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DEPARTMENT OF SOCIOLOGY AND SOCIAL WORK

**The Impact of Motorcycle Taxi Transport (Boda Boda) in Accessing the Kenyan
Rural Areas: A Case Study of Meru South Sub-County.**

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Reg No: C50/84082/2015

**A Project Report Submitted in Partial Fulfillment of the Requirements for the Master of
Arts Degree in Sociology (Rural Sociology and Community Development)**

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Declaration

This project is my original work and has not been presented for a degree or any other award in any university or institution.

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This research project has been submitted for examination with my approval as the university supervisor:

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Dedication

This project is dedicated to my mother Lenah C. John, my wife Joyce, my children Terry and Eric for the motivation, prayers and moral support they gave to me throughout my study. God bless you all.

Acknowledgements

This project has been made successful as result of organizations as well as individuals who greatly offered assistance and support at the time of need. Since they are many, I will mention just a few.

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Lastly and not the least I would like to thank our almighty God for strength and wisdom that assisted me cope in all situation during the course of this study.

List of Acronyms and Abbreviations

AGIL	Adaptation, Goal, Integration and Latency
CC	Cubic Centimeters
IEA	International Energy Agency
INTP	Integrated National Transport Policy
ITDP	Institute for Transportation and Development Policy
KIPPRA	Kenya Institute for Public Policy Research and Analysis
KNBS	Kenya National Bureau of Statistics
MOITC	Ministry of Information, Transport and Communication
NARC	National Alliance of Rainbow Coalition
NGCDF	National Government Constituency Development Fund
NGOs	Non-Governmental Organizations
NHTSA	National Highway Transport Safety Administration
NTPC	National Transport Policy Committee
NTSA	National Transport and Safety Authority
SACCO	Savings and Credit Cooperative Societies
WHO	World Health Organization

ABSTRACT

Rural areas as it is the case in many African countries are characterized by underdevelopment in terms of transport infrastructure and thus, hindering connectivity to towns that offer market to agricultural goods produced in these parts. Introduction of boda boda has come at a very crucial time in these areas.

The research objectives study were: To find out the socio-economic benefits of boda boda to the rural community; To investigate the contribution of the boda boda in the opening up of the hinterlands of Kenya; To find out the challenges faced by boda boda operators and; To find out the risks of the boda boda operations/activities in the rural areas.

The study was conducted in Chuka Division of Meru South Sub-County which is both commercial as well as agricultural hub of the Sub-County. The study adopted descriptive method where probabilistic sampling techniques such as simple random and cluster sampling were used to sample 100 boda boda operators who formed the sample size. To achieve this, questionnaires were administered face to face.

The study also found out that there were socio-economic benefits that accrued from boda boda operations with the 80% of the respondents making savings through their self-help groups.

Various challenges were associated with the boda boda operations which included: poor health conditions due to dusty roads that caused diseases to the riders, police harassment where they demand bribes from the riders; as well as uncooperative customers.

The study also established that there were various risks that were posed by boda boda operations in the rural areas. These risks included: increased cases of boda boda theft, increased school dropouts rates, increased accidents as well as sale of ancestral inherited property.

The study recommended that the government should come up with strategies geared towards subsidizing boda boda training fees to the riders. While on the other hand the County Governments should come up with strategies of sensitizing riders on the importance of belonging to SACCOs with the view of uplifting their socio-economic wellbeing. At the same time the Ministry of health should sensitize the riders on the available health insurance cover to assist them in times of medical needs.

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CHAPTER ONE

INTRODUCTION

1.0 Background of the Study

Rural areas in Kenya as it is the case in many parts of the African countries are characterized by underdevelopment in terms of road transport infrastructure. Many areas are inaccessible especially to vehicles due to size as well as poor state of these roads. It is imperative to note that even with the efforts that have been put in place by both the two levels of the government namely; the National and the County Governments, there is still a lot to be done. Since the inception of the National Alliance of Rainbow Coalition (NARC) government in 2003 the number of motorcycles has increased tremendously and thus making movement of people and goods easy even in places that were seen to be locked out of the rest of Kenya. The recorded increase was as a result of the waived tax on all imported motorcycles with cc rate of 250 and below (KIPPRA, 2009).

Kenya looks to the future with the aim of consolidating, enhancing and sustaining the gains of the Economic Recovery (Strategy ERS) which encompasses wealth creation as well as employment opportunities to the youths. The transport sector is recognized as a key pillar and a critical enabler in the achievement of this strategy. It will be important to navigate around to establish the critical role played by this informal transport sector and the contribution it has on the economic wellbeing of the rural areas (KIPPRA, 2009). Further, the sector is expected to remain a key component in tackling such challenges as reduction of poverty and overall improvement in the general welfare of the population. As a result of this adopted and internalized social economic development, societies have experienced revolution in terms of the land usage as a result of changing style of living. It is thus apparent that, the role of transport sector in Kenya is significantly demanding while at the same time being complex. To ensure transport sector effectively and efficiently achieve its intended functions, the former Minister for Transport, Honorable John Njoroge Michuki, launched the National Transport Policy Committee (NTPC) on 2nd April 2003 with the view of developing Integrated National Transport Policy (INTP). Public participation was envisioned through consultation with various stakeholders with the objective of attaining solutions to existing transport related problems based on the best international practices (Ministry of Transport, 2009).

This Integrated National Transport Policy (INTP) document was developed under the theme of “moving a working nation” (KIPPRA, 2009). It played a very significant role of establishing the challenges that prevailed within the transport sector and which adversely affected wellbeing of both rural and urban areas. Policies that exist however, have not taken into considerations the impact of motorcycle in improving rural and urban socio-economic well-being. The government ensured that the policy which was developed came up with strategies that could link up the Kenyan hinterlands with the rest of the developed parts of the country. Nevertheless, all these communication or movement of goods and services as well as people in and from these areas are critical to the growth of the national economy as well as social amenities such as schools and hospitals which remained a nightmare in these areas (KIPPRA’ 2009). Poor roads network isolated these hinterlands from the rest of the world and as a result there has been increase in mortality rate due to patients who are not able to access health services at the right time (Starkey, 2006).

On the other hand, motorcycles have increased the number of accidents according to National Transport and Safety Authority 2016 accident report. In comparison; the year 2014 recorded 320 compared to 399 in 2016 while pillion passengers were 159 in 2015 unlike 160 in the year 2016. Motorcycles pose interesting challenges in developing countries that are not faced by the rest of world (Perco, 2008). The increase in the usage of motorcycle has been attributed to the recent increase in petroleum prices as well as their maneuverability on the streets (Perco, 2008).

Globally increase in the number of motorcycles has increased per capita income in many developing countries (World Bank, 2006). Of late boda boda business has taken root in Kenya in a very notable and significant manner. This is because motorcycles have become the affordable means of transport and also by their nature of being able to navigate where cars cannot be able (Ministry of Transport 2009). Boda boda can get to the villages where the road network is not conducive for cars. It is out of their availability and convenience that they are used in some places to take children to school as well as patients to hospitals and dispensaries. On the other hand boda bodas are also dangerous especially where riders do not have the required qualifications and experience on the roads as it is the case with the public service vehicles. Motorcycles are accessible and cheap for the reason that people get loan advance from the banks or

even shylocks the rural people are able to buy and without training they get into business to ensure they are able to repay back the loan (Nyachieo, 2012).

The Boda bodas have operated since 1990s, when young people in Busia County and the other side of Busia in Uganda, used bicycles to smuggle goods across the two countries. The so called “boda boda” comes from the English word “border” which meant that they were operating border to border (Nyachieo, 2015).

These young people realized that they were putting their lives in the risks of arrests by the police and therefore posing the risks of the jail term. They then realized that these boda bodas could be used to transport goods and people from one point to the other at a fee in the poor villages in Western Kenya (Howe, 2003).

The idea spread over to rural villages and towns in the western parts of Kenya and beyond and this explains why there are many motorcycle and bicycles in Western Kenya than in other parts of the country. With time and due to speed and efficiency in service delivery, these bicycles have been replaced with motorcycles in most parts of the country although there are still places where bicycles are still in use (Howe, 2003). With about a large part of the Kenyan roads not being tarmacked and many roads being impassable by vehicles, the boda boda business has become has been embraced on the day to day basis in these areas since they are efficient, and effective means of transportation and can navigate even where vehicles are not able to (Perco, 2008). Many unemployed youths have taken advantage of the poor road networks and lack of vehicles to earn their daily income by transporting people and goods using boda bodas from one place to another.

In all towns and rural areas, you will see these motorcycle riders ferrying passengers and all manner of goods, ranging from farm produce, animals, hardware materials, households among others. As much as the government has tried to improve the access roads in the rural areas, leading to the positive impact of accessing and providing cheap and affordable markets for both agricultural output as well as modern inputs; it is nevertheless questionable whether the benefits accrued commensurate to the investment made (Howe, 2003).

The rural mobility involves hundreds of thousands of kilometers in bringing them to the mainstream national economic life. The planning of rural roads network in the past has not been based on the productivity but political affiliations as well as linkage to urban towns. Yet roads projects are to be useful in the opening of these hinterlands as well as the agricultural growth of these areas economically through bringing them to be the integral part of improving transport in these areas (KIPPRA, 2009).

With the immediate monetary returns and affordability especially where many people can be advanced loans or even sell property, majority of the rural people have embraced this mode of transport as easier and affordable solution to their livelihoods (Kumar, 2011). Young people have been attracted into boda boda taxi business even without the necessary basic training which has also turned to be recipe to many accidents as well as violation of traffic rules (Nyachieo2012). According to Chitere (2006) and Moraa (2010) they found out that even with the existence of the registered commercial driving schools not much is made by the state agencies to regulate them. In the study conducted in Thika it was established that majority of the riders indicated that they had attended informal training (Mbugua, 2011).

At the same time, increase in the number of motorcycle accidents has been reported in many parts of the country according to police reports (KNBS, 2016). These accidents have adverse effects on the riders and the pillion passengers as well as other road users. Most of the victims are poor people with no medical cover, accident cover insurances (Mbugua, 2011). This ends up in the depletion of the already scarce resources at their disposal.

1.1. Statement of the Problem

Prominence and the interest in study of boda boda related issues started to pick strong root in Kenya in 1990s with the zero rating of import duty on motorcycles below 250cc Nyachieo (2015). It is important to look at the both negative and positive effects that can be attributed to introduction of commercial motorcycles in Kenya. Many of the users of motorcycles and operators of these motorcycle-taxi business however, are mainly from the poor Kenyan population (Starkey, 2016). Basically, in real sense there has been increase in use of motorcycles in both urban and rural areas in Kenya and other developing countries as available means of transport for both human and goods.

Many of the Kenyan feeder roads leading to rural areas just as it is in other developing countries are not accessible by other modes of public transport considering their status. The motorcycle is able to navigate these roads with a lot of ease and thus, coming out as the favorable mode of transport in these poorly developed areas (Ministry of Transport, 2009).

A number of studies have been conducted on accessibility of the markets as well as raw materials in relation to the benefits of accessible rural roads. The theoretical framework in many of this analysis has been the Ellet-Walters model of rural transport (Walters, 1968; Gertsovitz, 1989). This theoretical framework asserts that land rents have been on decline with distance to markets through the influence of distance on effective prices. Various studies have been undertaken in Kenya on the inter-action between agricultural production and road infrastructure. The longer the distance from the desired market the lower the price since buyers are always looking for the high profits and as a result the burden of loss is transferred to the producers of the raw materials.

The studies conducted in three regions in Tanzania in 1988 indicated that inadequate public infrastructure could result in massive losses to producers. The three regions lost 50% of their cotton, one region 80% of its rice, and another region 50% of all its seeds and fertilizers and other chemicals when rural roads became impassable following heavy rains (Gavira, 1990). Jacoby's (1998) empirical analysis using data from Nepal suggests that providing extensive road access to markets would confer substantial benefits on average; most of these going to poor households. However, the benefits would not be large enough to appreciably reduce income inequality in the population.

Howe and Richards (1984) discuss some distributional aspects of rural roads, and present case studies. Growth of the rural areas is pegged upon the proper functioning rural road network with the links to urban centers for fair distribution of farm produce.

In Kenya, road transport is the predominant mode of transport. The road Network is currently not in the condition that is required if it is to play its role of promoting economic growth.

The prevailing poor state of our roads is a result of many years of inadequate financing and maintenance or even misappropriation of little allocated resources as well as uncoordinated works between the two levels of the government. Various studies

indicate that the financial and administrative needs of the road network, which have increased steadily over the years, have outgrown the framework in which the sector is currently managed. This therefore hinders the access of these key areas that feed the major towns in terms of food and raw materials for the industries (Ministry of Transport, 2009).

With the upcoming of this revolutionary and innovative means of transport which is of paradigm shift in nature; it is important to carefully filter through the sector with the aim of coming up with proper policies which will guide through its sustainability as well as ensure their intended roles. This study therefore will seek to establish the role of this critical transport sector in these rural areas which seem to be marginalized in terms of transport accessibility.

1.2. Objectives of the Study

The general objective of this study was to assess the impact of the boda boda taxis on the accessibility of the Kenyan Rural Areas.

1.2.1. Specific Objectives of the Study

The specific objectives of this study were:

- i. To find out the socio-economic benefits of boda boda to the rural community.
- ii. To investigate the contribution of the boda boda in the opening up of the Kenyan Rural Areas.
- iii. To find out the challenges faced by boda boda operators.
- iv. To find out the risks posed by the boda boda operations/activities in the rural areas.

1.3 Research Questions

- i. What are the socio-economic benefits of boda boda to the rural community?
- ii. What are the contributions of the boda boda in the opening up of the Kenyan Rural Areas?
- iii. What are the challenges faced by the “boda boda” riders in execution of their duties?
- iv. What are the risks posed by the boda boda operations/activities in the rural areas?

1.4. Definition of Key Terms

Accessibility of the hinterlands: means the way in which less reachable parts are connected with other developed areas for the purposes of facilitating farmers to access market to their agricultural produce.

Base: The term refers to the designated station in which the boda boda are registered as a group to operate from. They wait for their customers from this point.

Boda boda motorcycle: These are is a two wheeled vehicle that are powered by petrol which are currently in use in place of bicycles.

Boda boda operators: For this study, these are the riders themselves who own the boda boda or who work on either part time or full time as employee or lessee of the boda boda.

Hinterlands: The term refers to less developed parts of the country which are inaccessible to other means of transport such as vehicular transport.

Motorcyclists: People who ride motorcycles for both commercial and private reasons.

Pillion passengers: Are people who are transported from one point to another by the motorcycles behind the rider.

Risks: These are dangerous or threatening situations that boda boda influx pose to residents of the areas that they operate.

Roles of the motorcycles: these are duties or activities that are performed by the boda bodas in the opening up of the hinterlands.

Shuka/leso: It is a piece of cloth that women wrap themselves with especially when they are working in a dirty environment to prevent their clean dress.

Social-economic benefits of boda boda: Are notable social behaviors that are improved by change in consumer buying power.

Squad: In this study, squad is a short-term engagement where the rider is given a boda boda either by the owner or the designated rider as a reliever. The squad rider always returns boda boda to the designated rider after an agreed period.

1.5. Scope of the Study

The study was carried out in Meru South Sub-County in Tharaka Nithi County to establish the impact of the boda boda taxis in opening up of the Kenyan hinterlands. The target population consisted of the boda boda operators in Meru South Sub-County and the key informants included local administrators from Chuka Division, and traffic police department in Chuka medical superintendent as well as NTSA regional manager.

The study also looked into the economic benefits of the boda boda operations to the users and the challenges they face as they operate in their respective areas. Furthermore, the study limited itself into the responses from the riders only and therefore pillion passengers and other users were not interviewed.

The effects of the motorcycle taxi on health sector was not be looked into owing to the limitations of time and resources. This should form basis for further research.

1.6. Justification of the Study

Boda boda mania is the new concept that is revolutionizing the transport sector and therefore which is moving with a lot of speed. A big chunk of the young people population is seeking this industry as a result of raising level of unemployment. It is attracting many rural people as the cheapest and most convenient means of transport to connect, ferry their farm inputs and harvest from their gardens. It is also the means of transport available for people in places where vehicular transport is not available due to poor road network.

Relevant studies need to be carried out to assess the impact that they are causing as well as to inform the policy makers on the best practice possible into their regulation.

This study was relevant in the essence that it reflects a clear picture of the transport situation in the rural areas and developing country like Kenya. Contrary to the developed nations where motorcycles are used by elites for recreational purposes, in developing nations like Kenya they offer immediate solutions to real problems facing people living in the hinterlands. The study therefore, is of significant importance to the law enforcement departments such as traffic police as well as policymakers such as National Transport and Safety Authority (NTSA).

The study also sought to establish social economic benefits derived from the boda boda operations and therefore acting as guiding tool to the policymakers in terms of coming up with incentives that can motivate local people into using of boda bodas in their day to day activities.

CHAPTER TWO

LITERATURE REVIEW AND THEORETICAL FRAMEWORK

2.0. Introduction

The emergence of the motorcycle can be traced way back from the nineteenth century. The history of the motorcycles is linked to the works of Paris blacksmith in 1860s by the name Pierre Michaux who was the founder of Michaux and company. The first steam motorcycle is associated with Pierres son Ernest Michaux who fitted the first steam engine on the bicycle. The design was later taken to America by one of the employees of Michaux Company who developed the prototype in 1863 and filed a patent in America in 1866. First commercial motorcycle emerged in Germany and England in 1880s and thereafter spread to America as the many manufacturers embraced designs for internal combustion engine.

2.1. Literature Review

According to Mugenda Mugenda (1999) literature review involves systematic identification of documents containing any relevant information concerning the subject of interest under study in the research problem. Literature review should be extensive in nature so that it can provide a detailed information concerning the subject matter under investigation.

The primary objective of the literature review is to assist the researcher to get in-depth of the studies or investigations that have been carried out by other researchers and more to it all is to help the researcher to avoid unnecessary duplication of the studies.

Of late the flooding in of the affordable motorcycles in Kenya and other African countries is creating a paradigm shift in terms of accessibility of hinterlands in Kenya. The places that appeared unreachable or those that were inaccessible through bicycle are now made easier by the motorbikes.

With regulation of this sector, chances are that improved safety will be experienced by the bikers as well as their pillion passengers. These regulations may for instance include wearing of the helmet as well as number of the passengers that they carry. Regulations set at the national level through a policy such as the one for matatu transport sector can be of great importance since they can introduce and encourage formation of association

and savings and credit cooperative societies (SACCO). These organizations may be of great interest to both the industry operators and the government in general.

2.1.1. Legal Provisions as per Kenyan Traffic laws CAP 403

Law provide that all motorcycles which are transferred or sold to any person must always be accompanied by the following protective gear namely; two helmets which comply with the set standards of the Kenya National Bureau of Standards (KNBS) and the registration printed on it with letters not less than three inches on the both sides of the helmets; two reflective jackets with registration number of the motorcycle scribed on it at the back with the letters not less than four inches. The law further clarifies that any person willing to transfer motorcycle to another person must demonstrate compliance with the rules (NTSA, 2012).

Law classifies motorcycles into two categories namely two wheeled and three wheeled motorcycles. For the two wheeled motorcycle the owner is obliged to provide the rider and the passenger with protective gear. The owner is also supposed to ensure that the rider is the holder of a valid driving licence or a valid provisional licence and it must be endorsed in the respective class. This provision applies for the two wheeled motorcycles used for commercial purposes. For private motorcycles the owner must ensure that the motorcycle is at least insured against third party in accordance with the motor vehicle third party insurance Act whereas for two wheeled taxi should be insured against third party public service vehicle insurance. The owner is also expected to ensure that no modifications are made that is likely to affect the safe operation of the motorcycle in terms of hiding the number plate as well as hindering visibility. The modifications that are made to the exhaust system must not abet noise in any way above what that emitted by the motorcycle in the original manufacturer form (NTSA, 2012).

The responsibilities of the rider are also stipulated in the regulations that every rider must ensure that they have a valid driver's licence. They should also ensure that they do not carry any person without the protective gear properly fastened and that they should not carry more than one person at one time. They must also ensure that the passengers are carried on a proper seat with the foot resting securely to the motorcycle behind rider's seat and that the passenger must sit astride the motorcycle. It is the requirement that the headlights of the motorcycle must be always be on whenever the motorcycle is on motion. It is also the obligation of the rider to ensure that the passenger

and the load are not ferried together at the same time. The rider should ensure that the protective gear is clean and in wearable condition and the rear number plates should always remain visible. The law also directs the riders to only overtake on the right side and not on the same lane as the vehicle they are overtaking. However, riders are spotted many times overtaking from the left side and sometimes even on the pavements meant for use by pedestrians especially in urban centers. The child who is twelve years and below can only be ferried only if he or she sits in the middle of the adult passenger and the rider. This is not sometimes the case especially when these boda boda are used as a form of transport for the school going students and pupils (NTSA, 2012).

The law provide for the carriage of load that does not exceed fifteen centimeters beyond the outside end of the end of the handlers bars and that the height of the load should not be more than two meters from the ground. The weight of the load should not be in excess of thirty kilograms for the motorcycle that does not exceed 250 cubic centimeters (cc) and sixty kilograms for the motorcycle whose carrying capacity does not exceed four hundred cc and the rear extreme part of the load must be plainly be indicated by a conspicuous red marker during the day and a red light at night. The law further stipulates that the rider should ensure that no part of the load that is going to drag on the road (NTSA, 2012).

2.1.2. Two Wheeled Motorcycles Taxis.

The law provides that all two wheeled taxis must have their helmet painted yellow and that very person who is involved in this business for commercial purposes must be a member of a savings and credit cooperatives (SACCO) which should have a membership of at least 100 boda bodas. For two wheeler motorcycle taxis, the name of the group or Sacco which they are members of must be indelibly printed in letters not less than four inches in height on the back of both jackets (NTSA, 2012).

2.1.3. Three wheeled Automobiles

Construction and Equipping of three wheeled automobiles should in such a way that they are fitted with a seat belt for the rider and a seat belt per seating position for every passenger. The body of the motor cycle should be covered and painted on both sides and the rear with a broken horizontal line visible at a distance of two hundred and seventy five meters and should have at the minimum a motor commercial public service vehicle insurance cover (NTSA, 2012).

2.1.4. Responsibility of Owners

Every owner of the three wheeled motorcycle shall not permit any person to ride their motorcycle without a valid driving licence and which is endorsed in respect to that class of the motorcycle otherwise the owner will be in violation of law. The owner must also ensure that that the motorcycle is properly insured at least under the minimum of a Third Party Public Service Vehicle Insurance (NTSA, 2012).

2.1.5. Responsibility of the Rider

The responsibility of the rider is to ensure that he or she does not carry excess passenger more than the provisions of the law can allow it is also the duty of the rider to ensure that the head light is switched on when the motorcycle is in motion; and at the same time ensure that the safety belts are in wearable condition clean and properly maintained. Riders are also required to overtake on the right hand side and not in same lane as the vehicle they are overtaking. To overtake on the right hand side and not to overtake in the same lane occupied by vehicle being overtaken (NTSA, 2012).

2.1.6. Offences and Transitional Provisions.

The law states that “a person who contravenes any provision of these regulations and whose penalty is not provided for in the Traffic Act, commits an offence and is liable on conviction to a fine not exceeding Twenty Thousand Shillings or to imprisonment for a term not exceeding six months or, both” (NTSA, 2012).

It is estimated that 90 percent of the world traffic fatalities occur in least developed countries and developing countries like Kenya. According to WHO Sub-Sahara Africa has the highest number of the fatalities involving motorized transport with the average road fatality rate of 24.1 per 100,000 people. Worldwide fatality stand at an average of 18.0 per 100,000 people (World Health Organization, 2013).

It is approximated according to IEA (International Energy Agency) that the number of accidents will increase as the population in Africa is projected to increase by 2050 to a tune of more than a billion. At the same time the motorization in Africa is estimated to be one of the fastest globally with thousands of cars being introduced to the roads daily (International Energy Agency, 2008). With more vehicles therefore, there is high chances of death and injury unless the effective measures are put in place to improve safety on the roads as well as management of environmental hazards.

According to ministry of transport integrated transport policy titled “moving towards a working nation” 2009 nation traditionally, the road network was developed as a subsidiary of the railway network up and until the Kenyans independence. That time, railway transport was meant to transport bulky goods and passengers over the long distance. Basically, roads were meant to come up as a link between railways and European owned bulky farming estates. No significant contribution in terms of rural development was accorded knowing well rural areas are agricultural belt. Since independence various mechanisms have been put in place to challenge the situation (KIPPRA, 2009).

Appropriate institutional framework for traffic coordination in terms of the traffic safety and management of the motorcycles is missing. In most cases it has been reported by the victims of the accident that even when the riders are on the wrong they do not accept it. In most instances they revert to use of unorthodox way to resolve the problem. This lack of road discipline which is witnessed of the Kenyan road by the road users of all classes can only be resolved through adequate deterrent proactive and reactive measures in place. The effectiveness and efficiency of the traffic management function need to be improved dramatically to achieve desired results.

Rural access of the agricultural productive areas seem to have an upper hand in the development and opening up of these areas especially feeder road project on agricultural development in Kenya. The access of these hinterlands is seen by the government as key to growing and development of these areas. In Kenya positive effects have been witnessed as a result of the combined effort of the agencies that deal with road related issues. Rural development cannot be attained if access to these areas is futile. Robert chambers (1983) defines rural development as "a strategy to enable a specific group of people, poor women and men, to gain for themselves and their children more of what they want and need. It involves helping the poorest among those who seek livelihood in the rural areas to demand and control more of the benefits of development. This group includes small-scale farmers, tenants and the landless. The initiative starts with outsiders, the aim is to transfer more power and control to the poor."

Various studies have been undertaken in Kenya on the interactions between agricultural production and road infrastructure. In Uganda roads project in rural areas assisted in

opening up of these areas and consequently findings indicated that the production of cotton went up by between 373 percent and 525 percent (MOITC, 1981)

Dijkistra and Magori (1992) indicate that lack of sufficient road and transport infrastructure discourages adoption of high value horticultural crops of which can be of great importance to improvement of the farmer's earnings. Lack of proper infrastructure system may have greatly resulted to massive decline in the profits made by the farmers. Gavira (1990) indicated that in three regions of Tanzania experienced loss of 80% of rice, 50% cotton and another 50% of all their seeds and fertilizers when the rural roads became inaccessible following heavy rains.

John Hine argues that good policies and practices on the rural transport contribute to development. In sessional "Africa working paper no.100" Agriculture and transport is the major source of income in rural areas of Africa and similarly the core activity that takes place. For this reason therefore, transport should be treated as an integral part of the growth of these rural areas. According to Hine, the overall performance in terms of the growth will be affected by poor quality of roads, inaccessibility of the farm inputs, inadequate of alternative transport to select the convenient.

2.1.7. Global Outlook of Evolution of Motorcycles

Rapid growth and use of motorcycle has taken place in different countries globally. This has been attributed to increase of global motorization of low and medium income in these countries as well as disorganized transport system especially in least and developing countries (Kumar and Barret, 2008). Raising levels of unemployment faced by these countries have pushed youths who contribute the highest percentage in these countries have been pushed towards this ready form of employment. Youths in these countries focus on the motorcycle taxi business as ready form of employment (Peden et al, 2004).

Starkey P (2016) observed that thirty years ago it was difficult to see motorcycles other than those luxurious bikes used by police in traffic management and the scooters that are used by elites for sporting and recreation. He argues that things started to change in 1990s when china and other Asian counties started manufacturing of medium class and cheap motorcycles for use by the middle class. The motorcycles started being affordable to the rural people especially where they were cost shared by the family members as

well as when they were placed for taxi business. For example, in India 69% of the total number of motorized means of transport are motorcycles. This is considerably higher than in high-income countries (Mohan, 2000). This translates the fact that they offer comparative advantage to other means of transport in terms of affordability, efficiency and ability to navigate even in situations where vehicles are not able due to bad roads.

The World Bank has made some studies regarding non-motorized transport in the urban periphery in Sub-Saharan Africa (Starkey et al, 2002), yet scant academic research has focused on the intermediate technology of bicycles and bike trailers. World Bank researchers note that a wide variety of factors influence differences in rural transportation: “population density, culture, income, topography, climate, or crops and animals” (Starkey et al, 2002).

World Bank reports show a clear link between efficient transport system and the reduction of poverty in both rural and urban settings (Starkey et al, 2002; World Bank, 2002). Among the more successful decentralized, cooperative projects focused on bicycle transport is the recent work conducted by the Institute for Transportation and Development Policy (ITDP). ITDP has been active in Africa for over twenty years, with particular success in Ghana (Gauthier, 2005; Gauthier and Hook, 2005).

The efficient transport provides economic and social benefits to all parties involved as a result of multiplier effects which may include and not limited to employment especially of youths and accessibility of the markets.

When transport systems are unreliable in relation to efficiency and effectiveness, they can have an adverse economic cost such as reduced or missed opportunities. It is imperative to note that transport also is crucial social and environmental load, which cannot be neglected. Thus, from a general standpoint the economic impacts of transportation can be direct and indirect.

Direct impacts related to accessibility change where transport enables larger markets and enables to save time and costs whereas indirect impacts related to the economic multiplier effects where the price of commodities, goods or services drop and/or their variety increases.

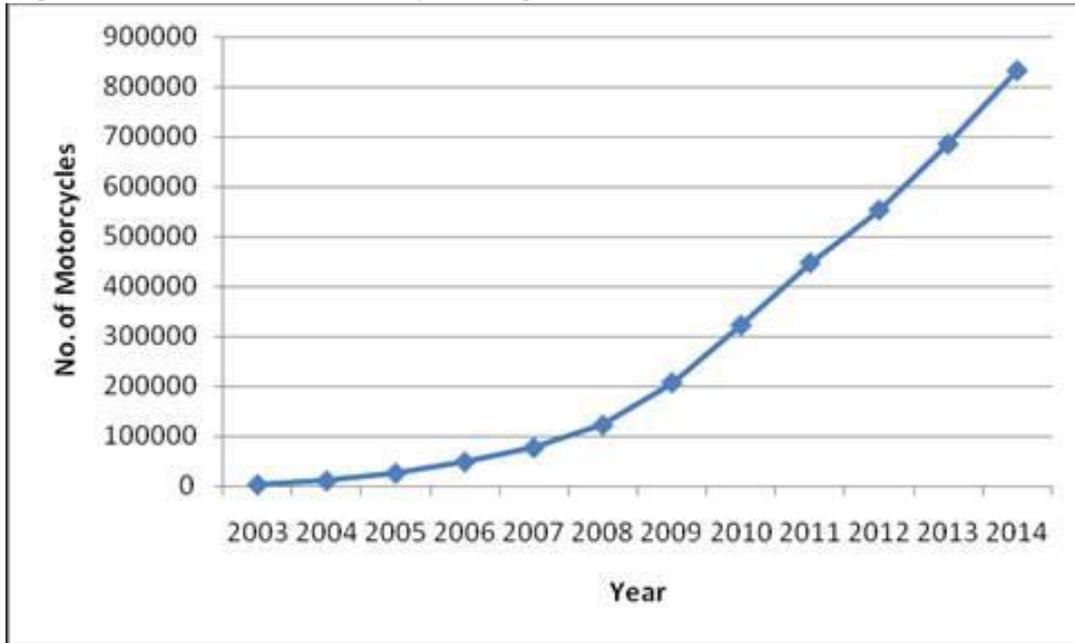
According to Starkey (2016) it is notable that in most developing countries that boda boda are common means of transport in the rural areas. He argues that use of motorcycles was evident in Asian countries but a decade ago in some countries he notes that the numbers were significantly low but have increased systematically for instant, in Tanzania as per the figure below.

In the United States motorcycles constitute three percent of all registered vehicles in United States (NHTSA, 2013). The fatality rate of the motorcycles in USA were seven times more in comparison to the passenger cars occupants. In comparison between 2013 and 2012 the fatality rate of the motorcycle riders and passengers was 1052 in comparison to passenger cars which was slightly lower at 1,005 (NHTSA, 2013). It is estimated that by 2007 there were four million motorcycles registered in United States of America (NHTSA, 2007). Majority of those who own motorcycles in USA is for personal or recreational purposes.

In China, motorcycle ownership grew rapidly between 1987 and 2001. During this period, it increased from 23% to 63%, with a corresponding increase in the composition of traffic fatalities sustained by motorists rising from 7.5% to 19 % (Zhang et al., 2004). However, in other low- income and middle-income countries, lack of road safety data means that precise levels of motorcycle rider fatalities are still unknown. Kenya being one of the developing nations has no actual data about boda boda fatalities and thus, estimates are still used because there are both reported and unreported cases. In low-income and middle-income countries, car ownership and use rates are generally much lower than in high-income countries. However, the ownership and use of motorcycles is generally high especially in Asian countries. For example, in India 69% of the total number of motorized means of transport are motorcycles. This is considerably higher than in high income Countries (Mohan, 2002).

It has emerged that as a result of accrued benefits such as affordability, availability, flexibility and even ability to navigate on poor roads, boda boda taxi services growth is likely continue increasing globally because majority of the population needs a flexible and convenient means of transport. This has implications in that, the growth of motorcycles for transport may increase significantly and if measures to curb accidents are not put in place; many people may be killed or injured in motorcycle related accidents.

Figure 2.1. Number of motorcycles registered in Tanzania, 2003 to 2014



Source: Bishop and Amos 2015

2.1.8. Regional Approach

Boda boda taxis is one of the major source of employment in the rural areas most of the beneficiaries being youthful men because of their ability to effect movement of people and good particularly in situations where there few or no other options. This advantage is extended to the fact that motorcycles business is quiet flexible allowing the riders to do other works that are of income generating in nature when they are not busy.

In a survey that was conducted in Cameroon rural areas it was found that many of the motorcycle riders doubled as farmers and they did not engage in transportation of people daily but they also generated significant income by helping to meet large demand of in relation to transportation of goods to weekly market. (Kemtsop and Starkey, 2013). Boda bodas normally form investment of the people who work in the urban areas and they are normally let to youths in rural areas at a fee or sometimes they are employed to run the business. This makes it very easy to repay the loans that are advanced to them and they bring additional boda boda on the road and the cycle continues (Starkey, 2008).

A survey conducted on the rural Cameron roads indicated 82% of 300,000 passenger movements in a calendar year were on motorcycles, as well as 74% of the estimated

33,000 tons of the agricultural produce and goods transported to and from markets (Kemtsop and Starkey, 2013). This is the reason why people who concern themselves with the matters related to rural development (village authorities, NGOs, extension officers) rated motorcycle taxis highly (Kemtsop and Starkey, 2013).

In addition to provision of the rural public transport services there other features that motorcycle taxis have that enhance their impact on the rural areas. Motorcycles can generally be accessed by just making a mobile call, allowing timely point to-point of the rural population living within same area (Roberts and Thum, 2005; Roberts, Shyam and Rastogi, 2006). Motorcycles are also found to be ideal since they can conveniently travel along footpaths and tracks, and cross small bridges. This means that they ensure services are brought together to villagers. This means they effectively bring road transport services to villages and households living away from the road. This can fundamentally alter rural access.

Generally, local people will prefer motorcycle in comparison to other available transport in rural areas because it is convenient in terms of waiting time, speed at which it travels in comparison to the conventional transport system and in other instances where it is only available transport.

In comparison with other cities such like those in South and East Asia where motorized two wheelers are used as personalized vehicle only small proportion is use it for recreation and personal use in Sub-Saharan cities Kumar (2011). However, there is significant growth in use of two and three wheeler especially for commercial public transport in the Sub-Sahara Africa. This has been attributed due to various advantages that are attached to this mode of transport. They include easy maneuverability, ability to travel on the poor roads, and demand responsiveness (Kumar, 2011)

Studies have shown that most countries in Southern Africa are for the first time experiencing such a high magnitude of rapid growth of motorcycles in their respective countries. It is reportedly presupposed that this is linked to apartheid that took place in South Africa and the legacy left. The elite (historically the whites) who colonized them did not need bicycles or motorcycles, as they had pickups and cars. There was also strict enforcement of regulations relating to helmets, licenses, insurance and passenger loads. In recent years both bicycle riding and motorcycle riding have been associated with

elite pastimes, rather than daily work use. The lack of bicycle and motorcycle 'norms' in South Africa appears to have influenced the people (and regulatory authorities) in neighboring countries such as Lesotho, Swaziland, Namibia, Zimbabwe and Mozambique. However, Kumar (2011) suggests that the benefits of motorcycle use for rural people will lead to their spread into Southern Africa, initially from the north followed by a rapid spread in South Africa, once a 'critical mass' of acceptance and adoption has been reached. Comparable predictions of rapid increases in Tanzania and elsewhere have already taken place (Starkey, 2008; 2011).

In 2007, it was estimated that 235,000 people died from road traffic injuries in Africa, (an incidence rate of 32.2 per hundred thousand inhabitants) with most deaths occurring for people between the ages of 5 and 44 years old. The risks are particularly high for African pedestrians, those travelling in two and three wheeled vehicles, or in public transport (WHO, 2010). Most rural roads have no separate provision for pedestrians who tend to use the road along with the mix of vehicle types. Unsafe vehicles, poor traffic awareness and safety knowledge will also be issues alongside a lack of enforcement. However, an enforcement regime that interprets the regulations too strictly would involve a significant decrease in services or an increase in prices. A balanced approach is therefore recommended. Starkey (2007) identified the following safety issues in rural areas: inadequate infrastructure, including potholes, lack of safety barriers and signs; unsafe vehicles; unsafe loads and mixed passengers and freight; and unsafe behavior of drivers.

According to studies that were carried out in Netherlands by Mooi (1999) there were clear indication that the level of injuries were high on riders who never used helmet in comparison with those riders who used helmets. The research cited that in Netherlands it is mandatory for all riders to be in helmet whenever they are on the road. The study indicated that over speeding was one of the causes of fatal injuries that were experienced in Netherlands. This was evidenced by the extent of the damage that was inflicted on the helmet.

On the other hand Clark et al (2004) established that 25.5% of the accidents were as a result of over speeding nevertheless 58% of the respondents acknowledged to frequently in contravention of the law that govern on the speed limit. In Kenya the Traffic Act Chapter 403 states that:

“1. (a) (i) Motorcycles and motor cars, including motor cars normally used for hire but excluding all other public service vehicles, when travelling on dual carriageway highways have a speed limit of 110 kph (ii) Motorcycles and motor cars including all cars normally used for hire but excluding all other public service vehicles when travelling on single carriageway highways have speed limit of 100 kph (Traffic Act, CAP 403, 2012).

According to Gian (2014) rural development in sub Saharan Africa suffer the set back of poor development as a result poor accessibility of the rural areas due to poor roads. The study indicated that for the rural areas to grow there must be commensurate interlinking of these areas with the urban areas. The survey that was carried out in Nangara village of Uganda showed that people are sensitive to the pricing and hence many rural people will prefer motorcycles due to lower fares as compared to car taxis.

Oladipo O. Olubomehin (2002) argues that in Nigeria motorcycles have played a very critical role in economic development as well as in easement of transport from one point to another especially as a result of collapse of intra-city transport. In Nigeria boda bodas are known as okoda which are used in many towns of the country.

Ogunsanya A. and Galtima A. (1993) argued that these means of transport have thrived well in some areas especially in Siaya, Kisumu Kakamega and Vihiga where bicycle operators are reportedly organized themselves into groups and are therefore able to present their concerns to the local government as well as make savings. “One of the most successful group is the Kibos Ngware group that links the Kisumu town with three sub urban communities. The association claims 500 registered bicycles that carry 7000 passengers per week”.

Various factors have been cited as the key influencers towards increased use of motorcycles for commercial purposes in normal transport operations in Nigeria. The inadequacy of the transport system was addressed as a result of the emergence of motorcycles for commercial purposes in Lagos (Olandipo O, 2002). Lack adequate means of transport was attributed to massive emergence of commercial motorcycles in Lagos with the intention of filling in the existing gap.

Another factor that was cited was the high rate of unemployment among the young population in Nigeria in 1980s. During this period the economic position of Nigeria

deteriorated to a situation that the civilian government that was in place that time under Alhaji Shehu Shagari (1979-1983) came with stringent austerity measures to save the economy. This resulted to massive job loss at both federal and State levels between 1980 and 1981. The regime that followed which was led by military general Mohammed Buhari and that overthrew civilian rule extended staff retrenchment which saw for instance 6000 people lose employment in 1983 (Oladepo and Omotunde, 1985:17). This structural adjustment policy contributed significantly even to loss of jobs in informal sector especially textile industries where many of the employees lost jobs. Purchasing power of the middle Nigerians people was adversely affected.

Another factor that was identified as one of the main contributors of the motorcycle in Nigeria was that okodas were seen to be efficient means of transport since they could be able to navigate in many places where commercial vehicles could not reach due to poor state of the roads. Unlike the car taxis, motorbikes were preferred since they could take their clients to the door steps. They were also identified as time saving in comparison to other means of transport since it could take even one passenger at a very low cost.

Any form of community development is conceptualized as a conscious and intended strive aimed at assisting rural communities in realizing their goals that are aimed at solving their problem both on short and long run. This therefore will boost extent at which they participate and contribute on the matters of the social-economic well-being of the society. Apantaku and Lawal-Adewale, (2011) see community development as conscious and deliberate utilization of the natural resources and application of technology in social-economic activities of man for overall transformation of the socioeconomic well-being of members of a social system.

The year 1980 is marked as the time when massive expansion on the usage of the motorcycle for the purposes of commercial business were spread in many parts of Nigeria. For instance in the northern part of Nigeria okada business was introduced in 1981 (Oladipo, 2012). Okonkwo, et al (2010) argued that riders that leave the rural areas often take their services into urban areas. He further cited that agricultural areas that mostly rely on the on the hand tools were likely to be affected especially where many youths embraced okada business as a result of inadequate labour supply in these areas.

Table 2.1: Factors affecting the use of motorcycle “Okada” for transportation

	Agree	Disagree
Natural factors	%	%
Bad road network	82.7	17.3
More time consuming on the bad roads	86.3	13.5
Easy to ply on the footpath	94.2	5.8
Social factors		
Poverty and bad economy	92.3	7.7
Shortage of public transport	67.3	32.7
Increase in population	84.6	18.4
Unstable transport fares	75.0	25.0
Fuel consumption	78.8	21.2
Flexibility in use	65.4	34.6

Source: Emmanuel Ayanwuyi (2013)

In Malawi motorcycles have been in use in rural areas to address issues connected to maternal health care. Motorcycles have been found to be effective means of transport in rural areas since they reduced referral delay by 2-4.5 hours equivalent to 35%-76%. It was also found that operating cost was \$508 which is far 24 times the cost of the car ambulance International Federation of Gynecology and Obstetrics (2008). This research found that motorcycle ambulances reduced the time spent by the expectant mothers especially those with referral complication issues from the District Hospitals especially in the situations where the health centre did not proper road accessibility.

The study also found that motorcycle ambulances were relatively cheap in comparison with the car ambulance especially in rural areas with no or poor road access. It is even cheaper to maintain the motorcycle ambulance in terms of fuelling as well as purchase.

2.1.9. Influx of Motorcycle in Kenya

In Kenya boda boda business has significantly yielded remarkable positive results to people who are involved in the business the youth groups who make savings and practice discipline on the savings that they make. Youth unemployment is a global challenge and Kenya is not left out. It is estimated that 64% of unemployed persons globally are youth. According to 2010 economic survey there was an increase of 32.8 percent in transition from the previous year of 2009 in terms of the registered vehicles. This is attributed to the increase in the number of the auto cycles which were registered

in Kenya which accounted to 56.3 percent. According to Nyachieo (2002) majority of the Kenyan youth in the boda boda have no other form of employment. In the year 2003 the government zero rated the motorcycles with 250cc and below and making the very affordable to buy even to the low income earners. Therefore, many bought these motorcycles to their children as a form of employment whereas others bought and hired them to the youths at a payment at the end of the day.

In terms of training, many of the riders do not have formal training. Big percentage of the riders acquire riding skills through fellow riders at a fee of between 50 and 200 shillings. A study that was conducted in Kisumu found that only 39% of the riders had formal training from the driving schools (Nyachieo, 2015). Similarly, boda boda business is seen as means of employment that is readily available and as such, many young people, especially boys, view boda boda business as a bridge to a better future after completing primary or secondary school (Nyachieo, 2015)

Table 2.2. Registration of motorcycles in Kenya

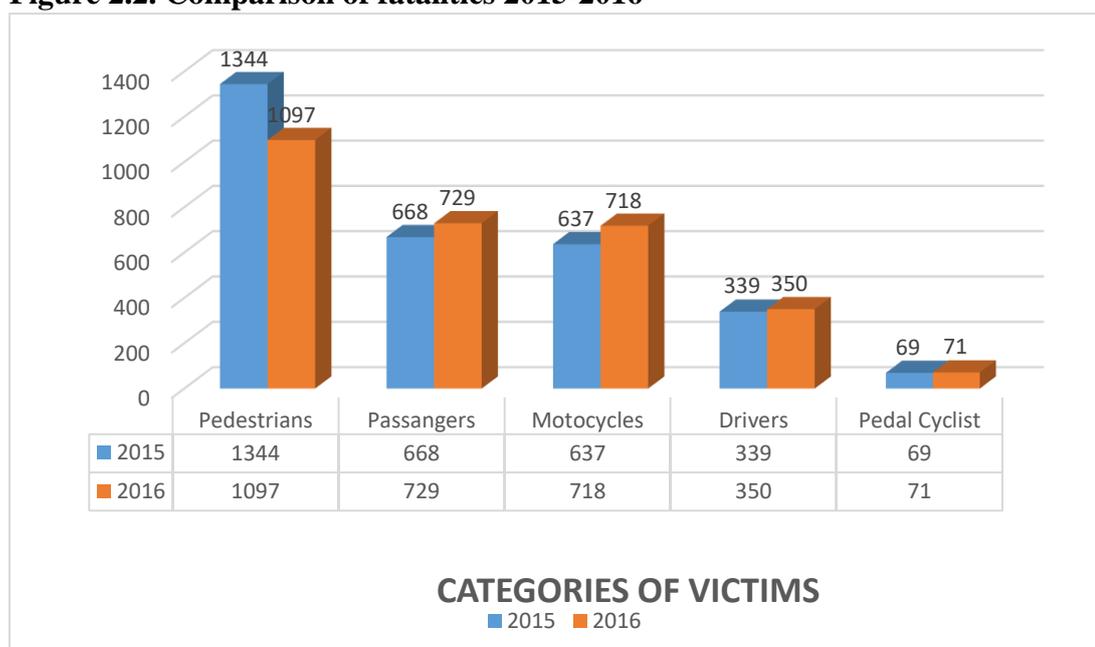
Make	2008	2009	2010	2011	2012
Motor Cars	43433	44,529	53,718	42,225	52,847
Utilities, panels vans, pick-ups	8,983	7,120	6,975	7,442	7,945
Lorries, trucks and heavy vans	6,691	6,037	4,924	5,247	7,821
Buses and Mini-buses	6,449	5,540	4,864	2,113	1,716
Motor and auto cycles	52,116	91,151	117,266	140,215	93,970
Trailers	2,100	2,883	2,379	2,556	3,761
Other motor vehicles**	2,059	4,553	6,330	6,043	4,984

Total	121,831	161,813	196,456	205,841	173,044
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Source: KNBS, (2013)

From the above table from Kenya National Bureau of Statistics there is indication that there has been increase in the number of motorcycles registered in Kenya from the year 2008 to 2011. This can be attributed to the zero rating of the motorcycles which are 250cc and below. The intention of the government to zero rate the motorcycles below 250cc was to create employment to the youth and to ensure low income earners who could not afford to buy cars were able to get means of transport to their places of work and also for business purpose. There was decrease in the number of the motorcycles which were registered in Kenya and this was attributed to the election period when the buying capacity was reduced and focused on the election campaigns.

Figure 2.2. Comparison of fatalities 2015-2016



Source: NTSA

According to figure 2.2 above from the NTSA report, the number of accidents victims has reduced over the years; 2015 and 2016 by 4.5 %, the government has been vigilant in getting rid of unroad-worthy vehicles, unqualified drivers, and unlicensed motorists who operate illegal business at the risk human lives. These steps in cubing accidents around the country has contributed greatly to reduction of accident victims.

Motorcycles accidents have increased over the years; from 637 in 2015 to 718 in 2016 according to Figure 2.2 by NTSA, this is as a result of many unemployed Kenyans especially in the semi-urban and urban settings venturing into the boda-boda business as a form; of earning livelihood.

The construction of sidewalks and flyovers has really contributed to the reduction of pedestrian accident victims between 2015 and 2016 according to NTSA report on Figure 1, since it has reduced their exposure to motorist thus providing safety.

The number of passenger accidents has also increased due to the rise in inexperienced motorists who rush on the roads competing for customers.

As the number of motorcycles has continued to increase, pedal cyclist accidents has also been on the rise due to the competitiveness of both modes of transport. The motorcyclist being more effective and faster in transporting people and goods tend to look down on the pedal cyclist and would easily win customers from them.

Table 2.3 according to KNBS economic report on the other hand gives a statistic of rise in the accidents victims between the years ; 2014-2015.

Table 2.3. Accidents Reports, 2014 - 2015

Victim type	2015	2014	%variance
Pedestrians	1344	1340	0.299
Drivers	339	268	26.49
Passengers	668	642	4.05
Motorcycle fatalities	637	553	15.19
Pedal cyclists	69	104	-33.7
Total	3057	2907	5.2

Source: KNBS Economic Report 2016

From the table 2.3 above extracted from the KNBS the number of motorcycle fatalities increased from 553 in the year 2014 to 637 in the year 2015. This is attributed to the

increase in the number of motorcycles on the Kenyan roads registered between the year 2014 and 2015. As the number of the motorcycles on the roads increased the violation of the traffic rules increased' the report indicates that there was a variance increase in the number of fatalities to the tune of 15.19%.

Table 2.4. Factors contributing increasing use of motorcycles

Positive		Negative	PULL	Push
Demand	Supply			
Time savings Door-to-door service Improve mobility Easy access Demand responsive Easy maneuverability Employment generation/Increase in income	Easy availability Limited street space	Congestion Pollution Accidents Safety/crime unregulated	Urban sprawl poor secondary road network poor road quality Low density Uncontrolled growth Absence of safe, secure, affordable alternatives (especially for women)	Inexpensive Easy credit High unemployment Low car ownership unregulated

Source: (Kumar 2011)

2.1.10. Factors contributing to increased use of motorcycles

The factors that are cited in the above table by Kumar, (2011) there is a clear indication that the pull and push factors reflect poverty levels in developing countries Kenya being among them. Poor road network, absence of secure and safe alternative especially for women in rural areas replicate the poor conditions that prevail in rural areas in Kenya. Bearing that these lowly developed areas also need mobility for their people and goods, the easily available, convenient and affordable means of transport is the boda boda which is more affordable and march their purchasing power.

Pull factors translate to the speed at which motorcycles influence growth in developing countries most of whom are in Africa. Most of the unemployed people are found in Africa therefore, the more poverty conditions that are experienced in these countries. As a result of these prevailing conditions of poverty then people are pushed to the desire to own motorcycles which are at least affordable means of transport as well as source of employment as experienced in Kenyan situation.

It is essential to access social amenities like health care, schools, education and jobs or markets and social networks for sustainable development (Diaz – Olvera *et al.*, 2007). This mostly work because of the prevailing conditions where even regulations that are put in place are not adhered to. Chepchieng' Kyalo & Mulwa (2011) observes that laxity by law enforcers in Kenya has contributed to massive increase in the number of motorcycles. This is so because motorcycle business minimal requirement is seen as only presence as well as the motorcycle and then one is ready to move. Ready credit facilities and sometimes which do not require any guarantee also are viewed as one of the contributors of the massive increase in motorcycles in Kenya. Some of the facilities are offered by shylocks who are seen to be willing to serve the gap between finances and motorcycles ownership (Kumar, 2011).

2.2. Theoretical Framework

2.2.1. Introduction

Under this section the research focused on explaining theoretical relationship in explanation of the phenomena at hand. In this case, the theories that were used in this research are social exchange and structural-functionalism theories. The investigation embarked on focusing on two theories namely structural-functionalism and social exchange to explain the role of the boda boda in opening up of the rural areas.

A theory is a system of explaining phenomena by stating constructs and laws that interrelate these constructs (concepts) Mugenda (1999) to each other.

2.2.2. Structural Functionalism

Structural functionalism, views society as a complex whole comprising of part that complement one another to enhance solidarity and cohesion of the entire system. It therefore sees society as providing to the social system of interconnected parts that work together to achieve state of the equilibrium and balance of the whole. This therefore

implies that for instance, family component has various roles that end up contributing to the wellbeing of the rest of the society. In the case of the motorcycle riders majority of them whom are male are the husbands and fathers within their social set up in the family and thus they have the role of providing to their families. The functionalist perspective emphasizes the interconnectedness of society by focusing on how each part influences and is influenced by other parts Parsons (1951).

Society will be regarded as functional if the rest of its parts are complementing one another but at the same time it will be seen to be dysfunctional if any of its part is working in disregard of the other parts. Thus, Parsons posited the existence of social control mechanisms as a way of enhancing coexistence (Parsons, 1951). For instance, when the boda boda riders disregard traffic rules they will be seen as dysfunctional from that perspective simply because they will not be working in cohesion with other parts of the society or rather they do not ensure stability of the society.

Through the analogy of the mechanical and organic solidarity, Emile Durkheim argued that rural people are held together in mechanical solidarity as a result of the shared norms and strong social bonds. He further argued that moral values of the rural dwellers are strong among members of these set up. In modern, complex societies which characterize the urban life, members perform very different tasks, resulting in a strong interdependence and individualism in performance of their duties (Durkheim, 1956).

Society is perceived as a set of action and interaction among human beings. These actions and interactions result in structure of relations as in the family. In a family, the father and mother perform the roles of providing food and education for the children who in turn have to pay respect to their parents in a system of authority. The family is a social structure maintained by the continued interaction as a result of defined roles among various units within a social set up. These actions and interactions form a continuous process of the functionality. Thus, units within a structure function to maintain structure (Parsons, 1951).

Therefore, it is worthy to highlight that structural-functionalism are two sides of the same coin that can be reflected from both dimensions interchangeably. That is you cannot have structures without function and no function without structures whose consequences and reciprocal rationalization they happen to be and fact are.

Structure therefore refers to the interrelated and inter-relatedness of parts constitutive of a given type of social organization which are required for effectiveness and sustained operation.

The key components of structural-functionalism theories Are:-

- The societal parts are interrelated and interdependent and this interrelation is the major basis of society. The different parts of society fit together in social system and they also require regulation because change in one part will definitely result to change in other.
- Society is seen as has having an existence of its own with its structures and social function (norms, function) Modes of society is based around the assumption of functional prerequisites and different parts of society that help to achieve this.

Prominent structural functionalism theorists includes:

Aguste Comte 1798-1857 coined the term sociology. And is usually regarded as the first sociologist. His emphasis on interconnectedness of different social elements was a forerunner of the modern functionalism in his pursuit to explain the interconnectedness of social institutions he came up with the term "Positivism", He pointed out the need to keep society unified as many traditions were diminishing. He dichotomized society into two broad categories static and Dynamic.

Static represented society's institutional structures and accompanying social system i.e. family, religion/ church and education.

Dynamic involved the ongoing industrial change processes experienced by each of these institution at micro level and the society as a whole at the macro-level. He postulated that eventually society would develop from a primitive to a civilized entity.

Talcott parsons was highly influenced by Emile Durkheim and Max Weber. Parsons held that society is a social system comprising of social actions of the individuals .Therefore, his departure point is where he sees two individuals with variety of choices choosing how they want to act and their actions or inactions are influenced and constrained by a number of physical and social factors.

He argued that as the behavior is frequently repeated within the interaction setup, it is institutionalized and thus a role is created. Parsons defines a role as the normatively regulated participation of a person in a concrete process of social interaction with specific, concrete role partners. Thus, even though anyone can fulfil any role, individuals are expected to conform to the norms and values that govern the fulfillment of the role. Parsons further noted that roles complement each other in ensuring the fulfillment of the functions of society. He argued that some roles are gender based and that they are functional and assist the society in fulfilling its functional needs which lead to smooth running of the society Parsons (1951).

Parsons (1951) argued that for the system to reproduce there must be socialization and social control. Socialization compliment is important for ensuring proper transfer of accepted norms and values of the society to an individual. Within the socialization component there exist negative and positive suctioning of the behavior that meet or do not meet these expectations. These suctioning can be formal or informal. So therefore, Parsons argues that successful internalization of values, norms and roles of the society are pre-conditioned for social order and therefore failure to adhere to them may lead to disintegration of the society.

He further argues that all systems have prerequisites for their survival which are, Adaptation, Goal attainment, Integration and Latency (AGIL)

Adaptation: Every organism must find its position in the society. It must seek to adapt the prevailing environment so as to survive Parsons (1951). The boda boda sub sector has created a position within the society by filling in the gaps that existed in the transport sector.

Goal attainment: These entails how the society attains the goals and how it endeavors to achieve the objectives for the goal. Every society has defined goal for its members Parsons (1951). Each and every youth majority of whom are boda boda operators will always seek to achieve the goals so as to suite in the society that they are in.

Integration: Society reinforces values norms and behavior that it find acceptable with the view of bringing its membership into cohesion and coexistence. This in return brings about social order in the society Parsons (1951). The governments come up with

laws for instant in this case traffic laws that manage relations in the Kenyan roads for the purposes of harmony.

Latency: This entails the accepted means or behavior that is directed towards sustaining socially expected behavior and also that which assist to manage tension within the society Parsons (1951). Boda boda operators will strive to portray acceptable behavior by working towards what is expected by society in terms of good morals.

In conclusion, Parsons saw society as a bigger part that is guided by morals that are supposed to be adopted by its membership for it can function effectively.

2.2.2. Social Exchange Theory

The social exchange theory explains the human relationship as a beneficial relationship that develops as a result of internalized cost benefit analysis by each individual in the engagement. It is argued that behavior is an internal process which is self-directed, and thus, not influenced by the environment Homans (1962). For instance, when one person see a potential for getting into a relationship of any kind with another person, each one of them will carry out a cost benefit analysis to find out what are the benefits of getting into a relationship with one another and if the benefits outweigh the cost then they will enter into the relationship.

Basically, according to this theory, there are those factors that interplay to influence and motivate people choice on relationships in a social setup may it be friendships, acquaintances or otherwise. In this relationships, there is an aspect of a giver and a taker, although not mandatory that there is balance of exchange. There those who will benefit more and those who will benefit less in that relationship. Therefore, naturally individuals will develop a comparison level to measure the ratio of give and take. This kind of reciprocity involve cultural reciprocity comprising of the rural society Malinowski (1932).

Social exchange theory explains the feelings we endure within relationships setup between persons on their perception of what they receive against what they give which Homans describes us 'An exchange of activity, tangible or intangible, and more or less rewarding or costly between at least two persons'. So therefore, the theory sees our

behavior as guided by rational calculation of the benefits and costs that we get in the interaction Homans (1962).

The rural dwellers, would always seek to see the benefits that they are drawing by use of boda-boda against the benefits that they will get by use of other means of transport. A rural farmer would always look at the efficiency and effectiveness of the transport system in place within their reach. Social exchange theory, argues that in that process of exchanging, human beings by nature would always want to maximize on the benefits and minimize the cost. They will always look at potential benefits visa-v social risks associated with the task and if the benefits outweighs the risks they will proceed with it but on the other hand, if the risks outweigh the benefits, the behavior extinct.

George Homans observed that, it is important to understand how individuals create and maintain social structures and how social structures influence their behavior in terms of rewards, punishment and stimuli (facilitator). He therefore proposed three elements of social behavior namely interactions ; which means ‘being an event in which an action of one man was the stimulus of an action of another’ (Homans, 1962:37) ,sentiment which means; behavior expressive of a person’s attitude toward other persons and includes the liking and disliking of individuals, approval and disapproval of the things they do (Homans, 1947:14) and activity which is ; any action that people perform that may not require interactions with others or express interpersonal sentiments. A man in an exchange relation with another will expect that the rewards of each man be proportional to his costs—the greater the rewards, the greater the costs—and that the net rewards, or profits, of each man be proportional to his investments—the greater the investments, the greater the profit. (Homans 1961: 75).

According to Homans, there are five propositions of elementary social behavior namely;

The Success Proposition: this proposition implies that a person will be tempted and willing to undertake a particular action if they foresee a reward in that particular action. Therefore the more likeliness of the reward the more likelihood of the performance of that specific action related to that reward (Homans 1974). Boda boda business has been viewed by many young persons to be a very good venture. Many operators have been

seen to be successful in this business and thus, increase in the new entrants into the operations.

The stimulus proposition; this means that if the past happening of a successful action is related to a certain stimulus, then in the subsequent happening/occurrence of such stimulus will attract the similar action (Homans, 1974). The amount of money that boda boda operators get on the daily basis forms as part of the stimulating factor that influence them to engage into the business. Previous studies have shown that many operators have benefitted from this business since some of them were jobless. It is also important to note that this business one does not require a lot of money and time to train since with as little as fifty shillings one can get trained (Nyachieo, 2015).

The value proposition; if the person sees his actions to be the more valuable, then the person will be motivated towards further actions in future (Homans, 1974). Young persons have always valued this boda boda business since it forms basis of their income and hence, they are able to provide to their families.

The Aggression – Approval proposition: when a person's action does not receive the reward he expected, or receives punishment he did not expect, he will be angry, he becomes more likely to perform aggressive behaviors, and the results of such behavior's become more valuable to him. Likewise, when a person's action receives reward he expected, or receives punishment he did not expect, he will be angry, he becomes more likely to perform approving behavior, and the results of such behavior's become more valuable to him. (Homans, 1974: 37).

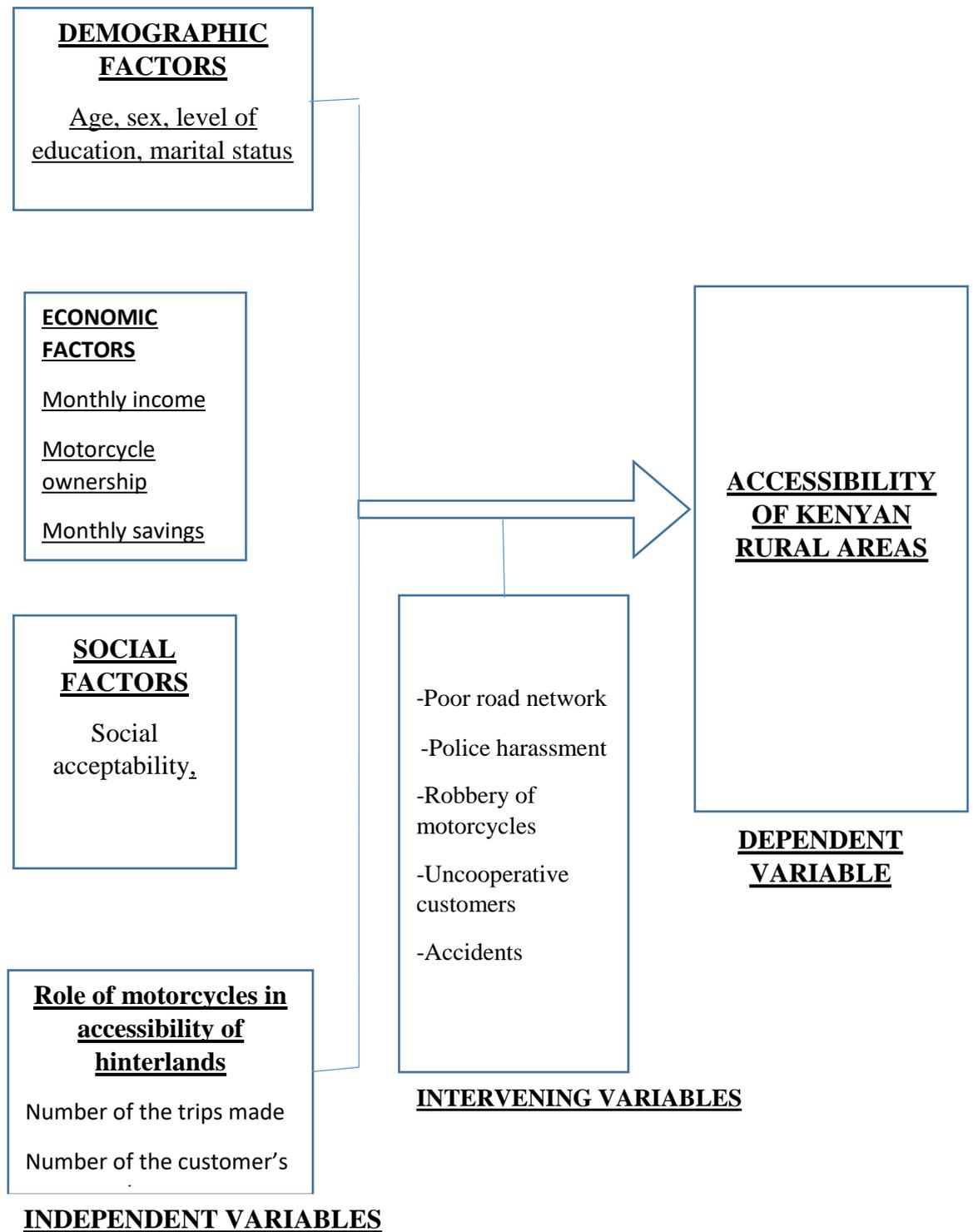
The rationality proposition: In choosing between alternative actions, a person will choose that one for which as perceived by him at the time, will yield greater value based on the probability of achieving it. (Homans, 1974: 43). Rural people will always weigh the probability of transporting their goods using boda boda and other means of transport and weigh the benefits of using one over the other.

2.3. Conceptual Framework

The Conceptual framework shows the relationship between variables under study and how they influence one another in terms of the independent and dependent variables. The dependent variable in this study is the opening up of the Kenyan hinterlands and which is affected by the independent variables such as economic social and

demographic factors. For instance age as a variable may be associated with high speeding and violation of traffic rules. Eventually, the over speeding and violation of traffic rules may lead to increased number of accidents. High rate of accidents associated with the boda boda may lead to avoidance of this means of transport and thus hindering the intended purpose of opening of the rural.

Figure 2.3. Conceptual Framework



CHAPTER THREE

RESEARCH METHODOLOGY

3.0. Methodology

This component of methodology consist of the site description, research design, population as well as sample size, data collection procedures and data analysis procedures. This chapter also elaborate on how ethical issues were dealt with in the study.

3.1. Site Description

Meru South Sub County is one of the three Sub Counties of Tharaka Nithi County. Other Sub Counties are Tharaka North and Tharaka South and Maara. Meru South consist of five divisions namely; Magumoni, Igambangombe, Chuka, Mwonge and Mariani Division. The Sub County has a Population of 128,107 people according to KNBS (2009) censures and it houses the largest town in the County which is Chuka town as its administrative headquarters. Majority of the population segment in this Sub-County are small scale farmers who mostly use boda bodas to access their farms and also to take their farm produce to the markets. In this view therefore, it was projected that the number of boda bodas in this particular Sub-County was the highest within the County and thus appropriate for generalization.

3.2. Research Design

According to Cooper and Schindler (2006) research design is the procedure in which data is collected, measured and analyzed in the view of the broad assumptions.

This research incorporated survey research design to collect data from the intended sample within Meru South Sub-County. Mugenda Mugenda (1999) states that survey aims at collecting data from the population with the aim of arriving at the prevailing situation of that population under study and with respect to one or more variables. The aim of the survey therefore, is to collect information or data which is quantifiable from the sample.

Gay (1981) defines descriptive research as a process of collecting data with the aim of testing hypothesis as well as with intent to answer the current prevailing questions about the behavior which is under study. Mugenda mugenda (1999) descriptive research aims

at describing such things as the behavior, attitudes, values and characteristics. The descriptive research will therefore help in answering the research questions and more specific get to understand the impact caused by the boda bodas in access of the Kenyan hinterlands.

This kind of research therefore, aimed at establishing the current behavior of the motorcycle operators as well and the persons who are the consumers of their services in their attempt to open up hinterlands in Kenya. Thus, this study matches the description provided for by the above authors and is of great important since it helps to analyze behavior, values and the characteristics of the motorcycle industry in their attempt to open up the hinterlands of Kenya with the reference of the Meru South Sub-County.

3.3. Unit of Analysis

According to Singleton (1993), unit of analysis is the entity about which the researcher gathers information. The unit of analysis in this study is the boda boda riders in Meru-South Sub-County.

3.4. Unit of Observation

The units of observation are the objects about which the information is gathered (Mugenda Mugenda, 2003). In this study the units of observation are the activities of the boda boda and their impact on their opening of the Kenyan hinterlands.

3.5. Population of the Study

This study aimed at concentrating its interest on the respondents from the associations of Motorcyclists in the Meru South Sub-County who are mainly riders. Mugenda Mugenda (2003) states that purposeful sampling allows the researcher to use cases that have the required information for the purposes of the study being carried out. In this case the cases of the subject were handpicked because they possessed the required characteristics. It is based on this that the riders were handpicked since they operated on day to day basis. Similarly, key informants were selected purposely based on the information that they possess through the nature of their job.

3.6. Sample Size and Sampling

Application of the cluster sampling technique was sought where the target population was used for the purposes of achieving the desired representative data of the sub-groups in the population. The sample consisted of the riders drawn from motorcycle riders associations within Meru-South Sub-County. The key informants involved were: Base Commander from Chuka Police Station, Administrative officers within Meru South Sub-County, National transport and Safety Authority (NTSA) Meru Region as well as Medical Officer Chuka County Referral Hospital.

A sample size of 100 people who were be representative of the universe was selected to form the body that contributed to the generalization of the analyzed results as well as data to be replicated in other future studies.

Gay, 1981 suggests that ten percent of the accessible population is enough in descriptive studies. It is always advised that where time and resource allow the researcher should take large numbers that can be accommodated for the purposes of representation and generalization. Purposeful sampling is deliberate non –random sampling method which looks at selecting a sample with already predetermined characteristics.

3.6.1. Sampling Design

Chuka Division was purposefully selected because it is the economic hub and the fact that it `is the agricultural nerve centre of the entire Meru South Sub-County. This is so because there are many boda boda operators who ply many routes to transport farmers, business people and workers to various parts of the sub–county. The sample size was be selected from the various wards within Chuka division. The division has fifteen wards. To get the required sample size the researcher used cluster sampling which is an equal probability sampling method. This is because it may be difficult to obtain an exhaustive and complete sampling frame due to boda boda operator’s mobility as well as their level of organization.

These bases were grouped into various clusters for the purpose of equally obtaining the clusters without biasness. Cluster sampling is ideal in situations where it may appear almost impossible to obtain a sampling frame either because the population is very scattered or it is too big. In this case the population of the boda boda operators is very big and not consistent. As a result of this, the constraints of resources and time this

sampling method was suitable in this study. The next step was to come up with the sampling frame for the riders from each cluster with the help of their leaders.

The third step was to select the clusters which were used to draw individual samples from the population with the view of accomplishing a sample size of 100 respondents. Since the clusters did not have an equal population size, the researcher applied probability proportional sample (PPS) where every selected cluster produced sample size proportionate to their standing in terms of their respective population. This was so because each and every element in the cluster population stood an equal chance of being represented in the sample and therefore producing a representative sample. The first number to be selected from the table of the random number was number five (5) as demonstrated in table below.

The table of the random numbers was instrumental in assisting in identifying of the clusters as indicated in the table below. After the selection of the first cluster, the rest of identification and selection was continued until the required sample size was acquired through use of snowball sampling where riders were referring us to their base members whom they operate together.

Table 3.1.Clusters selection.

N= 638

	Cluster	Population	Clusters selected by position
1	Nyagakairu	18	
2	Chera Go Down	30	6
3	Kathathani	30	5
4	Kambandi	80	
5	Kiereni	32	1
6	KwaMati	25	
7	Chera Stage	35	
8	Ndagani/jatomy	45	2
9	Kathunguthe	20	
10	Rukindu	10	
11	Kaanwa Stage	80	
12	Weru	80	3
13	Muchuuni	55	7
14	Mubukuro	48	
15	Kiangondu	50	4
	Total	638	

Source: Fieldwork

Table 3.2 Selected Riders in their Proportionality

N= 267

Cluster	Population	Proportionate Sample
Kiereni	32	12
Ndagani/Jatomy	45	17
Weru	80	30
Kiangondu	50	19
Kathathani	30	11
Chera go down	30	11
Total	267	100

Source: Fieldwork

3.7. Methods of Data Collection

To effect this study, both primary and secondary data were collected and analyzed appropriately. The primary data was collected whereby the questionnaires were administered to motorcyclists, and interview schedule/guide applied in interviewing the Base Commander Traffic Police a Head Teacher of a primary school, a Principal of a day Secondary School, County referral hospital Medical Superintendent as well as local Administrators. Both open-ended and closed ended questions were be directed to the respondents with the view of generating both qualitative and quantitative data.

3.7.1. Field Data Collection

Research assistants were recruited and trained on how to manage and administer questionnaire to the boda boda operators to ensure that they obtained accurate response from the respondents.

The primary data was both qualitative and quantitative in nature and was obtained by administration of the interview schedule and questionnaires. Face to face interview was found to in be ideal because in case where clarification was desired by the respondents, it was responded to instantly thus, saving time and money. Face to face further enhanced quality of the output by ensuring full compliance. Direct observation of the phenomenon under study assisted in establishing the behavior of the riders directly. Both covert and overt methods were used to obtain data.

3.8. Reliability of Instruments

Mugenda Mugenda (1999) states that “reliability is a measure of degree to which research tools yield the same results in repeated trials under the same circumstance”. The research instruments were first piloted to ascertain the reliability by first carrying out a pilot study in order to test the reliability of the research instruments. The results of the questionnaire testing was used to eradicate any vagueness. As the random error decreases the reliability on the other hand increases. Therefore, the testing was meant to reduce the sampling error. The testing was conducted to check on such errors as inaccurate coding, ambiguous instructions to the respondents, and interviewer’s bias among others.

3.9. Methods of Data Analysis

For data to have meaningful interpretation it must be analyzed clearly and thought out well so that it is understood well by intended persons as well as the ordinary persons. This kind of analysis therefore, aimed at summarizing the essential salient features with the view of achieving the relationship between the independent variables and the dependent variables. This led to desired proper and comprehensive generalizations that were made after the study. The project thus aims to use the questionnaires and interview guide to collect data which will be generalized.

The research aimed at using both quantitative and qualitative data analyzing techniques whereby use of bar graphs, pie charts and tables were used. The data was organized and interpreted by use of statistical Package for Social Sciences (SPSS) to deliver relevant policy makers and implementers.

3.10. Ethical Considerations

The respondents were informed both verbally and in the questionnaire of their rights and that they stand no benefits to direct incentives as a result of their participation in this research. The respondents were informed that they are at liberty to answer questions fully or partly and that confidentiality of their identity will be guaranteed.

The respondents were given opportunity to express themselves in relation to the study to ensure that all valuable information that they possessed and which was helpful to this study was incorporated in the final report.

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND INTERPRETATION

4.0. Introduction

In this chapter the results of the data are presented, analyzed and interpreted. Data was collected and processed in accordance with the specific objectives as stated in chapter one of this project. The main objective of the research was to find out the impact of the motorcycle taxi service (Boda Boda) in accessibility of the Kenyan hinterlands a case study of Meru South Sub-County.

4.1. Demographic Characteristics of the Riders

The study sought to understand the socio-demographic characteristics of the riders by looking at their age, sex, marital status and highest level of education. The study established that majority of the respondents were male aged between 21 to 45 years of age.

Table 4.1. Rider's age bracket
N=100

Age	Frequency	Percentage %
15-20	5	5
21-25	30	30
26-30	24	24
31-35	17	17
36-40	16	16
41-45	5	5
46-50	1	1
51and above	2	2
Total	100	100

Source: Fieldwork

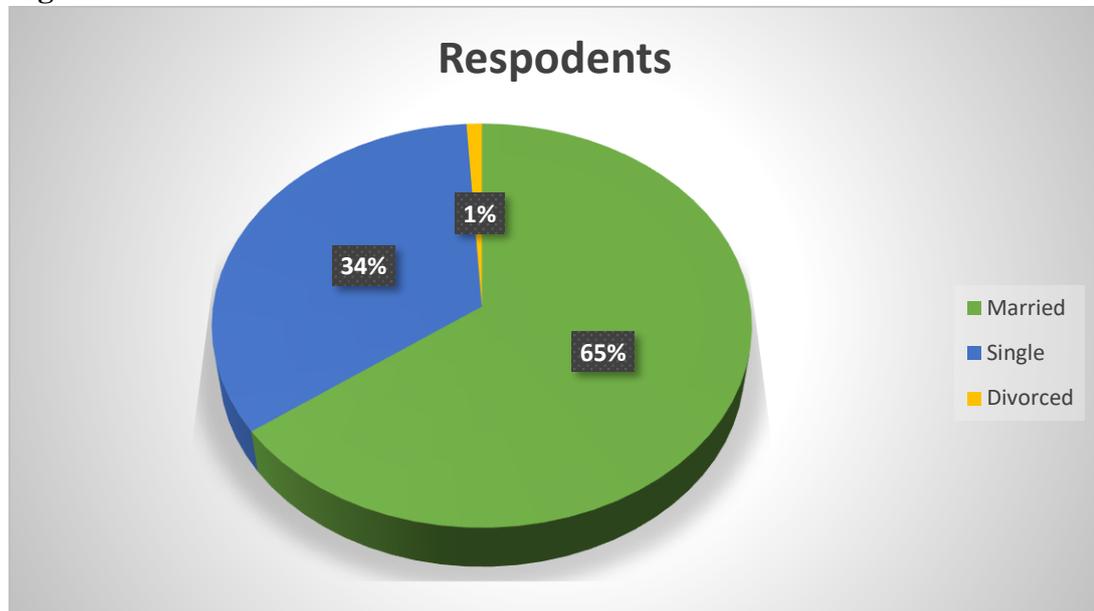
Majority of the riders fell in the age bracket of between 21 to 35 years carrying 71 percent of the entire sample population. This is the age that consist of the youths who as expected in many developing countries like Kenya are unemployed. Meaning that they viewed this business of the boda boda as the available opportunity for their employment and as such, that which did not require much skills to venture into. The study which was conducted in Douala Cameroon indicated that 85% of the riders belonged to the age bracket of between 25 and 45 years (Kumar 2011). The government

of Kenya in the year 2003 zero rated the motorcycles that are of 250cc and below making it accessible to many people majority being low income earners.

4.1.1. Sex

All the respondents interviewed were male. This therefore implied that the commercial operations of the boda boda was dominated by male riders. This is so because men were seen as providers to their families especially in this region. The other factor that had led to male domination of this sector is the nature of work and the risks that were involved as established in the study. The respondents cited that they sometimes carried a “client” who on the way turned to be thieves or who are violent.

Figure 4.1. Marital status



Source: Fieldwork

4.1.2. Marital Status

The study found out that the biggest proportion of the riders were people with the families and this implied that they were in the business to enable them to provide their families with the basic needs. This proportion consisted of 65% of the respondents. Further next is the batch of the riders who were not married and who made up 34% of the respondents. These were the people without much responsibilities and may be interpreted to explain the increase in the numbers of accidents involving boda boda. This may be attributed to the fact that there are few or no people who were relying on

this category of the riders and thus they formed the group of the riders who rode motorcycles beyond recommended speed on the roads.

Table 4.2. Educational Background of the Respondents
N=100

Education Background of the Riders	Frequency (n)	Percentage (%)
Primary school	58	58
secondary	38	38
College/University	4	4
Total	100	100

Source: Fieldwork

4.1.3. Education Background of the Respondents

The study findings established that 58% of the respondents were people with primary school education, 38% of the respondents were people with secondary school education while only 4% of the riders possessed university/college qualifications. The high number of riders with primary was attributed to the fact that many youths who dropped out of school at early ages preferred to go to boda boda business which they related with success and leisure. They saw this business as the easiest way of making money without getting tired and which did not require much training. This is because one required only two hours of training and as such they are ready for the business.

4.2. Socio-Economic Benefits

The study established that 98% of the riders used 150cc boda boda as the table below demonstrates.

Table 4.3 Cubic Centimeters (CC) of Motorcycles Used by Boda boda Riders
N=10

Motorcycle cc	Frequency (n)	Percentage (%)
50-100	1	
101-150	98	
151 and above	1	
Total	100	

Source: Fieldwork

This was attributed to the fact that the terrain is hilly as well as poor road network. The respondents argued that the bike has reliable speed, high engine power as well as being fuel consumption friendly. One of the riders age 27 years argued that:

“Boda boda yangu inakubebea mziro kama ngunia mbiliza parachichi kutoka kwa shamba mpaka sokoni na haisikii mlima” meaning that his boda boda can carry two sacks of avocado fruits from the farm to the market comfortably.

The study established that only fourteen percent (14%) did not transit from any form of employment prior to engaging in boda boda business. The study found further that eighty six percent of the respondents were previously in informal employment ranging from farming, watchmen, matatu drivers, matatu conductors among other informal employment. The table below indicates their level of earning in their previous employment.

Table 4.4: The Riders Earnings from Previous Employment.
N=100

Total earnings from previous employment	Frequency	Percentage
Below 3000	23	23
3000 -5,999	22	22
6000 – 8,999	17	17
9,000 – 10,000	14	14
10,001 and above	10	10
No previous employment	14	14
Total	100	100

Source: Fieldwork

4.2.1. Boda Boda Operators Level of Income

The study found out that 82% of the respondents undertook boda boda taxi business as full time employment whereas 18% of the respondents operated it as a part time mode of employment where some worked as watchmen. They work in the boda boda business in the morning and in the evening they retire to the other job as one of the respondents male respondent aged 36 years stated:

“Life has become very difficult, one cannot wait for Kenya shillings 10,000 that I am paid in my watchman job where I guard a supermarket”.

The table below shows the amount of money they earn from the boda boda business.

Table 4.5. Amount of Money Earned by Boda boda Operators in Kenya Shillings per Month.

N=100

Earnings	Frequency (n)	Percentage (%)
3000- 4000	3	3
4001-5000	7	7
5001-6000	5	5
6001-7000	11	11
7001-8000	3	3
8001-9000	22	22
9001-10000	11	11
10001 and above	38	38
Total	100	100

Source: Fieldwork

4.2.2. Ownership of the Boda Boda

The study established that out of the study population, 69% of the respondents owned motorcycles. Out of this 47% owned them through cash purchase and 22% had bought if through loan. Key informant number one (1) who was an Assistant Chief cited that many of the youths had sold land to buy boda boda either as luxury or for business purposes. She informed the researchers that:

“One of the boy in my sub-location sold three acres of land he had inherited from the father to buy boda boda to do business. Surprisingly, when the boda boda broke down the same boy is now selling the remaining part of the land including the house where he resides to repair the bike”.

This signified that the youths lacked financial management skills as well as property management ethics. This key informant went ahead to inform the study that:

“Many people have been rendered homeless due to the urge of owning the bike which is seen as a prestigious asset among the youths and especially those who have dropped out of school”.

4.2.3. Savings by the Boda Boda Riders

The study established that highest percentage of the riders translating to eighty percent (80%) saved money they earned in the boda boda taxi business. It was also established that 20% of the riders did not saved at all what they earned from the boda boda business and thus, they spend as much as what they earn. One of the riders aged 33 years argued that:

“There are so many people waiting for this money and who are more than the earners girls wait for us in the evening to buy them a drink in a local joint”.

In this case they meant the young girls who come to these riders to seek financial assistance in return for sexual favours. This on the other hand has led increase in the rate of immorality as well as early unwanted pregnancies.

Table 4.6: Savings by Boda boda Riders per Month

N=80

Amount saved in KSHS	Frequency (n)	Percentage (%)
0-1000	47	58.75
1001-2000	6	7.5
2001-3000	3	3.75
3001-4000	4	5
4001-5000	4	5
5001-6000	4	5
6001-7000	2	2.5
7001-8000	10	12.5
Total	80	100

Source: Fieldwork

4.3. Contribution of the Boda Boda in the opening up of the Kenyan Rural Areas

The study established that mostly the pillion passengers were both locals and visitors. The local passengers were farmers, teachers and school going children especially during school holidays. Meru South being an agricultural zone, boda boda have come as a great help to the farmers who usually transport their agricultural products to markets and to places of accessibility by other means of transport. For instance, during the season of avocados they transported them to various collection points where they were collected to various market destinations such as Nairobi, Mombasa and even to

Europe and other parts of the world. As a male the respondent aged 25 years informed us that he chose the 150 cc motorcycle because of its power as he puts it that:

“I like 150cc boda boda because it can carry two sacks of avocados. At the same time it saves a lot of fuel in terms of consumption. One can make a lot of trips per day since it has a lot of power and speed based on our terrain as you can see it is hilly by nature. A small engine motorcycle is very expensive to maintain because it wear out very quickly”

This being a region rich in production of banana, boda boda in this region were also used to transport bananas from the farms to the markets where buyers converged in the designated weighing stations for redistribution to the various market destinations or to factories for value addition. This benefited farmers since they directly dealt with potential buyers other than brokers who exploited them. Farmers happened to meet potential buyers in these banana weighing centres while on the other hand they benefited with networking. These weighing centres were inter-linked with the processing factories that are financed by NCDF.

Introduction of various milk cooling points had also come to benefit from boda boda. As the key informant number who was a male administrator put it:

“Farmers used throw away excess milk which could not get local market but now with the boda boda, they call them to transport their milk either as an individual or as a group to the cooling station. This has led to increased income to farmers of this area”.

In some situations, health services had been improved in these areas where public health officers and enrolled community nurses reached out to the residents by use of boda boda. Whenever there was vaccination exercise such as, that of polio and measles their officers used boda boda to penetrate to these areas which were not reachable through other forms of transport such as cars. Disease and health awareness campaigns in these areas had also benefited from the introduction of boda boda where respective health workers use them to distribute health materials and medicine to dispensaries which are far in villages which are not accessible to other means of transport. A key informant who was a male and a Medical Superintendent cited that:

“I have a number of my staff who commute from their homes which some are as far as twenty kilometers. They tell me that when they retire in the evening to their homes they do a lot of other

activities at home. Further, family ties have improved as a result of introduction of boda boda where many people work in towns and even the neighboring counties. These family members are able to reach to their respective places of work in good time and retire back to their homes in the evening. As such, besides their official work, they also engage in other development activities with the view of addressing social challenges”.

4.4. Challenges faced by Boda Boda Operators

The study sought to understand various challenges that were faced by boda boda operators in their day to day business. Various questions were posed to the respondents for the purposes of trying to understand challenges experienced by the riders. The study posed the question on whether riders possessed valid driver’s licence. The study found that only 25% possessed valid motorcycle licence endorsed class F and G respectively. This comes to agreement with the previous studies on motorcycle operations where Kumar (2011) observed that all motorcycle riders in Lagos where he estimated 50% of the riders did not own driving licence while in Douala the possession of driving licence was 18%. Similarly it was established that 24% have driving licence but which are not valid because they are not endorsed for the respective motorcycle class.

The study established that local leadership have come up with various ways in collaboration with the County Governments and the National Government Constituency Development Fund (NGCDF) with the view of assisting youths in these groups to obtain driving licence. A male respondent aged 21 years informed us that:

“We were trained at Kibugua ground for one day and filled forms to get licence. Even though we found the training not to be adequate enough to equip us with the required basic knowledge we had no other option since someone was organizing issuance of licence for free”

Many respondents cited lack of money as a reason as to why they have not obtained licence and they were requesting for subsidizing of the fees to enable many of them to obtain licence.

The study also found that 51 % of the riders did not possess driving licence as demonstrated in the table below. These short lived trainings may be recipe for the increased number of riders with driving licences but who are underqualified. These riders pose a lot of danger to themselves as well as other road user.

Table 4.7: Riders Possession of Valid Driving Licence.

N=100

Possession of Driving Licence	Frequency (n)	Percentage (n)
Valid Driving Licence	24	24
Other Endorsement	25	25
No Licence at All	51	51
Total	100	100

Source: Fieldwork

4.4.1. Police Harassment

The study found that boda boda operators usually go through police harassment where the law enforcers demand bribe ranging from Kshs.50 to 5000. Whenever the operators pass through police roadblock/check points they are required to part with Kshs.50. This allows them to operate on the road for that specific day and as such forcing them to carry extra passengers to get extra money to cater for bribe. But during traffic police operations if one is arrested he can part with as much as Kshs.5, 000. A male respondent aged 41 years informed the study that:

“I had parked my boda boda outside Kimwa Hotel, when I came back I found traffic police officers had towed it to police station. I was required to part with Kshs5, 000 bribe for them to release it. To us it is normal but one has to look for other means of surviving. I am forced to carry more passengers than required to assist me to pay bribes when am caught by police and also to remain with my share”

4.4.2. Poor Road Network.

Poor road network was another challenge that was found to be faced by boda boda especially in this sub-county. Many roads were dusty and this dust made riders and their pillion passengers to suffer from dust related diseases such as running nose and coughing. Various cases reported to Chuka County Referral hospital as reported by the key informant who was a Medical Superintendent included pneumonia, chest pain cold and severe headaches among the riders who go to hospital.

4.4.3. Uncooperative Customers

The study also sought to understand various difficulties that the riders experience from their customers. It was established that various categories of the customers posed various difficulties to the riders. On the female customers, some were linked to failure to pay in exchange of sex favours. This mostly applied to young women and girls. Sometimes husbands accused riders of being wife snatchers as respondent who was a rider aged 27 years put it that:

“I carried someone’s wife from town to her home, unsuspecting, the husband had been informed that she was in a lodging with another man, thus, he thought that I was the one. I was saved by my swift turn and speeding away from machete brandishing husband. Am lucky to be alive”.

There were other female customers who refused to wear helmet for the reason that it will destroy their hair style. They instead demanded to be given a leso to cover their hair in disregard of their safety. One of the respondents who was a rider operating along Chera route stated that:

“When you give out a helmet to a female customer they complain that we want to destroy their hair style for no better reason. I had an instance where a female customer refused to wear a helmet but unfortunately we were involved in slight accident and she sustained slight head injuries”.

“Mostly ladies here respect their hair style and cleanliness of their hair in the place of safety. A lady customer will ask for a leso in place of helmet and a reflector to secure their hair style and also to prevent it from becoming dirty”

On the other hand, some male clients became troublesome especially at night when riders were carrying drunk clients. Sometimes they fell off on the way inflicting some injuries on their bodies. Some male clients turned to be violent especially when they reach to their homes at night. A respondent from Chera Base aged 36 years cited out that:

“I carried a passenger who I was taking home only to realize that he had fallen out of the boda boda in the middle of the road. I realized this when I got to his home and found the passenger seat was empty. On my way back I met him walking home where he told me that he fell asleep on the way and fell down from the boda boda. Lucky enough he was not seriously injured since I was not speeding”

Some challenged riders to a duel so that they can avoid to pay for the ride. Other male customers turned out to be robbers where they stole bikes from the riders. In some instances they killed the riders who resisted to be robbed or who appeared to have identified those thieves for the purposes of concealing evidence.

The study thus, sought to understand how the riders coped or dealt with the challenges that they faced in their day to day operations. The study found that there were those riders who chose to just let it go for the sake of the future business with their clients while others sought assistance from their self-help groups so that they could adopt resolution to deal with such issues when they reoccur as a team.

4.5. Risks posed by Boda Boda in the Rural Areas

The study sought to understand from the respondents whether there are social risks that they could attribute to the emergence of boda boda in their respective areas. All the respondents interviewed cited that there were risks that are associated with the introduction of the boda boda in rural towns. One of the aspects of the risks that was cited by all riders was increases in the cases of both robbery and theft in these areas. One of the respondents who operated at Kiangondu base and aged 30 years stated that:

“mimi nimewahi kunyanganywa boda yangu na customer wangu niliyembeba usiku. Alinigeuka na akaniambia nimshukishie kwa barabara halafu akanitolea bunduki” meaning that [I have been a victim where my customer turned to be a robber who requested to alight in the middle of the road only to point a gun on me].

Key respondent number two cited a few cases where boda boda had been involved in theft. It was established in one of the sub-locations of Gitareni three boda boda were stolen by “customers” who turn to be robbers. At one instance, a respondent who was aged 33 years recalled an incident where:

“The motorcycle was allegedly stolen from Mwea in Kirinyaga County and brought to my location. More than three hundred riders were chasing the criminals and it had to take intervention of the Police by firing in the air to disperse the irate mob that wanted to torch the suspect’s house”.

Many incidences had been reported where riders had been identified to be suspects in allegations ranging from transporting stolen goods to riders themselves engaging into the actual robbery. This was attributed to the fact that they were capable of navigating easily and more so some boda bodas have no registration plates. Another fact is that even those boda bodas that have registration plates, it was not easy to

read their registration numbers at a distance. This made them easy means of actualizing these criminal activities.

4.5.1. Involvement of the Riders in the Accident.

The introduction of the boda boda had also come with the increased cases of road accidents. The study established that 25% of the respondents had been involved in accident. Out of the accident cases only 2% was reported to the police. Riders preferred sorting the cases outside police stations for the fear of victimization since many did not have driving licence. Key informant number who was an Administrator recalled that there had been increase in the number of accidents in her area of jurisdiction where one of the bicycle rider was hit by a boda boda in a place called Kathutwa in August 2016. He died while being treated at Chuka County Referral Hospital. She further informed the researcher that:

“There is another man who was hit by a boda boda and developed a back bone fracture forcing community to raise one million, five hundred thousand shillings (Kshs.1, 500,000) for hospital expenses”.

In the year 2017 a chief from Magumoni Division was crushed by a lorry while riding a boda boda. “I was also involved in an accident on a boda boda key respondent number one further added.

This explains increased rates of motorcycle accidents which in most cases they are fatal in comparison to motor vehicle accidents. This is because motorcycles have no body/housing to protect the occupants and therefore the passenger or the rider are prone to injury in case of falling or even being hit by a vehicle. Interference by politicians was also cited as a contributing factor in the number of accidents. This is where they organized for the riders to be issued with driving licences in disregard of the traffic law. This took place especially during campaign period. Research established that some politician invited traffic examiners for one day to train the riders where they were also issued with driving licence.

**Table 4.8: Accident Cases as Attended to at Chuka County Referral Hospital
N=613**

Year	Accident Cases as attended to at Chuka Referral Hospital
2012	6
2013	67
2014	103
2015	142
2016	202
2017	93
Total	613

Source: Chuka County Referral Hospital

4.5.2. School Dropout Cases.

There has been increase in the reported number of school dropout cases in relation to both girls and boys. Boda boda business was commonly seen as a business venture by young boys who formed the role model to boys in school. The boys who were in school viewed the riders as successful and thus as a role model. They also viewed boda boda business as lucrative where one leased a motorcycle from the owner and just parted with Kshs. 300. Thus, the rider strived to get extra cash which is theirs making it the easiest means of making money. A key informant who was Head Teacher of a primary school cited out that:

“I have a case where one of my pupils in class seven dropped out of school to go and get married to another boy who had earlier dropped out of school to be employed as a rider. They are now a married couple with the boy being the family provider”

She further added that:

“There are other instances where I know of the girls who have been impregnated by the riders forcing them to drop out of school. It becomes a burden to the family and especially to the parents of the girl who have to provide everything to the new family member who has been born”

The study further established that girls were enticed by the riders with the money and free rides and in return they pay in kind. This had greatly contributed to early pregnancies leading to school dropouts as well as early marriage among girls who followed these riders whom they saw as financially stable.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1. Introduction

From the analysis of the data collected from the field study, based on the objectives of the research, the conclusions and recommendations are made in this chapter. This is based on the responses received from the persons who were interviewed. The research sought to find out the impact of the boda boda taxi operations in the opening up of the Kenyan hinterlands.

5.2. Summary of the Findings

5.2.1. Social Demographic Characteristics of the Riders.

The study established that 76% of the riders are youth's majority of whom had basic primary education or none at all standing at 58%. Further, research found out that 69% of the respondents owned motorcycles where 47% of riders bought them through cash, while 22% bought through loans.

5.2.2. Socio-Economic Benefits

The study further found that 80% of the riders make savings through their Sacco's and self-help groups whereas 20% of the riders do not make any savings at all. Of the 80% of those who manage to save their income, 47% save Kshs. 1000 and below. Only 10 percent of the riders who make savings manage to save between Kshs. 7,001 to 8,000. The study also established that 38% of the riders earn Ksh. 10,000 and above per month.

5.2.3. Contribution of the Boda Boda in the opening up of the Kenyan rural areas

The study established that with the emergence of the boda boda many of these interior parts have been connected with the outside world. It was established that boda boda have come to aid farmers in transporting their agriculture produce to the market prior to the introduction of the boda boda many of the agricultural produce was going to waste. Produce like bananas and avocados were being bought by middlemen at a throw way price but with introduction of the cheap transport in form of boda boda farmers take their produce to collection centres where they negotiate prices with respective buyers through their self-help groups.

The study further revealed that milk which was sold to the locals at a price of Kshs.20 is now fetching farmers Kshs.40 after it is taken to the coolant where it is further value added.

5.2.4. . Challenges Faced By Boda Boda Operators

The study identified a number of challenges that boda boda go through in their day to day operations. Poor road network is one of the major challenges that riders face. Many of the roads are so dusty that the riders are compelled to use shukas to cover their customers while they are on board their boda boda. The study found that dusty roads contributed to accidents in these areas as well as eye diseases to the riders.

It was found that female customers do not wish to be carried with their legs astride while on the boda boda. This is contributing to the increase in the number of accidents due to lack of the stability while on transit. When the accidents occur the pillion passenger sustain severe injuries on their bodies. The study further revealed that some female pillion passengers refuse to put on helmet citing that it will interfere with their hair style making them prone to head injuries in case of an accident.

The research also established that many female passengers refuse to where reflectors as required by the law. They argue that the reflectors are dirty and also are prone to transmission of the skin diseases. This endangers both the lives of the rider as well as that of the pillion passengers on board since they are not clearly visible from a distant especially in darkness.

The study found that drunk male pillion passengers posed a lot of challenge to the riders. This is because some of them even fall asleep while on board the boda boda and as such they fall from the bike. The riders are forced to look for another rider to sit behind the drunk passenger. Other drunk passengers turnout to be troublesome especially when they allege they have paid while not. In some instances they challenge riders for a fight so that they can go away without paying for the transport.

The study further found out that some customers turn to be thieves whereby they steal motorcycles from the riders.

The research established that riders are forced to part with bribes to the police officers for them to operate on the roads especially from the villages to the towns where they

find police check points. Per day they pay Kshs.50 to these officers to allow them to access town.

5.2.5. Risks Posed By Boda Boda in the Rural Areas

The study found out that accidents have increased in the rural areas than it was before the introduction of the boda boda in this area. The study established that 25% of the respondents have had been involved in boda boda accident. Out of this, only 2% of these cases were reported to police. Riders prefer sorting these cases outside police stations for fear of being victimized. This has led to increased cases of lawlessness where they apply unorthodox means of dispute resolution such as mob justice. Whenever accident occur between motorcycle and a vehicle riders gang up to rescue their own whereby they vandalize the car steal from it and sometimes beat the driver of the car. This is irrespective of who was on the wrong side of the law. It was found that the rate of increase of the accidents has been very high by the fact that in 2012 there were only six (6) reported cases in Chuka County referral Hospital while in the year 2016 two hundred and two (202) cases were reported.

The study established that in some instances boda boda have been used in robbery incidences where they are used to transport stolen items or even to transport robbers. It was established that it happens for the reason that the boda boda can navigate even where cars are not able to. Boda bodas are also used as convenient means of escaping based on the reason that their number plate is not legible at a distance and also the uniqueness of their number plates.

The study found that with the introduction of the boda boda in the rural areas school dropout cases have increased. It was found that boys dropout cases was influenced by the attraction in the boda boda business based on the levels of income generated. Since many of the riders are youths, they tend to attract their young peers who model them. In the evening the school boys are given squads where they make some money. They thus, regard it as a luxury and want to be associated with it.

It was further established from the study that girl's school dropout has been reported where they are lured with free rides and handouts. This has led to increase in the underage marriage and unwanted pregnancies. These girls view the riders as successful

people and thus they see future in them where they can be able to provide to them in the marriage.

The study found that pollution of air is associated with the emergence of the motorcycles on the rural areas. Some of the operators have fitted their boda boda with enhance exhaust pipe silencers thus producing very high sound. This interferes with learns concentration especially where it passes through a learning institution. Based on the fact that many of these roads are dusty the riders with their enhanced mud guard on their boda boda produce a lot of dust especially to those who work or live along the roads.

5.3. Conclusion

Boda boda influx in Kenya has come at a time of its great need in many parts of the country. It is imperative to note that boda boda have played a very significant role in connecting rural areas with the rest of the towns in aiding circulation of goods and services to and from these areas. Agricultural activities are thriving in many of the rural areas of the country and thus, significantly impacting positively on the lives of the rural dwellers.

Employment opportunities have been created to youths who most of them do not transit to secondary school due to various reasons. However, failure to come up with proper polices in this sector has led to emergence of lawlessness among the operators who have established themselves as a subcultural group with its own rules.

The study revealed that majority of the operators are persons below the age of thirty five (35) years and with less financial managerial skills. This has led to poor sustainability of the business especially where the boda boda was purchased through loan. This has led to many of these youngsters leading the life of homelessness when they sell parcels of land to maintain the boda bodas. This can lead to future criminal gangs if it is not properly checked and controlled.

Study revealed through the records that there has been increase in the number of accident cases as reported in the hospital records. This may be attributed to the high number of operators who do not possess valid driving licences. Many of the riders go for informal training for just a few hours and they are ready to ride the motorcycle and as such endangering their lives as well as that of the other road users.

The study also established that society has embraced this mode of transport as a convenient and cheap means of moving from one point to another especially where one can get assistance through a phone call. Farmers prefer to transport their labourers to their farms by use of boda boda than walking as it used to happen before emergence of boda boda taxi and thus saving on time wasted.

The study found that there has been increase in the number of the robbery cases reported in these areas. Boda bodas have been used on several occasions to either transport stolen goods or at times used as a means of escape. Riders have also been associated with cases of girl/boy child school dropouts.

5.4. Recommendations

Emergence of boda boda taxi and the role they play in the opening of the hinterlands is very crucial to the socio-economic wellbeing of these areas. Various actors need to come together to develop an integrated policy with aim of management of the very vibrant sector that comprise of the young population. It is in this view that the following recommendations are made:

5.4.1. Safety of both the Rider and other Road Users

Over speeding is something that is common with the boda boda operations in almost every part of the country. As the study established many of the operators are young people who have low education background or none at all. These young people fear going to driving school for the reason that the instruction procedures may not be conducive with them. On the other hand, the amount of money that is charged by the driving schools is very high especially to the school dropouts or people who are jobless and who are eager to engage in any available means of employment.

The government through the relevant authorities such as NTSA should come up with a curriculum which is user friendly especially to the persons who have lower education background. On the other hand, the driving schools with the collaboration with the NTSA need to come up with the friendly payment plan for driving school fees which is affordable.

The county governments should also play the part of ensuring the safety of its people by allocating some funds to subsidize fees to these youths who wish to go to driving schools for the road safety training.

5.4.2. Financial Management Skills

This problem has been found in the course of this study where a big number of the youths have been found not to be keen on the savings for future use. The study established that many of the operators consume what they get on daily basis to a point that they sell property such as land and domestic animals to raise money to maintain their boda boda in times of breakdown.

To address this, the county governments through the office of county cooperatives need to come up with a programme where they take the riders through prudent financial management as well as assisting them to come up with the appropriate registered groups to assist in savings as well as securing loans from the financial institutions.

5.4.3. Formation of the Sacco's

The study established that all the interviewed respondents did not belong to any boda boda Sacco's as required by the law. To address this, the county government through their ministry of cooperatives should initiate awareness to the operators on the importance of the Sacco's to both the owners and the employed riders.

5.4.4. Health management of the Riders

The study established that only a small segment of the riders were aware of the available options of the available medical insurance schemes. The ministry of health through NHIF should sensitize riders on the importance of enrolling in the government subsidized scheme.

5.4.5. Ownership of the Boda Boda Taxi

The study established that only a big segment of the riders did not own boda boda. The reasons they cited was lack of money to purchase one. The fact that the government has come up with youth fund to start business, this fund is not sufficient to buy a boda boda and in any case it is advanced to an individual and not a group. The county governments can come up with a revolving fund that is advanced to individuals within a group and who guarantee one another. This will enable the youths in the informal sector to have capacity to purchase their own boda boda.

5.5. Areas of Further Research

Based on the outcome of this study, there are areas that are recommended for further study and which may facilitate a more efficient and effective management of the boda boda business. The role of the police in management of the boda boda transport safety need to be looked into because it emerged that enforcement of law in this sector is never in place.

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APPENDIX 1

QUESTIONNAIRE FOR BODA BODA OPERATORS IN MERU SOUTH SUB-COUNTY

My name is James Kariuki a Master of Arts student from University of Nairobi. I am conducting research on the impact of boda boda in opening up of the Kenyan hinterlands. The study seeks to understand the role of the boda boda in Meru South in relation to the opening up of the Kenyan hinterlands. I have selected you as a key respondent based on the information that you hold by virtue of the roles you play in your day to day activities as a boda boda operator. I will proceed to ask you some questions pertaining boda boda that are related to study objectives. The information that you will share with me will be treated with utmost confidentiality and will only be used for the purposes of this study.

SECTION A

Demographic Details

1. Please indicate the age group you belong

- (a) 15-20 []
- (b) 21-25 []
- (c) 26-30 []
- (d) 31-35 []
- (e) 36-40 []
- (f) 41-45 []
- (g) 46-50 []
- (h) 51 and above []

2. Sex

- (a) Male [] (b)Female []

3. Marital status (please tick appropriately)

- (a)Married []
- (b) Single []
- (c)Divorced []
- (d)Widowed []
- (e)Separated []
- (f)Any other (specify).....

4. Highest level of education attained

- (a) Primary []
- (b) Secondary []
- (c) University/ college []
- (d) Others (specify).....

SECTION B:

Socio-Economic Factors

1. What is the CC of your motorcycle?

- (a) 50-100 []
- (b) 101-150 []
- (c) 151 and above []

2. Why do you prefer the motorcycle that you have against the others in terms of the CC? Please explain the benefits.

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3. What was your previous employment engagement before you ventured into boda-boda

- (a) None []
 - (b) Informal []
 - (c) Formal []
- (Please specify)

.....

.....

4. How much were you earning?

- (a) Below 3,000 []
- (b) 3,000-5,999 []

- (c) 6,000-8,999 []
- (d) 9,000-10,000 []
- (e) 10,000 and above []

5. Do you carry out boda boda business as a fulltime or part-time employment?
- (a) fulltime ()
 - (b) part time()

6. For how long period of time have you been in boda boda business? Please tick one.

0-1 Years ()

2-3years ()

3-4 years ()

5-6 years ()

7 and above years ()

7. How much do you earn from boda boda business per month?

- (a) 1000-2000
- (b) 2001-3000
- (c) 3001-4000
- (d) 4001-5000
- (e) 5001-6000
- (f) 6001-7000
- (g) 7001-8000
- (h) 8001-9000
- (i) 9001-10000
- (j) 10001 and above

A) Do you belong to any saving scheme?

- (a) Yes []
- (b) No []

B) How much do you save per month in Kshs?

C) What are the benefits of the savings?

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8. Do you own the Motorcycle you use in your business?

- (a)Yes []
- (b) No []

If yes, how did you obtain?

- (a) Loan []
- (b) Financial institution loan []
- (c) Shylock []
- (d) Cash []

If cash where did come from?

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If no, what efforts are you putting in place to own one? Please explain

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9. How much do you charge per trip?

10. How many kilometers do you cover per trip?

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SECTION C:

Contribution of boda boda in opening up Kenyan hinterlands

1. Who are your frequent customers?
 - (a) Farmers ()
 - (b) School going children ()
 - (c) General ()
2. Basically, are customer's visitors or residents? Explain.

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3. How many customers do you ferry per trip?

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4. What are the kind of goods do you transport on daily basis? Please explain your answer.

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5. How many trips do you make in a day?

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SECTION D:

Challenges faced by boda boda operators

1. Do you have a valid driver's license?
a. Yes () b. No ()

If yes what is the class of your license endorsement?

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If no why don't you have a valid driving licence? Please explain your answer.

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2. Did you go to a driving school?
(a) Yes ()
(b) No ()

If yes, which driving school did you go to?

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If no how did you acquire the diving licence?

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3. Do you understand traffic rules?
a. Yes () No ()

If yes do you adhere to the rules? Explain in details.

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If no, how then do you manage to operate on the roads? Please explain.

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4. What challenges do you face as boda boda operator? Please explain them.

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5. Do you face any difficulties while dealing with customers yes () No () if yes please highlight on below.

a) Difficulties from the female customers

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b) Difficulties from the male customers

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c) Difficulties from the fellow riders

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...6. How do you deal with the highlighted challenges? Explain.

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8. Do you have a medical cover?

a. Yes () b. No ()

If yes, from which provider?

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If no, how do you manage medical issues as a result of continuous use of boda boda if any?

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SECTION E:

Risks of boda boda in rural areas

9. Are there social risks that are attributed to boda boda operations in rural areas?

Please tick one.

Yes () No ()

If yes, explain the risks posed by boda boda.

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10. Have you been involved in a road accident as a rider?

a. Yes () b. No ()

What was the cause of the accident? Explain the details of the accident.

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What was the extent of the accident?

a. Minor ()

b. Serious ()

If no, what can be attributed to it?

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11. How was the accident scene managed? For example did it involve police or it was solved amongst yourselves? Please explain in details.

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12. Were the results of the outcome agreed upon by the parties involved? Please tick one.

a. Yes () b. No ()

If yes or no, how was the issue sorted out? Please explain.

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13. What do you suggest should be done to improve boda boda operations?

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.....14. Is there any other information that you would want to share with us about boda boda operations?

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Thank very much for accepting to participate in this study.

APPENDIX 2:

INTERVIEW GUIDE FOR KEY INFORMANTS

My name is James Kariuki a Master of Arts student from University of Nairobi. I am conducting research on the impact of boda boda in opening up of the Kenyan hinterlands. I want to understand the impact of the boda boda in Meru South in relation to the opening up of the Kenyan hinterlands. I have selected you as a key informant based on the information that you hold by virtue of the roles you play in your official capacity. I will proceed to ask you questions pertaining boda boda operators in relation to the study objectives. The information that you will share with me will be treated with utmost confidentiality and will only be used for the purposes of this study.

1. Name of institution

2. The position of respondent in the institution.....

3. In your view what role does boda boda motorcycle play in transportation in this community?

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4. Has this community accepted boda boda as an important mode of transport in this area? Why?

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.....5. Does your organization has structured program on the road safety?

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6. Comment about boda boda accidents in this area.

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7. What are factors that are attributed to the increased number of boda boda accidents?

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8. What is your institution doing to reduce boda boda accidents?

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9. What are activities that have led to the increased use of boda boda in this community?

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10. Is there any connection between boda boda operations and school dropout?

(a) Boys

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(b) Girls

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11. What would you say about adherence to traffic rules by the boda boda operators?

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12. How has the boda boda contributed to the marketing of the agricultural produce?

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13. What is the connection between boda boda operations and the economic activities in the villages?

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Thank you for participating in this interview.