitative analysis is based on anecdotal evidence, comments offered, and ideas generated by participants. Quantitative analysis is based on data collected from a large sample of participants. Data collected from sample are evaluated statistically and may be generalized to the population at large (Jakubiak et al, 2010).





**Table 3.3 Data collection techniques and tools**

<b>Data Collection Techniques</b>	<b>Collection</b>	<b>Data Collection Tools</b>	<b>Types of Respondents</b>
Administering Questionnaires	Survey	Questionnaires	<ul style="list-style-type: none"> <li>▪ Drivers</li> <li>▪ Passengers</li> </ul>
Interviewing		Interview Guide, Checklist, Questionnaires	<ul style="list-style-type: none"> <li>▪ Regulators</li> <li>▪ Owners</li> </ul>
Observation		Eyes and Other sense, Pen/Paper, Watch	<ul style="list-style-type: none"> <li>▪ Participant Observation</li> <li>▪ Non-participant Observations</li> </ul>

Source: Kongmany (2009)

### 3.7.1 Questionnaire

An instrument which is used to collect information from respondents in a form series of questions is termed as a questionnaire. Questionnaires are a group of written questions to which participants are asked provide an answer in a form of writing their views on the questions asked (Abawi 2013). A drafted questionnaire includes both closed and open-ended questions which is used to gather the required data from the field. The closed-ended questions helped in easy computing of data to save time whilst the open-ended questions were explored into knowing what tricycle drivers' thinks about the sector (Liebscher, 1998) allow them to use their own language for expression. According to McGurik and O'Neill (2005), questionnaires are useful instruments for soliciting original information about tricycle transportation system, their opinions, and the level



of awareness about their business and undoubtedly their behavior and social interactions. This tool was used in this study to collect information from the drivers of the tricycle and the passengers as well. The passengers and the tricycle drivers were engaged in the tricycles during their working periods and they were engaged in a special kind of conversation. The conversation between the respondents, were actually face to face during working hours, and the questions were really relevant to the study (Olsen and Marie 2004). Information sourced from the operators included their socio-economic characteristics, mode of operations, trip characteristics as well as the challenges they faced among others in the Wa Municipality. Passengers of the tricycles were excellent in feeding the researcher with information on the effects of tricycles on the businesses, leisure and other economic factors.

For reliability and easy access to information, the researcher contracted five (5) people for data collection where 4 (four) of them were indigenes and could speak the local dialect very well. This helped the researcher to get all the needed information for this study.

### **3.7.2 Interviews**

An interview is an interaction between two people where one person asks questions for the other to provide answers. Though interviews are also in the form questionnaires, they are administered verbally and are very useful in producing an in-depth qualitative data on the problem under study (Baker, 1994; Twumasi, 2001 and Sarantakos, 2005). According to Abawi (2013), interview involve gathering data by asking some questions in relation to the area under study. In this study, an in-depth interview was conducted for some specific respondents to produce information.

This was conducted for the regulators, where they were interview on the ways rules and regulations guiding the tricycle transportation system whiles owners of the tricycles will be also interviewed



on how lucrative the tricycle transportation business looks. The in-depth interview was directed to the regulators focusing on issues relating to registration of tricycles, dues and levies, and other policies on the tricycle transportation system.

### **3.7.3 Observations**

In research observation is a data collection technique that involves a thoroughly selecting, watching and recording behavior and characteristics of living beings, objects or phenomena in a particular area. Observation can be taken in different forms, thus: participant observation and non-participant observation (Kongmany 2009). The researcher was both participant and non-participant in the activities of tricycle operations to this study. The researcher is a participant observer because he joins the tricycle and thereby had some information regarding their activities in the Wa Municipality. For instance, information on the role the tricycle transport has played in the growth of local economy of Wa Municipality. Since the researcher has been in the Municipality before the introduction of TTB, much has been observe in relation to the situation before and after transportation situation in the Municipality. The researcher was a non-participant in this study because he only observes certain activities such as how they operate and abide by the regulatory policy makers in the Municipality without participating.



### **3.8 Techniques of Data Analysis and Presentation**

Research is not complete until data collected is analyzed and interpreted. In social research, the analysis of data and interpretation of results are therefore very necessary. The data collected from various sources through the use of different tools and techniques generally comprises numerical

figures, rating, narratives, responses to questions. Data analysis refers to ‘techniques used to reduce, organize and give meaning to data’ (Burns & Grove, 2005).

The data was analyzed quantitatively and qualitatively. Quantitative data collected with the questionnaires from the field were pre-coded and analyze with the use of Statistical Package for Social Sciences (Version 21.0) software and Microsoft excel tools. Quantitative data for the analysis were presented, explained and discussed using descriptive statistics such as frequencies and percentages, statistically test such as Kendall’s W was also used for the quantitative analysis. The qualitative data in this research were analyzed through the process of transcribing field notes and interview recordings, editing, coding, conclusion drawing and report writing. The qualitative data in this study was mainly narrative. Graphic formats like: charts, graphs, tables and matrices produced from excel to aid appropriate presentation, description and interpretation were also used (Flick, 2002).

### **3.9 Validity and Reliability of Research Instrument**

Validity refers to the extent to which an instrument measures what it is required to measure (Polit and Hungler 1993). Again Karras (1997) argued that “validity describes a test’s ability to produce results consistent with other measures of the same characteristic and respire external criteria”.

Research validity is the extent to which an instrument designed to be used for exercise is able to accomplished it task throughout the study. The instruments used in collecting the data were very good because it actually measured and came out the data required.

Reliability on the other hand refers to the extent to which an instrument measures consistently what it purports to measure accurately. Minimizing measurement of error like data collection bias



was a form of reliability. Data collection biases were also brought to the barest minimum by friendliness and support exhibited by the researcher (Polit and Hungler 1993).

### **3.10 Ethical Considerations**

Ethical considerations form a major element in a research. The researcher needs to adhere to promote the aims of the research imparting authentic knowledge, truth and prevention of error.

During the period of the study, ethical principles were complied with as they serve to safeguard the dignity, right, safety and wellbeing of all the participants in the research (Babbie and Mouton, 2002 cited in Luci, 2012). According to Chilisa (2005), ethical issues in social inquiry have to do with codes of conduct that shield the study respondents from physical, mental, and/or psychological harm. That is, in undertaking research, researchers are expected to adhere to acceptable moral and legal standard that both protect the researcher and the credibility of the research. Examples of the important ethical issues that researchers have to adhere to are ensuring: informed consent, anonymity, confidentiality, the right to privacy and utilization of appropriate methodological and reporting formats. Also, the researcher should avoid plagiarism, deception, and falsification of authorship, evidence, data, findings and conclusions and as well enhance beneficence (Babbie, 2005; Marshall and Rossman, 1995; Creswell, 2014).

This research is focused on fairness and strived to avoid biases in data analysis, data interpretation, personnel decisions and other aspects of research where objectivity is required (Resnik, 2011). The researcher admits that plagiarism is unethical in academic writing. Creswell (2014) referred to plagiarism as the art of copying other authors write ups extensively without giving them credit for their work and or presenting same as yours. This study was conscious of this ethical issue and so



acknowledged the works of all authors and sources of data gathered to address the problem been researched.



## CHAPTER FOUR

### PRESENTATION OF RESULTS AND DISCUSSION

#### 4.0 Presentation of Results and Discussions

This chapter presents the analysis and interpretation of the data gathered from the respondents on the field is done in this chapter. A brief background is given on the socio-demographic characteristics of the respondents. For organization and logical presentation, the analyzed data are presented in line with the objectives set for the study. The results from the analysis are presented in diagrams such as graphs tables and charts.

#### 4.1 Demographic Features of Respondents

Demographic features of the respondents for the study were examined accordingly. Respondents sex, age, formal education and years or duration in being in the Wa Municipality in relation to the problem under study.

##### 4.1.1 Sex of Respondents

Sex of the respondents was analyzed (passengers and drivers) to know the proportion of males to females engaging in their economic activities through the use of TTB. According to Akrani (2011) activities which are undertaken in exchange for money constitute economic activities. The results were as displayed in table 4.1.

**Table 4.1 Sex of respondents**

Sex	Drivers		Passengers		Total
	Frequency	%	Frequency	%	
Male	232	100%	6	7%	238



Female	-	-	75	93%	75
<b>Total</b>	<b>232</b>	<b>100%</b>	<b>81</b>	<b>100%</b>	<b>313</b>

Source: Field survey, March, 2018

From the results displayed in Table 4.1, there were 238 males and 75 females' respondents used in this study. The study indicated that out of the 238 males, 232 were drivers and only 6 were passengers. All the 75 female respondents in the study were passengers. No female was found to be a tricycle driver in the Wa Municipality. As the drivers were providing services to the people through the TTB, the females' counterpart also used the tricycle transportation in their daily economic activities in the Wa Municipality. This demographic feature was important in this study in order to assess how the people had benefited from the introduction of the TTB in their economic growth activities. This conforms to Ipingbemi and Adebayo's (2016) study that, driving tricycle is energy sapping, arduous and labour intensive which many women do not have flare for. They also used it for they daily economic activities.

#### 4.1.2 Age of Respondents

The age of respondents (drivers) was necessary in determining the category of age group who operates the tricycle in the Wa Municipality. This was by way of profiling the respondents (drivers) by age as shown in Table 4.2.





**Table 4.2: Age of drivers of tricycles**

Age	Frequency	Percent
Below 15	30	12.9
18-25	40	17.2
26-35	105	45.2
36-45	37	15.9
45+	20	8.6
<b>Sub-total</b>	<b>232</b>	<b>100.0</b>

Source: Field survey, March, 2018.

The ages of the respondents (tricycle drivers) were put into five ranges: below 15, 16-25, 26-35, 36-45, 46 and above. Out of the 232 respondents engaged, majority (105) of them were between the age group of 26-35 years. The second categories were those between 18-25 with 40 respondents, followed by 37 respondents for those between 36-45 years. Also, there were 30 drivers who were below 15 years while the least were those in the age range of 45+ years who were only 20 respondents. Even though respondents below 15 years were ranged as the fourth category, but it is considered as a serious issue since underage are not allowed to drive according to the Road Fund (1997) Act 536 because they are considered to be inexperienced. Evidence from the study results suggests that majority of the respondents are considered to be in the working class as Ghana Living Standard Survey (GLSS) (2014) classified all persons aged 15 years and older as workforce group.



#### 4.1.3 Formal Level of Education of Drivers and Passengers

Education is a vital instrument to propel development and also helps individuals to make rational decisions that affect their businesses, livelihoods and general wellbeing in a society (Kabeer, 1991). Education helps in determining the level of peoples understanding and their ability to respond to issues. In this regard, the level of formal education of respondents to the study was examined to ascertain their level of understanding on how TTB has contributed to the growth of a local economy of Wa Municipality.

**Table 4.3: Distribution of drivers and passengers by formal educational level**

level of Education	Drivers	Passengers	Total (Drivers and Passengers)
No education	50 (22%)	21 (26%)	71 (23%)
Primary/ JHS	130 (56%)	30 (37%)	160 (51%)
SHS/ Tech/Voc	40 (17%)	20 (25%)	60 (19%)
Tertiary	12 (5%)	10 (12%)	22 (7%)
<b>Total</b>	<b>232(100%)</b>	<b>81 (100%)</b>	<b>313 (100%)</b>

Source: Field survey, March, 2018.

According to Table 4.3, it was realized that out of the 313 respondents (drivers and passengers), 71 had no formal education. Out of the 71, 50 were drivers whereas only 21 were passengers. Also, 160 of the respondent had Primary/JHS with 130 of them being drivers and 30 being passengers. However, 60 out of the total passengers and drivers were SHS/Technical/Vocational levers. Out



of the 60, 40 were drivers whereas 20 were passengers. In addition, 22 had tertiary education where 12 were drivers and the remaining 10 were passengers. From the findings, there is an indication that, majority (130) of the drivers respondents had obtain Primary/JHS and SHS/Technical education certificate. This implies that, most of them can read and understand road signs and markings and other regulations which are very critical to safety on the road.

#### 4.1.4 Occupation of the Respondents (Passengers)

It is often said that a person's occupation is determinant of his or her standard of living. The occupation of the respondents in this study was very necessary to help the researcher to be able to determine their main occupation and how tricycle contributes to that in the Wa Municipality.

**Table 4:4 Occupation of respondents (passengers)**

Occupation	Number of Respondents	Percent (%)
Farmers	20	24.6
Office work	6	7.4
Trading	40	49.3
Mechanic and others	15	18.7
Total	81	100

Source: Field Survey, March,2018.

Table 4.4 shows responses of the passengers' occupation. From the respondents, 40 (49.3%) said they were into petty trading and small scale businesses. Respondents mentioned to include table-top selling of ingredients and handicraft activities like tailoring, hairdressing, weaving, carpentry, and were found to be engaged in self-employed jobs. Twenty (24.6%) respondents said they were into farming, 15 respondents representing 18.5% said they were into repairing (mechanic), whiles

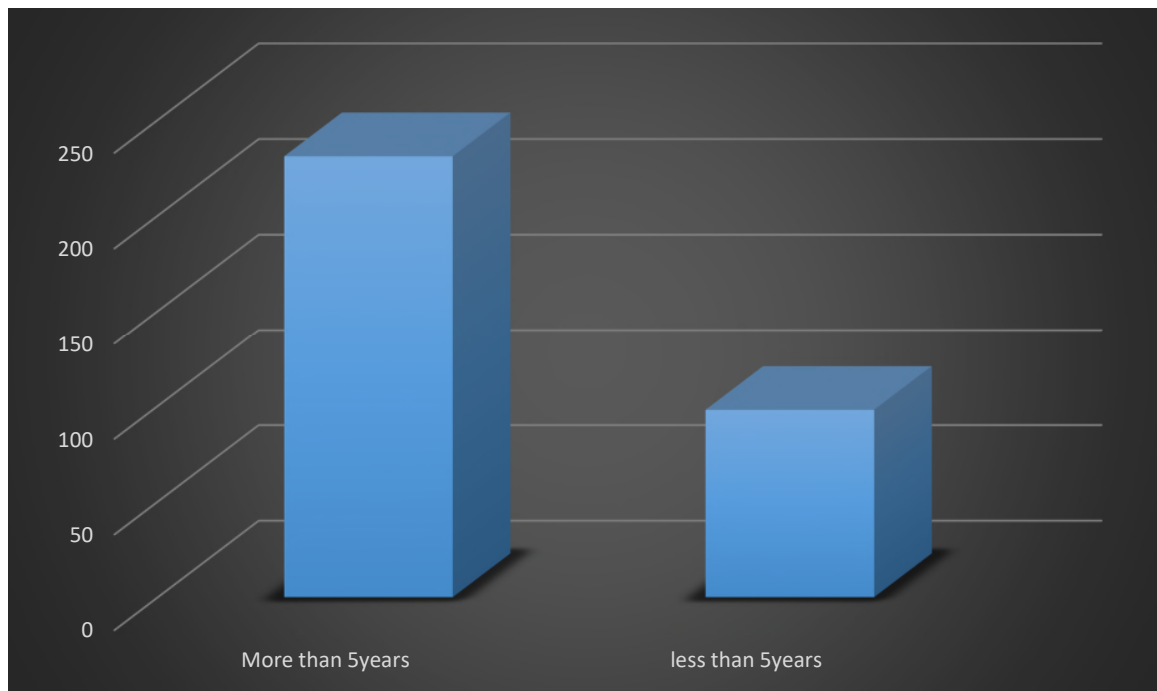


the remaining 6 (7.4%) respondents also said they worked in formal sector (office work). From the findings it was realized that majority of the passengers were into trading and other small scale businesses and therefore relies on the tricycle transport as their source of conveyance of their goods to the market centers.

#### 4.1.5 Respondents' years of stay in the Municipality

Respondents' years of stay in the Municipality determines respondent's level of knowledge or understanding of issues on the problem under study. It was believed that those who had stayed in the Municipality for longer period (more than 5 years) knew more about the transportation situation before the introduction of the TTB.

**Figure 4.1 Respondents years of stay in the Municipality**



Source: Field Survey, March, 2018.

Figure 4.1 depicts how long respondents had stayed in the Wa Municipality. The study revealed that out of the 329 respondents 231 representing the majority had stayed in the Municipality for



more than 5 years. Only 98 respondents representing the minority had stayed in the Municipality for less than 5 years. Most respondents of the majority said they were born in the Municipality and were considered to know more about the situation before the introduction of TTB.

#### **4.2 THE TRICYCLE TRANSPORTATION BUSINESS AND ECONOMIC ACTIVITIES IN THE WA MUNICIPALITY.**

This section was the main focus of the research. Respondents demonstrated their understanding of the influence of tricycle transportation business on economic activities and their contributions to the growth of the local economy of Wa Municipality. Respondents' assessment was based on how the introduction of the TTB had contributed to their economic activities mainly; by way of employment creation, business activities and mobility.

According Barwell (1996) and Starkey et al. (2002) added that, the use of motor tricycles help improves access to economic activities and social services in a locality or a country. These effects were headlined under three main sections in the study and these included: TTB effects on employment creation, TTB effects on business activities and TTB effects on mobility. The research sought respondents' views on how significance TTB was to the growth of local economy of Wa Municipality on these lines. In a likert scale ranking of: Very Significant, Significant, Moderate, Less Significance and No influence, the results were as displayed in percentages in Table 4.5.



**Table 4.5 Contribution of TTB to economic growth**

Contributed of TTB to Business Growth	Very Sig (%)	Sig (%)	Moderate (%)	Less Sig (%)	Not Sig (%)	Total (%)
Employment creation	96.0	4.0	0	0	0	100
Business efficiency	90.1	9.9	0	0	0	100
Mobility Enhanced	79.0	11.2	9.8	0	0	100

Source: Field Survey, March 2018

**Table 4.6 Drivers and passengers' ratings**

Respondents	Employment	Business activities	Mobility
	Percent (%)		
Drivers	86	14	23
Passengers	10	76.1	56
Total	96	90.1	79

Source: Field Survey, March 2018.



Table 4.5 clearly shows how TTB has contributed significantly to the growth of Wa Municipality. The responses were grouped to reflect the views of the drivers (operators) and passengers' respondent. The contributions were categorized in relation to the rate at which they were perceived to be attributable to the growth of economic growth in the Wa Municipality. From the respondents' responses, it was realized that 96% of the driver and passenger respondents rated employment as very significant with the remaining (4%) saying it is significant to the growth of the economy. Business activities and mobility were rated as very significant with 90.1% and 79.0% respectively. From Table 4.6, it was clear that out of the 96% rated very significant, majority 86% were drivers. Also, 76% of the respondents who rated business activities as very significant (90.1%) were passengers representing the majority. Moreover, respondents ranking on mobility enhancement was that, 56% were passengers while 23% were drivers. This means that as TTB was creating employment to the unemployed as drivers, it was also booming business activities and enhancing mobility of the people to their various destinations in the Municipality hence increasing economic growth. This finding conforms with Anaman (2004) that, some of the major indicators of economic growth include; employment, business growth/activities, mobility and many others which are driven by the activities of the people.



#### **4.2.1 The TTB and employment creation in the Wa Municipality**

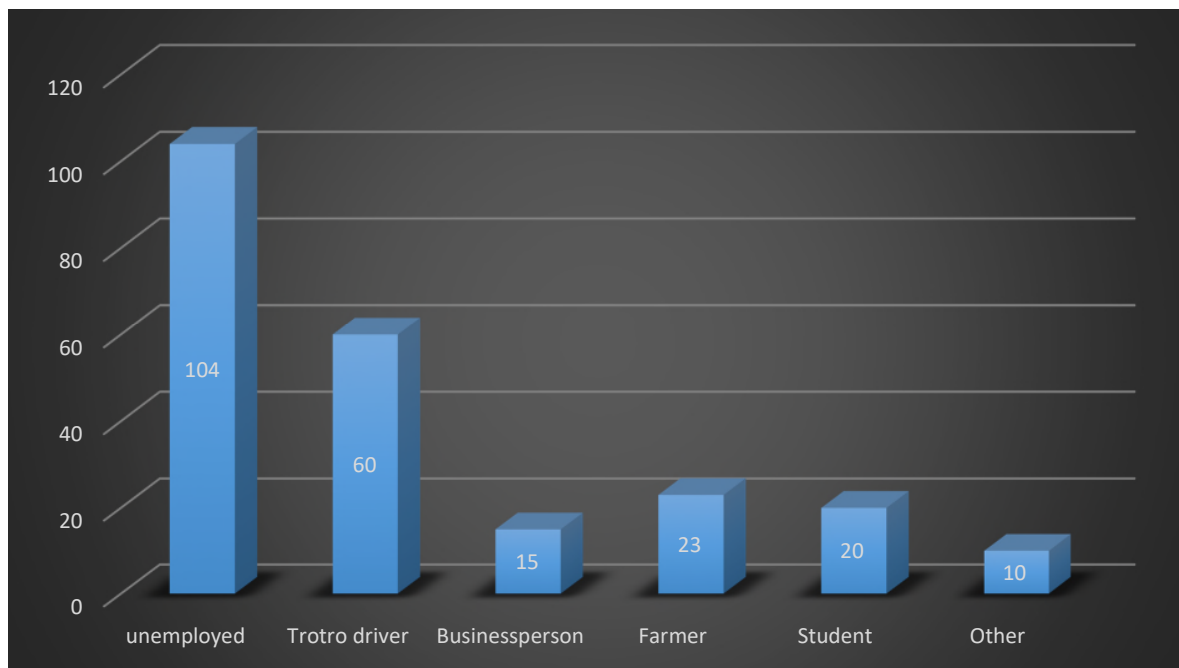
This section in the study tried looking at how TTB has engage people for employment. Unanimously, all the respondents (drivers) said they have benefited from TTB in terms of employment generation. They agreed that they had not only benefited from TTB as employment but also in diverse ways like being responsible in the society. It was noted that employment had

been one of the major benefits that the tricycle operators had gotten from the introduction of the TTB.

#### 4.2.1.1 Previous occupation of TTB operators before going into TTB

Respondents were asked to answer the type of business or their previous occupation before realizing the introduction of the tricycle transportation business as their new occupation. they were doing before going into TTB. This section was addressed to only the drivers of the tricycle transportation.

**Figure 4.2 Previous occupation operators before going into TTB**



Source: Field Survey, March 2018.

Figure 4.2, indicates that majority (104) of respondents were unemployed. This confirms the previous assertion in Table 4.5 that the contribution of TTB to employment is really significant to the growth of the local economy of the Wa Municipality. The findings found were not different





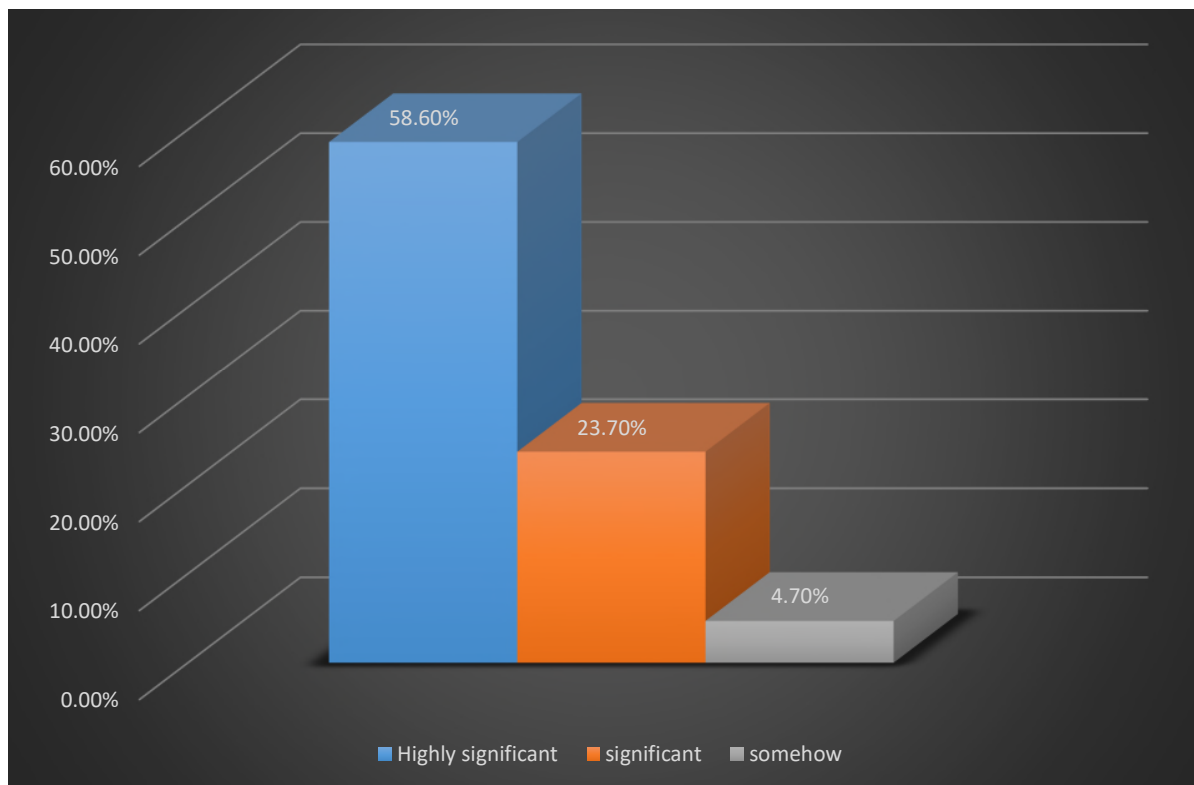
from those identified by Dinye and Ahmed (2015). It however confirmed that 104 people who were unemployed have gained employment through tricycle transport in the Municipality.

#### 4.2.1.2 Significance of TTB to Employment Creation

In order to prove that unemployment was very high before the introduction of TTB in Figure 4.2, the researcher looked at how significant TTB had led to employment creation in the Municipality.

Figure 4.3 illustrates the results.

**Figure 4.3: Significant of TTB to Employment Creation**



Source: Field Survey, March 2018.

According to Figure 4.3 above, majority of the drivers and passengers' respondents (58.6%) were of the view that, the creation of employment as a result of the introduction of the TTB was very significant, 23.7% of the respondents had the view that TTB and employment creation is



significant. Only 4.7% were of the view that it is somehow significant. Majority of the study respondents held the view that TTB is significant to employment creation, meaning the contribution of tricycle transportation service had led to a reduction in unemployment crisis in the Wa Municipality. It is believed that the economy can also be well shaped if the government and successive government concentrate at the transportation sector to help reduce the unemployment problems in the country. Evidence from the field was consistent with GNA (2017) view that in Northern Region, Tamale, the introduction of the new innovative smart business (keke) had engaged most of the youth and had reduce unemployment which had led to a better economy in the Region.

In an interview with a passenger, she remarked;

*The tricycle business has created a lot of employment for most of the youth in Wa.*

*When my son completed JHS, I didn't have money to send him to SHS so he was in the house and I was afraid these bad boys would have influence him. Fortunately, a friend bought him a tricycle to be working with. It is barely 2 years now and if I am to tell you what this boy has done, it will surprise you (Interview, March 2018).*

An owner of the tricycle added this;

*I've been able to create employment for 10 people in Wa and Tamale through this tricycle business. I pay them very well and they are happy with the job since they were all unemployed. So in one way or the other I have also created employment out of TTB and I believe that this can also help reduce the burden on the government and would help increase the economic growth of the Wa Municipality (Interview, March 2018).*



Some reasons were also translated into writing from the interview conducted. Unanimously, all the drivers engaged gave something positive about their new job. Others said they were not only impacted with the profitability aspect but had been able to stay away from some unaccepted behaviors in the society. Respondents mentioned these unaccepted behaviors to include, taking hard drugs, robbery (especially stealing of motorbikes), illegal mining, rape cases, unnecessary emigration and other indecent behaviors. A driver corroborated this statement:

*My brother, TTB is a life changer. I can't say so much. I used to work in the night, that is, robbery and I remember in 2015 I was nearly shot by the police in the course of an operation. It wasn't that I was happy with that work but due to unemployment issues and the associated hardships. I thank God that ever since I found this tricycle business, I don't even have time for the useless things I used to do. Am now taking care of my siblings and I am very responsible. I don't even remember the last time I thought of going into such. So my brother, I call TTB a life changer; crime to prime (Interview, March 2018).*

The respondents to this study were very ingenuous and open to their statement given to the researcher with the reason being that it was a past story of their life and they were happy telling the researcher since it was going to serve as a lesson to the youth in the Wa Municipality. Another respondent also explained how TTB had contributed to his life. The respondent gave his own picture to the researcher showing his behavior and lifestyle before getting the opportunity to enter into the tricycle transportation business.

**Plate 4.1: A picture from the field showing the previous lifestyle of respondents (driver) (Right) and a passenger (left) and also picture showing after being into TTB**





Source: Respondent, March 2018.

Field Survey, March 2018

He remarked that:

*Boss put my picture in your book to serve as an advice to the younger ones. I nearly killed myself with tramadol. I was unemployed and was just confused, so I was living my life anyhow. Two (2) of my friends have died as a result of tramadol intake. So if not this Kamboo business I know I would have died now. This is a past story of my life and I have vowed not to go into such act again so it won't bother me much to say this. I have really suffered in my past life. It wasn't that I liked such act but it was due to unemployment (Interview, March 2018).*



#### 4.2.1.3 The employment creation and economic growth of the Municipality

According to Rodrigue and Notteboom, (2017), there is a relationship between transportation and job creation and they have effects on the local economic growth. With regards to the employment creation, this section of the research looked at the effect of employment creation from TTB on economic growth.

**Table 4.7 The Employment Creation and Economic Growth of the Municipality**

<b>Contributions of employment to Economic Growth</b>	<b>Frequency</b>	<b>Percentage</b>
Reduction in criminal activities	160	51.1%
Increase in standard of living	80	25.6%
Responsible to family and the society at large	73	23.3%
Total	313	100

Source: Field survey, March 2018.

From the findings out of the 313 passengers and drivers, it was found that 160 (51.1%) of the total respondents attested that the effect of TTB on employment has resulted in reduction in criminal activities in the Municipality. Eighty (25.6%) also indicated that it has increased their living standard whiles the remaining 73 (23.3%) showed that TTB has made the irresponsible very responsible to their families and the society at large because they can now take care of their families and perform other roles that they are supposed to do through this job. It was revealed that the most encountered issue (armed robbery) which was worrying residents in the Municipality for the past years have been reduced. And this implies that a reduction in these criminal activities will



also help people to engage in their economic activities to enhance their livelihood. The findings confirm Rodrigue and Notteboom (2017) that youth engagement in employment mostly contributes to the reduction of crimes as a result of the youth engagement.

#### **4.2.2 Contributions of TTB to Business Activities**

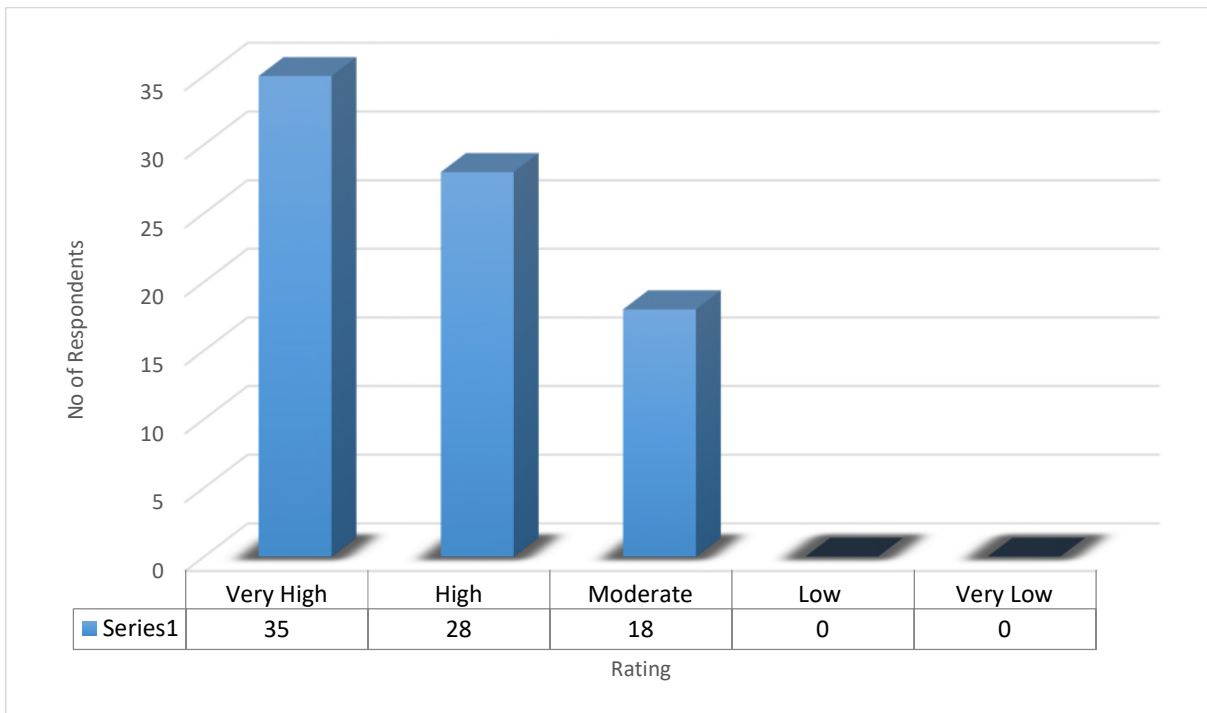
It was realized from the findings that the activities of the TTB contributes much to all the economic activities in the Wa Municipality. The findings established that people really use the tricycle transportation service to their workplaces (market, farm, office, school). Unanimously, all the respondents responded that they used both the passenger tricycle (Mahama Can Do) and freight tricycle (Nyaaba lorry) in their daily economic activities.

##### **4.2.2.1 State of Business Activities Growth**

This section of the study became imperative and necessary to solicit the views of the respondents on how the tricycle transportation business have contributed to the growth businesses in the Wa Municipality.



**Figure 4.4 State of Business Growth**



Source: Field Survey, March 2018.

Interestingly, all the respondents believed that TTB had contributed to economic growth in diverse ways. Evidence from the survey as display in figure 4.4 shows that out of the 81 passengers, 35 indicated that the TTB contribution to businesses growth was very high. Twenty-eight of them also rated that there had been a high growth in businesses as a result of the TTB introduction. Moreover, 18 respondents believed that the state of businesses growth had been moderately high.



These rating were done based the level of their business now. However, none of the respondents indicated that the TTB had led to low or very low in the growth of their business. In effect, respondents agreed that the contribution of TTB had helped improve businesses because they are reliable and affordable in the Municipality and therefore believed that more opportunities will emanate from TTS operations if their operations are well designed.

Findings established in this study confirmed Eddington's (2006), assertion that increasing business efficiency, through time savings and improved reliability of transport services for businesses helps improve the business growth. The availability of tricycle transportation services reduces the waiting time of businessmen/women which could lead to an increase in productivity and also finds new ways of making the business attractive. TTS have the propensity to reducing poverty, improving larger market accessibility, easy accessibility, job security and new job creation, and improved income of beneficiaries.

Following up on the state of businesses growth in the Wa Municipality, the study sought respondents' views on the effect of TTB to the growth of businesses. The results were shown as in Table 4.8.

**Table 4.8 Effects of TTB to Business Growth in Wa Municipality.**

<b>How TTB has Contributed to Business Growth</b>	<b>Frequency</b>	<b>Percent</b>
Increase in earnings (Profit)	136	43.5%
Increased profit for the expansion of existing business	71	22.7%
Establishment of new business	47	15.0%
Increase business investment	31	9.9%
Increase competition (reduce monopoly market)	28	8.9%
Total	313	100

Source: Field Survey, March 2018.





Results from Table 4.8 covered the findings of figure 4.4. The effects of the tricycle transport on economic growth were analyzed for the passengers of the tricycle. All the respondents to the study said the effect of the TTB to their businesses has been very useful and significant. However, 28 (8.9%) of the respondents held the view that, TTB had helped increase competition (reduce monopoly market) among businesses in the Wa Municipality. Respondents added that TTB had helped eliminated the monopolistic tendencies that taxi drivers were enjoying.

#### 4.2.2.2 Drivers Earnings from Previous Occupation and Earning from TTB

The study also made efforts to find out the driver earnings from previous occupation and earnings from TTB. These comparisons helped the researcher to easily make a justification of whether the TTB was profitable than that of their previous occupation. Here, only those who were employed or working were used to analyze this section. Out of the 232 drivers only 128 respondents were used for this section.

**Table 4.9 Drivers Monthly earnings from previous occupation and earning from TTB**

Monthly Earnings	(Before going into TTB		After Being into TTB Earnings	
	Frequency	Percent	Frequency	Percent
Below GHs 200	21	16.4	-	-
GHs 200-500	74	57.8	37	28.9
GHs 500-1000	31	24.2	78	60.9
More than GHs 1000	2	1.6	13	10.2
Total	128	100	128	100



Source: Field Survey, March 2018.

Table 4.9 shows the drivers earnings from their previous occupation and earnings from their current occupation (TTB). It was revealed from the findings that out of the 128 respondents (operators) engaged, 21 (16.4%) were earning below ₵200.00 in their previous occupation. After the intervention of TTB, none of these respondents were earning below GHs 200. Evidence from the survey further shows that 74 (57.8%) of the total respondent were making a monthly sale between GHs 200-500 in their previous occupation as compared to only 37 (28.9%) after being into TTB. Also, 31 respondents representing 24.2% indicated that they were earning between GHs 500-1000 monthly in their previous occupation against 78 (60.9%) who earns between GHs 500-1000 averagely in a month from TTB. Moreover, the survey evidence brings to bear the highest sale of monthly earning of GHs 1000 and above and it was known that only 2 (1.6%) respondent was earning more than GHs 1000 in a month as compared to 13 (10.2%) respondents earning that after being into TTB.

It was revealed from the Table 4.9 that TTB was respondents now earns more as compare to their previous occupation as only 1.2% of the respondents were earning more than GHC1000 in a month in their previous occupation as compare to 10.2% of respondents earning more than GHC1000 in a month after taking TTB as their new business. This implies that TTB is a lucrative business that the people (youth or unemployed) in the Wa Municipality can rely on for a living since it earns better than the other businesses. This finding confirmed respondents' previous argument that TTB is more profitable than most of the jobs in the Municipality. It has helped many of the youth to get employment.



#### 4.2.2.3 Passengers Cost Savings in a Month (n=76)

Under this section, only respondents who had being in business for more than 5 years were given the opportunity to answer this question. This was done because the researcher wanted to know their earnings before the coming of the tricycle transportation and after the tricycle transportation had come into existence. And out of the 81 respondents, 76 said they had been in the business for more than 5years which therefore means that a clear comparison could be made as to whether they have been able to save cost as a result of TTB in their business through the reduction in awaiting time for transport.

**Table 4.10 Passengers Average Earnings in a Month (n=81)**

Monthly Earnings	Before TTB introduction (2012)		After TTB	
	Frequency	Percent	Frequency	Percent
Below GHs 200	8	11%	1	1%
GHs 200-500	55	72%	10	13%
GHs 500-1000	11	15%	58	76%
More than GHs 1000	2	2%	7	10%
<b>Total</b>	<b>76</b>	<b>100</b>	<b>76</b>	<b>100</b>

Source: Field survey, March 2018.



Out of the 76 respondents (passengers), only 1 (1%) of the respondents was recorded to be making monthly average earning below GHs 200 after the TTB had come into operation as compared to 8 (11%) who were making monthly average earnings of below GHs 200 before TTB introduction (before 2012). This implies that a total of (10)10% of the respondents' earnings were below GHs 200 than before the introduction of TTB. Also, 13% of the respondents said they were earning between GHs 200-500 averagely in a month after TTB against 72% before the introduction of the TTB.

On the other hand, evidence from the field further showed that only 15% passengers were making an average monthly earning of between GHs 500-1000. Only 2% of the passenger respondents were earning more than GHs 1000 before the introduction of TTB. After the introduction 76% were earning average monthly of between GHs 500-1000 and 10% were also earning more than GHs 1000 averagely in a month. Comparing these earnings, it was realized that there was a difference of 61% increase in earnings of those who were earning between GHs 500-1000 had enabled after the introduction of TTS. This implies that TTB had contributed to an increase in respondent's average monthly earnings.

A respondent from the MTTU remarked



*Well, I think the contributions of the tricycle are not center on only the driver and passenger but also contribute something to the government in a form taxes. The amount the drivers pay as taxes to the government can also be used for the developmental projects in the Municipality. Hence, their contribution is really significant to economic growth of a local economy of Wa Municipality.*

In an interview, a mechanic passenger had this to say:

*I have been in this service for 12 years now. Somewhere around 2011, I nearly stopped this job due to the unprofitable nature of the work. I quite remember I used to earn GHs 14 as the maximum profit in a day. But from 2014 till now I won't lie to you I can make about GHs 100 a day. The boys were not even willing to learn this job by then, I used to have only one apprentice but now I have 9 apprentices. The fact is when you work on one tricycle the money you charge is more than working on five (5) motorcycles. So to talk of tricycle contributions they are numerous because as the more and more of the tricycle are coming into the system our profit is also increasing (Interview, March 2018).*

**Plate 4.2 A picture of a mechanic at the workshop working on a faulty tricycle.**



Source: Field survey, March 2018.



The amount of income earned from a business is very important because it partly indicates the level of comfort enjoyed. The findings revealed that, petty traders, spare parts dealers, mechanics and other businesses monthly earnings have increased tremendously through the reduction in waiting for transport and other reasons. This therefore means that tricycle transport system contributes to business growth in the Wa Municipality.

By confirming the result of Table 4.9 and 4.10 on the increase in respondents (drivers and passengers) earnings, Kendall's Coefficient of Concordance statistical test was used to test to confirm the significant level of the increase in their earnings after patronizing the TTB. This has been shown in Tables 4.11 and 4.12.

**Table 4.11 Paired samples test report on difference in drivers earnings**

	Mean	N	Std. Deviation
After TTB	386.0014	76	128.89832
Before TTB	92.1071	76	27.42388
Mean difference	293.8943		
Sig.	0.000		

Source: Field survey, March 2018.

**Table 4.12 Paired samples test report on difference in passengers earnings**



	<b>Mean</b>	<b>N</b>	<b>Std. Deviation</b>
After TTB	366.0714	76	126.88833
Before TTB	99.1071	76	29.37388
Mean difference	266.9643		
Sig.	0.000		

Source: Field survey, March 2018.

From Table 4.11 and 4.12, drivers and passengers' respondent were earning on average GHs 92 and 99 per month in their previous occupation respectively. However, after their engagement in the tricycle business, drivers and passengers' respondents were earning GHs 386 and 366 respectively on an average every month indicating that their income has increase in three folds of their previous occupation's income. Drivers' respondents earning after TTB standard deviation of GHs 129 indicates that some tricycle drivers earn as high as GHs 514 per month and as low as GHs 294 which is still higher than the average of GHs 92 before TTB. This is similar in the passenger earnings as indicated in Table 4.12.

From the above Table 4.11, the mean difference of GHC294 per month earnings is statistically significant with P-value of  $0.00 < 0.01$ . This further confirms that the tricycle business had significantly enhanced the respondents (drivers and passengers) income levels thereby improving their business sustainability, standard of living and economic growth.



#### 4.2.2.4 Passengers Reasons for Joining Tricycle Transportation

Respondents were asked as to what makes people patronize the tricycle more than the other transport service. It is known that there were numerous reasons why people join the tricycle transportation. The researcher identified some influential factors that might influence passengers for patronizing the TTS in the Municipality. These preferences were grouped based on the respondents' reason for choosing tricycle as their mode of transport. These responses were rated by respondents as Strongly Agree, Agree, somehow, Disagree and Strongly disagree.

**Table 4.13 Passengers Preference for Choosing Tricycle as their Means of Transport**

Passengers Preferences for TTS	Strongly Agree	Agree	Somehow	Disagree	Strongly Disagree	Total
Accessibility from home, work, church, market and other places .	72.2	27.8	0	0	0	100
Low Fare/cost/expense	55.0	23.1	10.9	0	0	100
Safety on board vehicle	30.5	50.8	18.7	0	0	100
Comfortability (cleanliness)	28.9	51.1	20.0	0	0	100
Reliability (dependable)	40.6	44.2	15.2	0	0	100





Regularity (on Time)	20.0	56.5	23.5	0	0	100
Security	0	20.1	40.0	35.2	4.7	100

Source: Field Survey, March 2018.

### **Accessibility**

Accessibility to and fro was ranked first among these reasons with 72.2% respondents rating that they strongly agreed. Only 27.8% said they agreed that accessibility in the Municipality has been easy as a result of the TTB introduction. Nevertheless, none of the respondents rated somehow, disagree nor strongly disagreed the fact that it can be accessed from where ever one stays. Respondents in interviews added that before the TTB introduction they were facing challenges in getting means of transportation. Since the trotro's route was from Bamahu to Sombo leaving the other areas isolated but has now been solved by tricycle transportation business. The study revealed that the tricycle transportation business had made movement very easy hence solving the problem that was delimiting people access to movement in the Municipality especially within the Wa Township. Respondents said they now get to their places of work very early and in a more convenient way with the use of the tricycle which adds up more profit to them in the business activities.

### **Low cost/fare charge**

Also, per the ranking, low cost or fare was rated as the second reason why the respondents joined the tricycle. Under the fare charge, 55% said they strongly agree that the fare is affordable. Also, 23.1% rated that they agree to the fact that the fare charge on tricycle transportation was very low. Only 10.9% said they somehow agree to the fact that the fare or charge on the tricycle was low.



With none of the respondents neither disagrees nor strongly disagrees. This built up with the view of Dinye and Ahmed (2015) that, tricycle transport is less costly as compare to other transportation services in Northern Ghana.

A passenger remarked;

*The fare charge for joining TTB is cheap. The time the tricycle was not introduced, master stop, the fare was not easy for us at all. You will pick a taxi and the fare alone will collapse your business. As taxis were charging GHs 30, the tricycle takes GHs 8 for going to the same place. So if you are talking about fare kamboo is far better than the other transport services in the Wa Municipality (Interview, March 2018).*

### **Safety and Comfortability**

Safety and comfortability (cleanliness) was also one of the factors that were considered as the reasons why people prefer joining the tricycle to the other transport service in the Wa Municipality. The findings from Table 4.13 indicate that, 30.5% and 28.9% respectively strongly agree that they prefer the tricycle transport to the other transport. Whereas 50.8% and 51.1% agree that it is safe and comfortable. Only 18.7% and 20% rated that it is somehow safe and comfortable respectively in joining the tricycle. The findings also showed that majority of the respondents agree to the fact that tricycle transportation is good (clean and safe) that is why they patronize it more than the other transport services. In an interview with a passenger, he said:

*I prefer patronizing the kamboo because it is safe and clean as compared to the trotro in the Wa Municipality. I don't remember the last time I joined trotro. All the trotro in the Municipality are old cars which have been used in the south for almost*



*20years and have been brought to this place. And it is a threat to people's lives. So I prefer kamboo far better to trotro (Interview, March 2018).*

A respondent from the DVLA also corroborated this statement;

*I prefer joining the tricycle because they are very clean and more comfortable as compare to the trotro. With the safety, yes, it is safe. The tricycle cannot speed so much and that makes it a little bit preferable and safe from other transports services. One of the factors that made a vehicle unsafe and risky is over speeding but the tricycle is free from that even though it gets accidents but not as high as the others (Interview, March 2018).*

These views confirmed the claim of African Public Transport Association (2010) that majority of the vehicles used in Ghana are second hand buses and that are generally old aged, hence tricycle will be more preferred to the trotro in Ghana for that matter in the Northern Ghana.

### **Reliability and Regularity**

The study also showed it clearly from Table 4.13 that reliability and regularity are also some the factors that passengers considered when joining the TTS. Reliability in this aspect means how dependable the tricycle is to the people in the Wa Municipality whiles regularity means how fast it shows up when one is waiting to join.

Findings of the study in table 4.13 shows that reliability and regularity of the tricycle were considered as the some of the reasons why they prefer TTS to other transport services. Also, 40.6% and 20% of the respondents strongly agree, with 44.2% and 56.5% were of the view that they agree, with the remaining 15.2% and 23.5% of the respondents' preference were rated that they



somehow agree respectively. Based on the findings, it clearly shows that individual preference to joining the tricycles were meaningful since the majority 44.2% and 56.5% agreed.

### **Security**

Security in this study refers to protection against something bad that might happen. Every individual person needs security in his/her daily activities. Security in businesses is very necessary and they go together. This study made an effort to find out how secure the passengers are in joining the TTB. Even though none of the respondents strongly agreed that they joined the tricycle because it is secured. Twenty percent (20%) of the respondent rated for agreed with 35.2% rated it that they somehow see the TTB to be a secured transport service. Only 4.7% of the respondents disagreed. It was obvious that security was considered as the least preference of the reasons for the patronage of the TTS. Even though 20.1% agreed and 35.2% also sees it to be somehow secure, it was the only preference that the respondents rated that they disagree to the fact that it is safe with 4.7%. This therefore implies that joining the TTS does not guarantee the passenger 100% security but are also associated with some challenges.

A passenger remarked;

*The tricycle transportation service is good because it has helped we the market women in diverse ways that is why I prefer it to the other transport services. But for me, it does not guarantee 100% security oooooo.....that is why I ticked it as the last preference because I witnessed someone being robbed in it (Interview, March 2018).*



Per the ranking it worth saying that, the TTS is the most preferable transport service in the Wa Municipality. Therefore, its contributions to the economic growth of the Wa Municipality is clearly significant.

#### **4.2.3 Contributions of TTB to Mobility**

According to NRC (2002), mobility is very relevant in transaction of businesses and other economic growth indicators. The effects of mobility could enhance or affect negatively the performance of a business or a person's activities. The tricycle transportation and mobility have a direct relationship in carrying out economic growth. Respondents eventually answered the question of whether they patronize TTS to places and where they mostly take them to.

##### **4.2.3.1 Patronization of the TTS in the Municipality**

Up to 98% of the respondents interviewed said they often patronize the TTS to various places. Only 2% said No (they don't often join the TTS). The 2% who said they don't often patronize gave reason that they have their personal means that they only join it when the motor develops a problem or when they travel and arrived. This implies that a number of people often joined the TTB and it is an indication that TTB had made movement easy to those without their own personal means of transportation.

##### **4.2.3.2 Where do you often join the TTS to? (n=79)**

Out of the 79 respondents who said they often patronize TTS for their activities and places, were then asked a follow up question on where they often join the TTS to most. In this section multiple responses were used to find out where the respondents join the tricycle mostly to. Multiple responses were good for this aspect because it is believed that most people join it to different places as a result multiple response was appropriate.



**Table 4.14 Places People Often Joins TTS to.**

Places	Frequency	Percentage of Cases (%)
Market	77	97.5
School	12	15.2
Workplace/Farm	65	82.3
Others	71	89.5

**Multiple Responses** Field Survey, March 2018.

Table 4.14, clearly indicates places such as market, workplace, school and recreational centers were considered as major places where passengers joined the tricycle to. All these places (market, workplace and other places) were rated with more than 50% score, hence was a clear indication that people join it most. However, 97.5% of the respondents said they often join the tricycle to market. Also, 89.9 % said that they often join the tricycle to other places such as church, gym, visiting friends and relatives and many other places. To add to, 82.3% said they joined it to their workplaces/farm. However, there was no doubt that only 15.2% of the respondents said they joins it to school because most of them had their own means of transportation and it was assumed that students' patronization is less. It was revealed that the tricycle has become the most preferred transportation service used by the people in the Municipality and this finding confirms (Rodigue, 2017) that economic opportunities are likely to arise where there are efficient transportation infrastructures in order to answer mobility needs and ensure access to markets and resources.



#### 4.2.3.3 What was your means of movement before TTB (81)

This section was sort to find out how respondents movement were done before the coming of TTB. Out of the 81 passenger respondents, the majority 58 respondents representing 71.6% said they used to walk to their various destination to undertake their economic activities, whereas 18 respondents representing 22.2%. Only 5 respondents representing (6.5%) said they used to hire taxi to undertake their major economic activities.

A passenger remarked:

*The situation before the introduction of the TTB was very bad. Those of us who were staying in the outskirts of the Wa Town used to find it very difficult in getting means to and from our destinations. We had to walk for about 45 to 60 minutes before we could get to the main roadside to pick a trotro. As a farmer by occupation, when the produce is harvested how to transport these produces to the market center was always a challenge to us. We have to carry these produce on our heads and trek for about 3 hours before we could get to the market center. And this at the long run always caused us so many losses since all the produce could not be transported (Interview, March 2018).*

A passenger remarked that:

I have been in this tomatoes business since 2012 and anytime my goods arrived from Burkina Faso how to send them to the shop was always a challenge. Some of these goods sometimes got rotten which always affected my sales. So for me, the situation was very bad (Interview, March 2018).



It was revealed that majority of the people were really facing challenges in undertaking their economic activities since they have to walk from far distance. This means that there was a negative effect on respondents' economic activities as a result of the delayed in getting means of transportation to transport the goods to the market center. Time is considered as a factor in economic activities as it was clearly stated in the conceptual framework of this study that travel time have influence on business performance.

#### **4.2.4 Other Contributions of TTB to Economic Growth**

Aside the three main indicators identified as the main contributors of TTB to economic growth of the Wa Municipality, respondents identified the agricultural and health sector as important areas to consider in this study.

##### **4.2.4.1 TTB and Agriculture in Wa Municipality**

Respondents gave their views on how tricycle transportation contributes to agricultural activities in the Municipality. Generally, it was discovered by the researcher that TTB had contributed to agriculture through the conveyance of farm produce to the market centers on time. This therefore makes Nyaaba Lorry as the "Farmers' Savior" in the Wa Municipality.

A farmer remarked;

*Before the coming of TTB, most of our farm produce used to spoil before it got to Wa and this was affecting us especially we the tomatoes farmers in Jingu. There was no means of transporting our produce and in fact we were earning very low from our sweat. But ever since TTB came into existence, there has been a reduction in the losses hence high earnings which have motivated others to go into farming (Interview, March 2018).*





This confirms Akangbe et al., (2013) and MoFA's (2012) observation, that perishable crops like tomatoes, okra, plantain and yams get damaged in the course of transporting as a result of lack means to transport the goods to the market centers where excessive heat usually result in loss of quality and reduction in farmers' income; eventually discouraging farmers in expanding their farm size the next growing season.

Moreover, it was revealed that the freight tricycle had diverted from its use as a vehicle for carrying goods and is rather used as an ambulance for carrying patients from the villages to nearby health centers. According to some residents of Tabiase a village within the Wa Municipality, the tricycles were not only meant for carrying yams, charcoals and other goods but are also used for saving lives. Hence, its contribution in the Wa Municipality is beyond resourcefulness. Plate 4.3 depicts the other roles of the tricycle in the Wa Municipality.



**Plate 4.3 The freight tricycle carrying a pregnant woman to the health center as an ambulance.**



Source: Field survey, March 2018.



### **4.3 CHALLENGES FACING TRICYCLE TRANSPORTATION BUSINESS IN THE WA MUNICIPALITY**

Objective two of the study was handled in this section. The section presents the most encountered challenges associated with tricycle operations in the Municipality. These challenges include those associated with drivers, passengers, owners and regulators. It is possible that these constraints manifest in so many forms but with the same theme (Bhasin, 2004). Challenges are bound to occur in business, so does the transportation sectors specifically the tricycle transport system also have it challenges which have direct effect on the drivers, passengers and the economy at large. Some of these challenges included: fare charges, attacking and robbing people with it, underage driving, over speeding, careless driving and ineffective regulatory policies. In order to get the most challenging issues associated with tricycle transportation, the researcher identified some challenges which were common to tricycle transportation from the literature and asked respondents to rank them as to how they were confronted with those challenges in order of degree of seriousness with the following options: Very severe, severe, moderately severe, and less severe.

After the rating the researcher used Kendall's W statistical test to ensure that the challenges rated by the respondents were really significant. The study tested the respondent's level of agreement or disagreement using the Kendall's Coefficient of Concordance as it is considered as the most appropriate tool to determine the level of concordance or discordance among different raters of the same items according to Legendre (2005). Legendre (2005) revealed that Kendall's Coefficient of Concordance is a measure of the agreement among several (P) judges who are assessing a given set of n objects.



The Kendall's coefficient value of 0.949 which is greater than 0 means that null hypothesis that "There is no agreement among tricycle drivers regarding their challenges in TTB (Ho:  $W_1=0$ )." will be rejected against the alternative that "there is agreement among tricycle drivers regarding their regarding their challenges in the TTB. (H1:  $W_1 \neq 0$ )". The Kendall's W value of 0.949 indicates that 95% of the respondents agree with the results of the rankings. The Asymptotic Significance [0.000] indicates that the result of Kendall's coefficient of concordance is statistically significant.

Similar case was applied for the passengers of the tricycle challenges as stated in Table 4.15. where the Kendall's W value of 0.951 indicates that 95% of the respondents agreed with the results of the rankings. The Asymptotic Significance [0.000] indicates that the result of Kendall's coefficient of concordance is statistically significant.

**Table 4.15 Distribution of Challenges facing tricycle drivers in the Wa Municipality (n=232)**

Challenges	Very Severe	Severe	Moderate Severe	Less Severe	Total	Kendall's W	
						Mean Rank	Ranking
High demand for high returns by owners	81.4	18.6	0	0	100	1.32	1st
Lack of designated parking space	76.0	21.1	2.9	0	100	2.04	2th
High cost of registration	74.0	18.4	7.6	0	100	3.14	3th



Careless driving among some drivers	71.5	16.0	11.7	0	100	3.98	4 <sup>th</sup>
Bad reputation as a result of unaccepted behaviors among drivers	65.1	15.4	19.5	0	100	4.95	5 <sup>th</sup>
Single roads with static congestion (traffic)	64.0	15.0	21.0	0	100	5.91	6 <sup>th</sup>
Underage drivers	0	11.1	45.1	43.8	100	6.89	7 <sup>th</sup>
Extortion from law enforcement agents	13.4	38.6	48.0	0	100	7.89	8 <sup>th</sup>
Ineffective regulatory policies/law abiding/compliance	8.0	33.1	30.0	28.9	100	9.00	9 <sup>th</sup>
Low patronage	17.8	2.0	32.0	48.2	100	9.88	10 <sup>th</sup>
Lack of road maintenance	15.0	18.0	26.0	41.0		11.00	11 <sup>th</sup>



Kendall's Coeff. .949; Asymp. Sig. .000

Source: Field survey, March 2018.

**Table 4.16 Challenges Confronting Passengers on TTS (n=81)**

Challenges	Very Severe	Severe	Moderately Severe	Less Severe	Total	Mean Rank	Ranking
Robbing/attacking people in the night	81.0	19.0	0	0	100	2.57	1 <sup>st</sup>
Overloading	30.2	60.2	5.6	0	100	3.18	2 <sup>nd</sup>
Underage drivers	49.5	3.9	38.5	4.5	100	3.79	3 <sup>rd</sup>
Over speeding	59.6	32.4	8.0	0	100	4.39	4 <sup>th</sup>
Careless driving	36.0	48.8	15.2	0	100	5.00	5 <sup>th</sup>
High risk of accidents occurrence	6.1	12.6	65.2	6.1	100	5.61	7 <sup>th</sup>
High Fare charges	0	0	69.1	30.9	100	6.21	8 <sup>th</sup>
Ineffective regulations for drivers	0	2.6	26.4	71.0	100	5.25	6 <sup>th</sup>

Kendall's Coeff. .951; Asymp. Sig. .000

Source: Field survey, March 2018.



Table 4.15 and Table 4.16 depict the challenges that drivers and passengers respectively faced in the tricycle transportation sector. From the findings high demand for high returns by owners was ranked 1st among the challenges of the drivers with a mean rank of 1.32. Where 81.4% of the drivers' respondents rated it as a very severe challenge. Only 18.6% rated it as a severe challenge confronting drivers with none of them indicating moderately severe, less severe or not severe. The

finding in this regard was so serious because more than 80% of the respondents identified the high demand for high returns by owners to be very high for the drivers to be able to save the future. In an interview with a driver he indicated that the cost of the machine is very high. As a result, they cannot afford to buy the machine on their own and this has made them working for people for years without seeing a light to have ownership of theirs.

In as much as the drivers were complaining of the high demand for high returns by owners, the passengers were also complaining of attacking and robbing passengers in the night in the tricycle. Respondents identified this as the most challenging issue in the tricycle transportation with the mean rank of 2.57. Where 81% of the passengers' respondents said the challenge was very severe while 19% said it was severe. However, none of them indicated it being moderately severe, less severe or not severe. About 60% of the passengers' respondents engaged gave a sad story of their experiences with the drivers in the night. It was not surprising that they ranked it as the most challenging issues confronting passengers of the tricycle transportation in the Wa Municipality. A remark of a passenger:

*I will advise everyone not to board the tricycle in the night with a huge amount of money or something valuable on him or her. My money and other properties were taken away by a so call driver with his gang around 11pm. The tricycle came to solve most of our problems but had now turned to be a threat of death to the public (Interview, March 2018).*

Bad behaviors among some drivers was also identified and ranked as the 5<sup>th</sup> challenge among the drivers' challenges with mean rank of 4.95. In an interview with a driver he said some people claim they are drivers but criminals. These criminals are spoiling the reputation of the tricycle drivers in



the Municipality. He added that working in the night was much better than in the day but people are now afraid to board a tricycle in the night due to the bad behaviors of some drivers.

In an interview with an officer from Ghana Police Service he said, the recent reported cases by the civilians are related to the activities of the tricycle transportation system. Complaints such as raping people in the tricycle in the night, robbing people in the tricycle and public disturbances (where some drivers regulate the volume of music (tape) very high while operating within the township) were some of the issues that respondents stated in an interview

Also from Table 4.15, lack of designated parking space for tricycles was ranked the second most challenging for the drivers with a mean rank of 2.04. Seventy-Six percent of the drivers' respondent said this challenge was very severe, while 21.1% said it is severe with the remaining 2.9% saying the challenge is moderately severe. None of the respondents ticked for either less severe or not severe. The respondents claimed they were really disobeying some rules and regulations laid by the police and that they are not to be blame but have no option but to be there since the Municipal Assembly has not provided a place for them. This finding implies that, there is no parking provision for tricycles because their activities are not yet incorporated into urban transportation planning in the country for that matter Wa Municipality. As a result, drivers park haphazardly on the road shoulders, at junctions (blocking entrance) and on the traffic lane. This is dangerous for the operators of tricycles and other road users. This finding actually fell in line with the tricycle situation in Nigeria which Aderamo (2012) noted that, poor parking is a major problem created by public transport services in developing countries.

Moreover, respondents also identified high cost of registration and careless driving among some drivers as the 3<sup>rd</sup> and 4<sup>th</sup> challenges with a mean rank of 3.14 and 3.98 respectively. Just as over





half of the tricycles in the Wa Municipality were registered, some of these drivers who had not registered their tricycle complained of the high cost of registration and the high level of bureaucracy complex in the registration process. And as a result 74% complained that the situation of not registering the tricycle is very severe, while 18.4% and 7.6% said it is severe and moderately severe respectively. Talking about careless driving, the researcher asked the respondents if they had licenses and about 95% said they did not have license. It is believed that possession of driving license is a key component of road safety. And with majority (90%) not having license, it therefore means it will have a key effect on driving behavior and safety on the road. It was not surprising that careless driving was ranked 4<sup>th</sup> among the drivers and the also 4<sup>th</sup> among the passengers' challenges.

Probing further, the study found that underage drivers was among the challenges which was ranked 3<sup>rd</sup> with a mean rank of 3.79 for passengers and 7<sup>th</sup> with a mean rank of 6.89 among the driver challenges. Majority of the passengers (49%) had the view that underage driving was a very severe challenge while 45.1% of the drivers attested that it was a severe challenge. This finding implies that the high records of accident cases are influenced by these underage drivers since they do not have the experience and courage to control them when involved in a dangerous incidence.



In an interview with an officer from the GPS, (MTTU), he revealed that one of the challenges confronting their institution was compliance. The activities of the tricycle business are good but they do not comply with the law. For instance, drivers of the tricycle do not comply to the traffic light, some are also driving the tricycle without registration, no licenses and other problems which stands the risk of the passenger (*Interview, March 2018*).

Another challenge that was bitterly complained by passengers was the fare charge. Even though it was ranked last with a mean rank of 6.21. Majority (69%) of the respondents ranked fare charge moderately severe, 30.9% as less severe. A passenger remarked that, the fare charge for joining tricycle is less than the other transport service. But the drivers sometimes charge very high especially when it is late night.

A driver respondent also had this to say in an interview;

*Some of us hire the tricycle and the amount the owners' charge for daily sale is very high. And since we are also working for profit and do not want to incur loss, we normally imposed these cost on the passengers by charging higher than the actual amount. We know that the implications of overloading are severe but we have to do so. Passengers complain and it sometimes results to misunderstanding but we have nothing to do. So we are aware that the price was a challenge to some of the passengers. And this sometimes pushes us to overload the machine in order to get a flexible fare for passengers. Thus, it affects the maneuvering of the vehicle and at the same time increases wear and tear of the vehicle which has repercussion on the safety of the vehicle and its passengers. (Interview, March 2018).*

Overloading was ranked as the second most challenging situation among the passengers with a mean rank of 3.18. From the result gathered, 60.2% respondents representing the majority said overloading was very severe in the tricycle transportation. Also, 30.2% indicated that it was very severe with only 5.6% saying it was moderately severe. The ranking position of this challenge tells how severe it was and its associated threats to both passenger and driver. And this makes Ipingbemi and Adebayo (2016) statement true that, the implications of overloading are grievous; it affects the



maneuvering of the vehicle and at the same time increases wear and tear of the vehicle which has repercussion on the safety of the vehicle and its occupants.

In an interview with a tricycle owner, he remarked;

The TTB is crafted with several challenges. Sometimes the little that you get is use for maintenance when you don't get a good person to operate it. Some of us went in for loan to purchase the tricycle so if the drivers are misbehaving with the tricycle the burden (cost) is on the owners (Interview, March 2018).

Drivers also ranked lack of road maintenance as the last among the challenges with the mean mark of 11.0. Where 15% of the driver respondents said it was very severe, 26% ranked it as moderately severe. Forty-one percent said it was less severe who represented the majority. From the challenges identified in the findings, it was revealed that the challenges confronting tricycle transportation business were not different from what were found in a study conducted by Bamidele (2016) on the challenges facing the transportation sector in the New York. Challenges are bound to emanate in every sector but the implementation of effective measures can help make the sector smooth.

The result from the Kendall's W Concordance indicated that at 95% of the Kendall's coefficient value of 0.949, the ranking of the driver challenges is significant because more than half of the 232 respondents agreed with the results of the ranking in Table 4.15. Also, the Kendall's coefficient value of 0.951 of the passenger challenges rankings indicated that it was 95% significant and are really confronting the operations of TTB in the Municipality.



#### **4.4 IMPROVING THE TRICYCLE TRANSPORTATION BUSINESS IN THE WA MUNICIPALITY.**

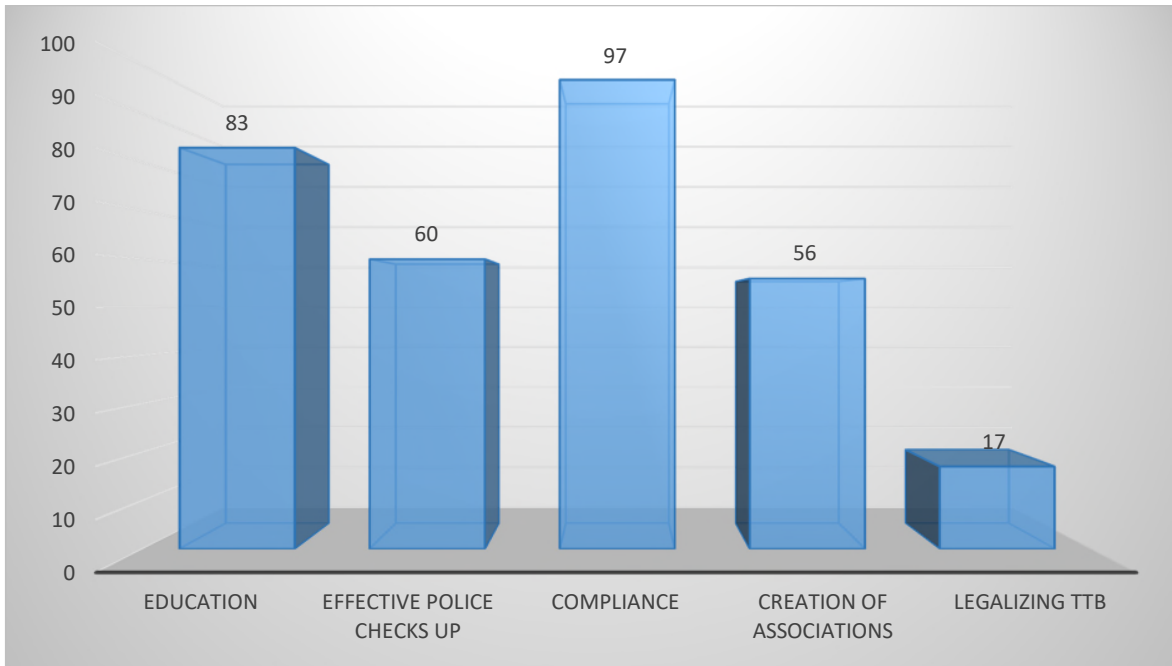
Respondents' views on the contributions of the TTB clearly indicated that the business is actually contributing to the local economic growth of the Wa Municipality and as such requires strategies to make it more lucrative and better for operators and users as well as the regulators.

##### **4.4.1 Strategies to Improve the TTS**

The study explored the views of respondents as to the strategies to improve the TTS. The following were suggested by the respondents as some of the strategies: training and education on compliance, regular checks on licenses, registrations and other particulars required to operate on the road by the Police (MTTU), effective law enforcement, fines and other form of punishment must be imposed on law breakers. These were represented in Figure 4.5.



**Figure 4.5 Strategies to Improve the TTS**



Source: Field survey, March 2018.

Education and training was identified as a way to improve the tricycle transportation system. Out of the 313 respondents, 83 said education and training must be given to the drivers to help improve the sector. A respondent said through education and training drivers will be able to acquire the knowledge required to be on the road and this can help reduce the accidents cases of the tricycle transportation. It is also believed that through education the drivers will realized the illegalities in their activities and can be monitored and controlled.



It is believed that a number of the developmental projects in towns, cities and countries are established from taxes and levies paid by citizens. Therefore, if the drivers of the tricycle transportation are well educated on importance of paying taxes and levies as well as what it is used for in the Municipality, it will encourage them to pay without any hesitancy. An official from the Assembly confirmed that the Assembly raises revenue for the development through a device tax

rate system for tricycles called motorcycle and tricycle levy where special stickers are designed purposely for motorcycles and tricycles.

Compliance was suggested by the majority with 97 respondents. Respondents indicated that complying to road rules and regulation will help improve the sector. Compliance comprises of the following: licensing, registration, certificate from recognized driving school. Effective compliance to road regulations makes transportation a less challenging sector when users abide by all instructions. Respondents' views on compliance fit in Dinye and Ahmed's (2015) that to ensure compliance and enforcement of motor traffic law, relevant institutions should be empowered in terms human and material logistics. The Motor Traffic and Transport Department (MTTD) when empowered to enforce compliance of especially the road laws, they will help avoid further fatalities and injuries sustained through motorcycle and tricycle accidents; Driver and Vehicle Licensing Authority (DVLA) tricycles are registered by right persons (riders) and have the right skills.

Also, positioning security personnel at vantage points and also street lights at the dark places along all the major roads in the Municipality especially the Wa Township was also one of the strategies to improve the sector. Sixty (18%) of the respondents also revealed that the Police can help improve the system by making serious inspections on underage drivers, careless driving (over speeding, overtaking, wrong parking), criminal activities (stealing, rapping people and other unaccepted behaviors). It was revealed that the Police involvement in arresting and punishing law breakers will help improve the sector. For instance, the tricycles should be seized when a minor or underage drives it to put punitive measures on the owners.



Fifty-six representing of the respondents suggested that they should create association for the TTB. With 17 respondents saying legalizing the operations of TTB in Ghana as it is in other countries could help improve the tricycle transportation sector.

In an interview with an officer from Ghana Police Service (MTTU) he said:

In-fact we the law enforcers are finding it very difficult to monitor the operations of the tricycle transportation in the Region and Wa Municipality to be precise as a result of its legal operation. So we are going to prompt the government on how the TTB will be legalized to monitor them as it is with the other transport sectors (Interview, March 2018).

An official from the Wa Municipal Assembly also had this to say:

*Look, much revenue can be made from the operations of the TTB to help development the Municipality. These drivers do not contribute to anything to the government because of how it has been structured. We need to be very critical on them since they have taken the urban and rural transport system in the Municipality. It is just about giving the order to the DVLA to design something which will be easy for the Municipality to identify them and collect such contributions to develop the Municipality* (Interview, March 2018).

In an interview with a respondent from the GPRTU, he remarked:

GPRTU is not pleased with the unaccepted acts by the tricycle drivers. GPRTU is putting strategies to improve the system. We will create associations for them which will enhance payment of dues and other contributions. We are also going to collaborate with other stakeholders like the DVLA to differentiate the registration



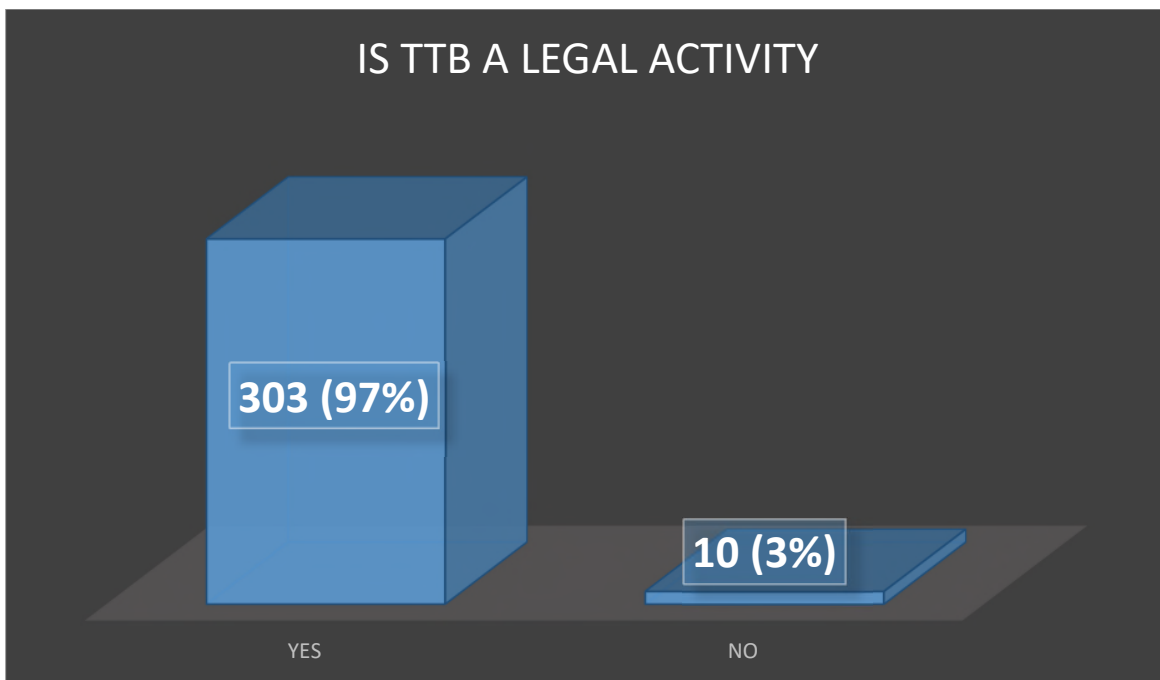
plate from motorbikes and also issue special numbers on the tricycles to help trace them when wanted (Interview, March 2018).

From the findings, it is clear that much can be done to the tricycle transportation system in the Wa Municipality to help improve their operations in Municipality and replicate that to other areas where TTB operates in Ghana.

#### 4.4.2 The legality of TTB as Commercial Business

The researcher at this point wanted to find out whether the activities of the TTB in the Municipality were legal in the first place. The option provided for respondents were Yes or No responses. Figure 4.6 illustrates the result of this section.

**Figure 4.6: Is TTB a legal activity in the Municipality?**



Source: Field Survey, March 2018.





Out of the 313 respondents, up to 303 representing 97% said they saw the activities of the TTB to be legal (YES). Only 10 respondents representing 3% indicated that the activities of TT are illegal (NO). However, out of 303, 90% were drivers of the tricycle whereas only 10% were passengers. It was therefore not surprising that the drivers were in the position that the operations of TTB is legal since it serves as their source of employment and would not say anything bad to terminate it. The views of the minority were therefore considered to be the authenticated views since they had the legal backgrounds.

In an interview with an official from MASLOC, he made it known that the activities of the TTB for commercial purpose was illegal even though MASLOC introduced the tricycle. He furthered that, the government reason for introducing it was a way of bridging the wide poverty gap that exist between the Northern and Southern part of Ghana. As a result, the introduction of the tricycle was seen as another way of pursuing the welfare of the citizens through job creation and business growth. He concluded that, the tricycle had contributed a lot to the growth of the economy since its introduction hence requires the collaboration of various authorities to help make the TTB legal for commercial purpose.

A respondent from the MTTU remarked:

*The tricycles and motorcycles are not for commercial usage in Ghana as it is in Nigeria because the constitution and the National Transport Regulatory Body have not instituted any law that permit the usage of tricycle as commercial purpose (Interview, March 2018).*

Views from respondents were therefore concluded that the operation of TTB is important and is in line with MASLOC reasons for introducing it hence requires a legal endorsement from the



regulatory bodies to operate as commercial transportation. It was found that due to the illegal operations of the tricycle, the law enforcers are finding it very challenging in regulating their activities in the Municipality. Their activities are not recognized as it is in Nigeria and other developing countries where the law recognized them as commercial operators. This means that in improving TTS, legalization must be considered as a major factor to make it sustainable.



## CHAPTER FIVE

### SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

#### 5.0 Introduction

This chapter presents the summary of major findings, conclusions, and recommendations.

#### 5.1 Background of Respondents

Underage driving was found to be a major challenge confronting the operations of tricycle in the Municipality. Underage driving according to the Road Fund Act 536, (1997) is illegal in Ghana. Which means underage persons are not supposed to drive the vehicle? Also, out of the 313 drivers and passengers' majority of them 160 (51%) were Primary and JHS levers. It was therefore concluded that these drivers had had basic education which was an indicator that they could at least read and identify road signs.

Regarding the occupation of respondents (passengers), it was found that majority of them were petty traders. Where they were found to be joining the tricycles most often for their business activities. Moreover, 231(70%) respondents were found to have stayed in the Municipality for more than 5years and were well knowledgeable about the transportation situation before the introduction of the TTB and how it had contributed to the growth of the Wa Municipality.

#### 5.2 Contributions of TTB to Economic Growth of the Local Economy of Wa Municipality

The contributions of TTB were categorized under three main areas in the study and these included: the effects of TTB on employment creation, effects of TTB on business activities and effects of TTB on mobility. From the responses of the respondents, it was revealed that majority of the drivers rated that employment creation was very significant (96%) with only (4%) accepting that



it was significant to the growth of the economy while the passengers also rated business activities and mobility as very significant with 90.1% and 79.0% respectively.

From the drivers' perspective 104 were unemployed before realizing TTB as their lucrative job to engage in. This made TTB a more significant contributor to the creation of employment in the Wa Municipality since it has engaged these people. Also, respondents believed that through the job creation, there has been something positive about their new realized job in terms of their responsibility.

Drug abuse (marijuana, tramadol, and excessive alcohol), robbery (especially stealing of motorbikes), illegal mining, rape cases, unnecessary emigration and other indecent behaviors were some of the effects that TTB has helped reduce in the Municipality. It was realized that the most challenging issue of robbery which was as a result of unemployment had been reduced in the Municipality. This implies that a reduction in criminal activities will also help people to get engaged in economic activities to enhance their livelihood. It was therefore concluded that the economy could also be well shaped if the government and subsequent government would concentrate on reducing unemployment problems in the country by introducing smart business such as the TTB.

The findings established that people really patronize the tricycle transportation business to places for their various activities. Unanimously, all the 313 respondents responded that they used both the passenger tricycle (Mahama Can Do) and freight tricycle (Nyaaba lorry) in their daily economic activities.

It was found that the existence of transportation services (tricycle transport services) had helped reduce the waiting time of businessmen/women which could lead to an increase in productivity



and also to find ways of making the business attractive. TTS have the propensity to reducing poverty, improving larger market accessibility, easy accessibility, job security, new job creation and improved income of individuals.

In effect, it was revealed that, the effect of TTB on businesses growth resulted in an increase in respondents' earnings, expansion in existing businesses, establishment of new business, increase in business investment and an increase in competition (reduce monopoly market). It was found that majority of the respondent traders' earnings had increased through the TTB introduction as a result of cost reduction factor.

It was found that tricycle transportation and mobility had a direct relationship in flourishing economic growth. Up to 98% of the respondents engaged said they often patronize in the TTS to various places. The remaining 2% said they don't often join the TTS. The reasons given was that they had their own personal means and only joins it when the motor develops a problem, when they travel and come. This implies that a number of people often join the TTB and it is an indication that TTB had made movement easy to those without their own personal means.

### **5.3 Challenges Facing Tricycle Transportation in the Wa Municipality**

All the respondents to the study strongly agreed that there are challenges confronting the tricycle transportation business. The drivers mentioned the following some of the challenges as: high returns for high demand from owners as a result of high cost of tricycle, lack of designated parking space, high cost of registration, careless driving among some drivers, bad reputation as a result of unaccepted behaviours' among drivers, underage drivers, single roads with static congestion (traffic) and other pressing challenges.



From these challenges majority of the drivers identified high sales for high demand from owners (as a result of cost of the tricycle) as the most challenging issue facing the tricycle drivers. In order words, 81.4% of the drivers' respondents scored it as a very severe challenge, with the remaining 18.6% rated and was confirmed with the mean rank of 1.32 as 1<sup>st</sup> among the challenges confronting drivers. They indicated that low returns (sales) affects them where they sometimes do not earn nothing as profit since the little earned is use as sales to the owners.

Passengers also identified the following as challenges confronting the patronization of the tricycle transportation; attacking and robbing people in the night, overloading, underage drivers, over speeding, careless driving, high risk of accidents occurrence, fare charges. Respondents identified bad attitude towards some drivers as the most challenging issue in the tricycle transportation business. Under this, 81% of the passengers' respondents said this challenge is very severe. Again 19% said the it is severe with none of them indicating moderately severe, less severe or not severe.

#### **5.4 Strategies of Improving Tricycle Transportation Business**

In improving the tricycle transportation sector, the following strategies were suggested by the respondents: legalizing tricycle transportation business as commercial business in Ghana, training and educating the public especially tricycle drivers on compliance, regular checks on license, registrations and other particulars required to be on road by the Police, effective law enforcement, fines and other form of punishment must be imposed on law breakers.

#### **5.5 Conclusions**

The study was conducted on the assessment of the contributions of tricycle transportation business to the growth of a local economy, Wa Municipality as an evidence. The following conclusions were drawn from the findings gathered from the field.



The introduction of tricycle transportation business has contributed to the economic growth of the local economy of the Wa Municipality in several ways. Thus, the level of unemployment in the Municipality has reduced as a result of the youth engagement in employment through the tricycle transportation business. Many businesses in the Municipality have benefited from the introduction of tricycle transportation business through the reduction in time spent on waiting on transport to workplace or convey goods has become easy as a result of the tricycle transport accessibility in the Municipality. Also, individuals' movement has been very easy especially for those who do not have their own personal means of transport as a result of the availability of the tricycle transport system in the Municipality.

There are also several challenges that are confronted by the passengers and drivers of the tricycle in the Municipality. The most encountered challenge facing passengers of the tricycle was that, the tricycle is used as a medium for attacking and robbing people in the night whereas the drivers or operators also complains of the high sales demands by owners. These challenges could be addressed if the following suggestions are put in place to improve the tricycle transportation business included: legalizing TTB as commercial activity, effective police checks (licensing, registration and other particulars), creation of associations, effective law enforcement, imposition of fines and other form of punishment on law breakers.



The overall assessment of the contribution of the tricycle transportation business to the growth of the local economy of Wa Municipality was that, despite its challenges, the introduction of tricycle transportation business has contributed to the economic growth of the local economy of the Wa Municipality.

## 5.6 Recommendations

A good number of recommendations were made to the study. It was recommended that the regulators of the TTB especially the Police, DVLA and the Assembly should push the issue of legalizing TTB as a commercial activity to parliament so that the Police can effectively monitor their operations. Also, there should be an effective enforcement by the Police to arrest all tricycles operating by underage drivers.

Again, the Police (MTTD) should ensure regular positioning of security personnel at the vantage points. The Municipal Assembly should also ensure that there are proper and functioning street lights along all the major roads in the Municipality especially the Wa Township to help reduce the criminal cases because most of the robbery which occurs in places where there is no light at night.

The transport regulatory body in the Municipality, thus GPRTU should create associations and unions for the operators in the Municipality to help harmonize taxes to relieve multiple taxes on drivers and tax evaders. Developmental projects can be built from these taxes if well strategized by the government. There should be a designated parking space for the tricycles in the Municipality to avoid the single road static congestion.

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## **APPENDIX A:**

### **QUESTIONNAIRES**

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GRADUATE SCHOOL

MASTERS THESIS RESEARCH

TOPIC: CONTRIBUTION OF TRICYCLE TRANSPORTATION BUSINESS TO THE  
GROWTH OF THE LOCAL ECONOMY. EVIDENCE OF THE WA MUNICIPALITY

SUBMITTED BY:

CLETUS GALYUON

UNIVERSITY FOR DEVELOPMENT STUDIES

In Partial Fulfillment for the Award of a Master of Philosophy Degree in Development  
Management



## **APPENDICES**

APPENDIX 1: SURVEY QUESTIONNAIRE FOR OPERATORS (DRIVERS) OF THE  
TRICYCLE IN THE TRICYCLE TRANSPORTATION SYSTEM IN THE WA  
MUNICIPALITY

This is a questionnaire from a final year MPhil student of the University for Development Studies to seek your sincere views on the transportation situation in the Wa Municipality before the introduction of tricycle transportation business, how the introduction of the tricycle transportation business has affected/influenced economic activities, identify the challenges facing tricycle transportation business and to find ways of improving the tricycle transportation in the Municipality. The information is only for academic purpose will be treated with the strictest confidentiality as the exercise is guided by the principle of anonymity of the respondents. Thank you for your cooperation.

**Bio-Data of Respondents (drivers)**

- 1. Sex of respondent ..... Male [ ] Female [ ]
- 2) Age .....
- 3) Educational level.....No formal education [ ] Basic [ ] Secondary [ ] Tertiary [ ] Other [ ]
- 4. What is your marital status? Single [ ] Married [ ] Divorce [ ] Widowed [ ]  
Others (specify).....
- 5. Are you a? a. Native [ ] b) Non-native [ ] c) Student [ ] d) None of the above [ ]
- 6. Which type of tricycle are you operating with?(a) Motor King/Nyaaba lorry [ ]  
(b) Mahama Can Do [ ]
- 7. Do you own it? a. Yes [ ] b. No [ ]
- 7a. If Yes, how did you acquire it?

.....

**OBJECTIVE ONE: The introduction of the tricycle transportation business and its effects on economic activities in the Municipality**

10. The tricycle transportation business contribution to employment is



- a. Very Significant [ ] b. Significant [ ] c. Moderate [ ] d. Less Significant [ ]
- e. Insignificant [ ]

11. Kindly explain your answer in Q10

.....  
.....

12 What was your occupation before going into the TTB?

- a. Troto driver [ ] b. Unemployed [ ] c. Businessman [ ] d. Farmer [ ] e. Student [ ]
- b. Other, specify.....

13. What is your reason for driving tricycle?

- a. Unemployment [ ] b. Low income from primary job [ ] c. Business failure [ ] d. Family sustenance [ ] e. Quick savings [ ]

14. On an average how much were you earning in a month before coming into the TTB?

- a. GHs 10-50 [ ] b. GHs 60-100 [ ] c. GHs 110-150 [ ] d. Above GHS 150 [ ]

15. How long have you been in the tricycle transportation business? Kindly indicate the number of year(s) you have been in this business.....

16. On an average how much are you earning from the TTB in a month?

- a. GHs 10-50 [ ] b. 60-100 [ ] c. 110-150 [ ] d. above GHS 150 [ ]

18. Is the TTB profitable than your previous work? a. Yes [ ] b. No [ ]



17a. If Yes, how

.....  
.....

19. Which of the tricycles operate/goes to the villages the most?

- a. Motor king/Nyaaba lorry [ ] b. Mahama Can Do [ ]

20. Where do you operate most?

- a. Within the Wa Township [ ] b. Villages in the Municipality [ ]



c. Outside the Municipality [ ] d. Other, specify .....

21. Do the village dwellers benefits from the TTB? a. Yes [ ] b. No [ ]

21a. How do the farmers benefits from the tricycle transportation business?

.....  
.....

22. In your opinion how has the tricycle transportation business contributes to economic activities in the Municipality?

.....  
.....

23. Do you think you (driver) have impacted the people through this business?

a. Yes [ ] b. No [ ]

23a. If Yes explain

.....  
.....

24. Do you think the TTB is better than the other transport services? a. Yes [ ] b. No [ ]

If yes explain

.....  
.....



25. What makes people patronize or join the tricycle? Which of the following factors influences passengers' preference on the TTS in the Wa Municipality? Please, tick as many as are applicable and rank them as strongly agree, agree, somehow, disagree and strongly disagree using 5, 4, 3, 2, and 1 respectively

<b>Mode of passengers preference of the tricycle transport</b>	√ (Tick) <b>those applicable and indicate as 5, 4, 3, 2, or 1</b>
--	--

	1	2	3	4	5
Accessibility from home, work etc.					
Fare/cost/expense to destination					
Safety on board vehicle					
Security					
Reliability (dependable)					
Comfort (cleanliness)					
Frequency (short waiting time)					
Regularity (onTime)					
Speed (shorttravel Time)					
Flexibility/ Maneuverability					
Music/Radio					

26. What really makes this business useful to the Municipality?

- a. Boomed businesses [ ]    b. Employment Creation [ ]    c. Mobility [ ]  
 d. Increase productivity [ ]    f. Specify if any .....



27. How long have you used your tricycle?  
 .....  
 .....

28. When do you intend disposing?  
 .....  
 .....

29. How has the TTB contributed to the economic growth of the Municipality?

.....  
 .....

**Objective TWO: The challenges facing the tricycle transportation business in the Wa Municipality**

30. Using the scale 1-5, indicate the extent to which the following challenges affect tricycle transportation in the Wa Municipality. **1- Not at all, 2- Slightly, 3-Moderately, 4-Very much, 5- Extremely**

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CHALLENGES	Extremely	Very much	Moderately	Slightly	Not at all
SCALE	5	4	3	2	1
Price/ cost of tricycle					
Lack of road maintenance					
Careless driving among some drivers					
Underage drivers					
Single roads with static congestion (traffic)					
Ineffective regulatory policies/not abiding laws					
Low patronage					
Lack of designated Parking Space					
Bureaucracies at the Authority (DVLA)					
High cost of Registration/license fee					

31. Are there other challenges aside those in Q31? a. Yes [ ] b. No [ ]

31a. If yes, what are they?

.....  
.....

29. How have these challenges affected the operations of the tricycle transportation business?

.....  
.....  
.....

**Objective THREE: How to improve the tricycle transportation business in the Wa Municipality.**

30. In your opinion what do you think can be done to improve on the tricycle transportation system in the Wa Municipality?

.....  
.....

31. Who are the main actors of policy regulations in the TTB in the Municipality?

- a. DVLA
- b. Ghana Police Service
- c. GPRTU/PROTOA
- d. Municipal Assembly
- e. Other, specify .....

32. Are these regulators really doing what they are expected to do? a. Yes  b. No

32a. Explain your answer

.....  
.....

33. What do you expect from the policy regulators in other to make the TTB challenge-free in transportation sector?

.....  
.....

34. Are you aware that the operation of the TTB as commercial transport is illegal according the National Regulatory Transportation Policy? a. Yes  b. No

35. How would you feel if the government decides to ban the operation of the TTB?

.....  
.....

36. Did you go through some special requirement/training before been allowed to operate as a tricycle driver? a. Yes  b. No



36a. If yes, what was it

.....  
.....

37. Do you pay dues and other levies in the TTS? a. Yes [ ] b. [ ]

38. Do you have all the necessary documents for driving? a. Yes[ ] b. No[ ]

If No, explain? .....

39. Have you insured yourself and the tricycle? a. Yes [ ] b. No [ ]

Explain your answer

.....  
.....

41. Have you insured your tricycle? a. Yes [ ] b. No [ ]

Explain your answer .....

42. What are some of things you think should be done by the regulators to help address the challenges in the Municipality?

.....

42. Please add any comments that may enhance the research work.

.....  
.....  
.....

## Thank You



### APPENDIX 1: SURVEY QUESTIONNAIRE FOR PASSENGERS OF THE TRICYCLE TRANSPORTATION SYSTEM

#### Bio-Data of Respondents (passengers)

1. Sex of respondent ..... Male [ ] Female [ ]

2) Age .....

3) Educational level.....No formal education [ ] Basic [ ] Secondary [ ] Tertiary [ ]  
Other [ ]

4. What is your marital status? Single [ ] Married [ ] Divorce [ ] Widowed [ ]

Others (specify).....

a. 5). Are you a

√	Student	Visitor	traveler	Worker
Thick				

Please thick as many as applicable.

**TRANSPORTATION SITUATION IN THE WA MUNICIPALITY BEFORE THE INTRODUCTION OF THE TRICYCLE TRANSPORTATION BUSINESS.**

(6) What work do you do for living?

a) Farmer [ ] b) Business person [ ] c. Trader [ ] d. Teacher [ ]

e. Other, specify .....

(3) What was your means of transport in the Municipality before 2012?

(a) Trotro [ ] (b) Personal means [ ] (c) Trekking [ ] (d) Other, specify .....

What was the transportation situation in the Wa Municipality before 2012? a. Very Good [ ]

b. Good [ ] c. Somehow [ ] d. Bad [ ] e. Very Bad [ ]

Explain your choice of answer?

.....  
.....

6. How long did you have to wait to get a means of transportation to work before 2012?

a. Very long [ ] b. Long [ ] c. Quite long [ ] d. Not quite long [ ] e. Not long at all

7. How did waiting affect your work output?



- a. Positively [ ]    b. Negatively [ ]

**THE INTRODUCTION OF THE TRICYCLE TRANSPORTATION BUSINESS AND ITS EFFECTSON ECONOMIC ACTIVITIES IN THE MUNICIPALITY**

8. What work do you do for living? Farmer [ ]    b. Trader [ ]    c. Teacher [ ]

d. Other, specify.....

9. Do you patronize the tricycle transportation service for your work? a. Yes    b. No

10. If yes to Q9, how often do you use it?

a. very frequently [ ]    b. Frequently [ ]    c. Sometimes [ ]    d. Not frequently [ ]

11. How long do you wait to join/pick it?

a. Very long [ ]    b. Long [ ]    c. Quite long [ ]    d. Not quite long [ ]    e. Not long at all

12. Where do you pick it to/from?

a. Market [ ]    b. Office [ ]    c. School [ ]    d. Farm [ ]    e. Home [ ]

f. Other, specify .....

13. Why do you prefer the tricycle to other transport systems? Please indicate your reason for choosing the tricycle transportation system by ticking as many as apply and rank in order of choice using 5, 4, 3, 2, and 1for: Excellent, Very good, Good, Bad and Very bad respectively.



S/N	Passengers preference of tricycle transportation	1	2	3	4	5
1	Accessibility from home, work etc.					
2	Low fare/cost					

3	Highly Safe						
4	Tight Security						
5	Very Reliable (dependable)						
6	Comfortable (cleanliness)						
7	Frequency (short waiting time)						
8	Regularity(on Time)						
9	Speed (short travel Time)						
10	Flexibility/Maneuverability						

13a. Other, specify .....

14. For how long have you been in your work? a. > 5 years [ ] b. <5 years [ ]

15. How has the introduction of the tricycle transportation business enhanced your work output?

a. Very high [ ] b. High [ ] c. Moderate [ ] d. Low [ ] e. Very Low [ ]

14. In what way(s) do you think the TTB has contributed to the improvement in your business?

.....  
 .....

16. On an average how much were you earning as profit in a month before 2012?

a. GHs 10-50 [ ] b. GHs 60-100 [ ] c. GHs 110-150 [ ] d. Above GHS 150 [ ]

17. On average how much profit do you earn in a month now?

a. GHs 10-50 [ ] b. GHs 60-100 [ ] c. GHs 110-150 [ ] d. Above GHS 150 [ ]

18. Will you say the introduction of tricycle transportation business contributed to the current state of your profits? a. Exactly [ ] b. Somehow [ ] c. Not at all [ ]

19. Where do you do work most?

a. Within the Wa Township [ ] b. Villages in the Municipality [ ]





c. Outside the Municipality [ ] d. Specify if other.....

20. TTB has contributed greatly to doing business in the villages by transporting goods to the market centers?

- a. Strongly agree [ ]
- b. Agree [ ]
- c. Somehow Agree [ ]
- d. Disagree [ ]
- e. Strongly disagree [ ]

21. Do you think TTB contributes to economic growth? a. Yes [ ] b. No [ ]

22. How in your view does the tricycle transportation business contributes to economic growth?  
.....  
.....

24. What is the estimated place of work distance from your community or the nearest main road in kilometers? a. Less than 2 [ ] b. 2-3 [ ] c. 4-5 [ ] d. 6-7 [ ] e. 8 or more [ ]

25. By what means do you get your produce to the market?

- a. Head portorage [ ]
- b. Bicycle/Motorcycle [ ]
- c. Tricycle [ ]
- d. Truck [ ]
- e. Other, specify .....

26. How would you describe the physical condition of the road surface connecting your community?

- a. Poor [ ]
- b. Fair [ ]
- c. Good [ ]



27. What vehicles often ply this road?

- a. Mahama Can Do [ ]
- b. Motor king/Nyaaba lorry [ ]
- c. Trucks [ ]
- d. Other[ ]

28. What is the estimated travel time to the Municipality Capital in hours?

- a. Less than 1 [ ]
- b. 1-2 [ ]
- c. 3-4 [ ]
- d. 5 or more [ ]

29. How long do you have to wait for a vehicle to the Municipality Capital? a. Less than 1hr [ ] b. 1-2hrs [ ] c. 3-4hrs [ ] d. 5hrs or more [ ]

30. How would you generally describe the travel cost of the tricycle?

- a. Very Low [ ] b. Moderate [ ] c. High [ ] d. Very high [ ]

31. How would you describe the way vehicles load goods to the market especially the tricycle?

- a. Do not overload [ ] b. Slightly overload [ ] c. Overload [ ] d. Highly overload [ ]

32. Give reason to your answer in question

.....  
 .....

**CHALLENGES FACING THE TRICYCLE TRANSPORTATION BUSINESS IN THE WA MUNICIPALITY**

33. In my opinion the tricycle transportation system is?

- a. Very safe [ ] b. Safe [ ] c. Moderate [ ] d. Unsafe [ ] e. Very unsafe [ ]

21. There are many challenges that are faced by the TTB in the Wa Municipality which includes:

Please tick as many as apply and rank in order of degree of seriousness using: **5, 4, 3, 2, and 1** for very severe, severe, moderately severe, less severe and not severe respectively.

CHALLENGES	Very severe	severe	moderately severe	less severe	Not severe
<b>SCALE</b>	<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>
High Price/ fare charges					
Robbing/attacking people in the night					
Careless driving					
Underage drivers					
Over speeding					
Ineffective regulatory policies/lack of regulations for drivers of the tricycle					
High accident occurrences/incidence					



22. Other, specify .....

23. Share your experience of any of these challenges if witnessed before?

.....  
.....

**OBJECTIVE FOUR: How to improve the tricycle transportation business in the Wa Municipality**

24. How can these challenges be resolved in the Municipality?

.....  
.....

25. In your opinion in what way(s) do you think can be done to help solve the tricycle transportation system in the Wa Municipality?

.....  
.....

26. Who do you think are the main actors of policy regulations in the TTS in the Municipality?

a. DVLA [ ] b. Ghana Police Service [ ] c. GPRTU/PROTOA [ ] d. Municipal Assembly [ ] e. Other specify .....

32. What do you expect the policy regulators to do in order to make the TTB challenge-free in transportation sector?

.....  
.....

33. If the government of this country decides to ban the operations of the tricycle transportation what will be your opinion?

.....  
.....



34. Please add additional comment that you think can help in addressing the research problem under study

.....  
.....  
.....

**Thank You**



**INTERVIEW GUIDE FOR THE REGULATORY BODIES OF THE TRICYCLE TRANSPORTATION SYSTEM**

This interview guide is from a final year MPhil student of the above named Department of the University for Development Studies to seek your candid views on the transportation situation in the Wa Municipality before the introduction of the tricycle transportation, how the introduction of the tricycle transportation business has influenced/affected economic activities in the

Municipality, and the challenges confronted with the activities of the tricycle transportation. As well as solicit your views on how to improve the tricycle transportation business in the Municipality. Confidentiality of all responds will be properly observed and to be used for only academic purpose. Your participation is very much appreciated.

1. Which institution do you work with?

- a. DVLA  b. Ghana Police Service  c. GPRTU/PROTOA   
d. Municipal Assembly  e. Specify if any other .....

2. For how long have you worked in the institution?

3. Please which department are you?

4. What is your position?

5. What did you observed on the transportation situation before 2012 in the Wa Municipality?

6. What have you observed on the transportation situation now in the Wa Municipality?

7. Do you see the tricycle transportation system as one of the transportation sectors which need serious attention with regards to their operations? How?

8. What are some of the key issues the TTS has contributed to the growth of the local economy of Wa Municipality?

9. What are some of the challenges that tricycle transportation system faces in the Wa Municipality?

10. How have these challenges affected the people and the tricycle transportation system in the Wa Municipality?

11. Are the activities of the TTB to be legal? Explain your answer

12. Are there special rules and regulations for the tricycle transportation in the National Transportation Regulatory Policies? a. Yes  b. No



13. Are there policies you think your institution can put in place to help make the TTS lucrative/legal? a. Yes [ ] b. No [ ]

13a. If yes, what are some of the policies

14. In what way(s) do you think your institution can help improve the tricycle transportation system?

15. Please add additional comment that you think can help in addressing the research problem under study

**Thank You**

