

**FACTORS INFLUENCING MOTORCYCLE TRANSPORT ON CREATION OF  
EMPLOYMNET OPPORTUNITIES IN KENYA; A CASE OF BUNGOMA SOUTH SUB-  
COUNTY, BUNGOMA COUNTY.**

**BY**

**NANDWOLI, FERDINAND WEKESA NYONGESA**

**A RESEARCH PROJECT REPORT SUBMITTED IN PARTIAL FULFILMENT OF  
THE REQUIREMENT FOR THE AWARD OF A MASTER OF ARTS DEGREE IN  
PROJECT PLANNING AND MANAGEMENT OF THE UNIVERSITY OF NAIROBI.**

**2014**

## DECLARATION

This assignment is my original work and has not been submitted to any other university or institution of higher learning for examination for any award.

Signature  .....

Date... 7/05/2014 .....

**NANDWOLI, FERDINAND WEKESA NYONGESA**

**L50/84223/2012**

This Project proposal has been submitted for examination with my approval as the university Supervisor

Signature  .....

Date... 7/05/2014 .....

**MR. ANTHONY MURUNGA,  
LECTURER, DEPARTMENT OF EXTRA-MURAL STUDIES,  
UNIVERSITY OF NAIROBI**

## **DEDICATION**

This research proposal is dedicated to my family, wife Pamela Murunga and daughter Praise Wendy Wekesa.

## **ACKNOWLEDGEMENT**

I sincerely give my gratitude to my able supervisor Mr. Antony Murunga for his academic guidance that was crucial to the writing of this project proposal. I take this opportunity to acknowledge the contributions of the University of Nairobi for offering me a conducive environment for learning and developing this research proposal.

My recognition also goes to my 2012 fellow course mates who have always been there for me when I required their support.

I owe gratitude to my work mates and colleagues at the Prime Steel Limited for their encouragement and support towards my academic endeavours.

I can't forget my entire family members including my loving wife Pamela Murunga, daughters Praise Wendy Wekesa, my father Bonface Nandwoli, my late mother Auleria Naliaka and my siblings for the great inspiration and encouragement they accorded me.

To all of the aforementioned, I say may God bless you abundantly.

## TABLE OF CONTENTS

<b>DECLARATION</b> .....	ii
<b>DEDICATION</b> .....	iii
<b>ACKNOWLEDGEMENTS</b> .....	vi
TABLE OF CONTENT.....	v
LIST OF FIGURES.....	viii
LIST OF TABLES.....	ix
ABREVIATION AND ACRONYMS.....	x
<b>ABSTRACT</b> .....	xi
<b>CHAPTER ONE: INTRODUCTION</b> .....	1
1.0 Introduction.....	1
1.1 Background of the study.....	1
1.2 Statement of the problem.....	3
1.3 Purpose of the study.....	4
1.4 Research objectives.....	4
1.5 Research questions.....	4
1.6 Significance of the study.....	5
1.7 Delimitations of the study.....	5
1.8 Limitations of the study.....	5
1.9 Assumptions of the study.....	6
1.10 Definition of significant terms.....	6
1.11 Organization of the study.....	6
<b>CHAPTER TWO: LITERATURE REVIEW</b> .....	8
2.1 Introduction.....	8
2.2 Mobility and employment opportunity.....	8
2.3 Accessibility and employment opportunities.....	10
2.4 Economic growth and employment opportunities.....	13

2.5 Traffic regulation and employment opportunities.....	16
2.6 Theoretical framework.....	19
2.7 Conceptual framework.....	21

**CHAPTER THREE: RESEARCH METHODOLOGY..... 22**

3.1 Introduction.....	22
3.2 Research design.....	22
3.3 Target population.....	22
3.4 Sample size and procedures.....	23
3.4.1 Sample size.....	23
3.4.2 Sampling procedures.....	23
3.5 Research instrument.....	24
3.5.1 Questionnaires.....	24
3.5.2 Interview schedule.....	24
3.5.2 Piloting.....	24
3.6 Validity of research instruments.....	25
3.7 Reliability of research instruments.....	25
3.8 Data collection procedures.....	25
3.9 Data analysis techniques.....	26
3.10 Ethical considerations.....	26

**CHAPTER FOUR: DATA ANALYSIS, PRESENTATION AND INTERPRETATION OF FINDINGS.....27**

4.1 Introduction.....	27
4.2 Questionnaire Response Rate.....	27
4.3 Demographic characteristics of respondents.....	27
4.3.1 Gender.....	28
4.3.2 Age.....	28
4.3.3 Education level.....	29
4.3.4 Operation routes.....	30
4.3.5 Experience.....	30

4.4 Mobility and employment opportunity .....	31
4.5 Accessibility and employment opportunities .....	33
4.6 Economic growth and employment opportunities.....	36
4.7 Traffic regulation and employment.....	40
<b>CHAPTER FIVE: SUMMARY OF THE FINDINGS, CONCLUSIONS AND RECOMMENDATIONS.....</b>	<b>45</b>
<u>5.1 Introduction.....</u>	45
<u>5.2 Summary of Findings.....</u>	45
<u>5.3 Conclusions.....</u>	46
<u>5.4 Recommendations.....</u>	46
<u>5.5 Suggestions for Further Research.....</u>	48
<b>REFERENCES.....</b>	<b>49</b>
<b>APPENDICES.....</b>	<b>53</b>
<b>APPENDIX A: LETTER OF TRANSMITTAL.....</b>	<b>53</b>
<b>APPENDIX B: QUESTIONNAIRE.....</b>	<b>54</b>
<b>APPENDIX C: INTERVIEW GUIDE.....</b>	<b>58</b>
<b>APPENDIX D: TIME FRAME.....</b>	<b>59</b>
<b>APPENDIX E: BUDGET.....</b>	<b>60</b>
<b>APPENDIX F: PERMIT.....</b>	<b>61</b>

## LIST OF TABLES

Table 3.1: Sample size .....	<u>23</u>
Table 4.1: Instrument return rate .....	<u>27</u>
Table 4.2; Gender .....	<u>28</u>
Table 4.3; Age .....	<u>28</u>
Table 4.4 Respondents education level .....	<u>29</u>
Table 4.5; Routes .....	<u>30</u>
Table 4.6; Experience .....	<u>31</u>
Table 4.7; Statements on mobility .....	<u>32</u>
Table 4.8; Motorcycle ownership .....	<u>34</u>
Table 4.9; Not employed .....	<u>34</u>
Table 4.10; Alternative engagements .....	<u>34</u>
Table 4.11; Average daily earning .....	<u>36</u>
Table 4.12; Motorcycle boda boda as an economic activity .....	<u>37</u>
Table 4.13; Economic opportunities .....	<u>38</u>
Table 4.14; Driving licence .....	<u>40</u>
Table 4.15; Traffic operations .....	<u>41</u>
Table 4.16; Other possessions .....	<u>42</u>



## LIST OF FIGURES

Table 2.1: Conceptual framework.....	21
--------------------------------------	----

## **ABBREVIATIONS AND ACRONYMS**

<b>CBS</b>	-Central Bureau of Statistics
<b>CNCC</b>	-Centre National du Cuir et de la Chaussure
<b>FCFA</b>	-French Communauté Financière Africaine
<b>GDP</b>	-Gross Domestic Product
<b>ILO</b>	-International Labour Organization
<b>ITDP</b>	-Institute for Transportation and Development Policy
<b>NMT</b>	-Non Motorized Transport
<b>SOTUC</b>	- Société des Transports Urbains du Cameroun
<b>SPSS</b>	-Statistical Package for Social Sciences
<b>UN</b>	-United Nations
<b>UNCTAD</b>	- United Nations Conference on Trade and Development
<b>USA</b>	-United States of America

## ABSTRACT

Employment opportunities today are very scarce due to harsh prevailing economic environment. Competition is intense than even before and risks are higher than expected. Business is emerging as a source of employment is globalizing in quest for new markets and to expand their market share. This study seeks to identify critical factors that influence Boda Boda motorcycle transport on creation of employment opportunities in Bungoma South Sub-county, Bungoma County, Kenya. The objectives of the study were to; assess how mobility influences creation of employment opportunities, determine how accessibility influence creation of employment opportunities, establish how economic growth influences creation of employment opportunities and to assess how traffic regulation influences creation of employment opportunities in Bungoma South Sub-county. A descriptive research design was used to enable the researcher gather relevant data for this academic undertaking. The target respondents included were all operators of the motorbikes on four routes in Bungoma town. Simple random sampling was applied in drawing the sample size of 100 respondents as identified from the groups they have formed along the various routes. The structured questionnaires and interview schedules were used to collect the primary data. The validity and reliability of research instruments were achieved through analysis of responses from the piloting and expert judgement. The data was entered and analyzed using the SPSS software and results presented descriptively in tables of frequencies and percentages. The study revealed that the motorcycle transport has revolutionized unemployment and many youths are earning a living from this trade. However there is need for the government and other players to streamline the sector so as to reduce fatalities and death as a result of motorcycle transport. The findings of the study will help the County Government of Bungoma and other governments in planning, regulating and managing the boda boda motorcycle businesses since they are spread all over the country. This is aimed at achieving effective economic development from the industry.

## CHAPTER ONE

### INTRODUCTION

#### 1.1 Background of the study

A decline in organized public transport systems has led to rapid growth in non-conventional means of public transport, initially provided by minibuses and shared taxi/vans, and more recently by commercial motorcycles. Unlike cities in South and East Asia, ownership and use of motorized two-wheelers as a personalized vehicle is very small in sub-Saharan cities (Kumar 2011). However, over the past decade there has been a significant growth in the use of motorcycles as a commercial public transport mode. While offering certain transport advantages in the form of easy manoeuvrability, ability to travel on poor roads, and demand responsiveness, commercial motorcycle service growth has also led to an increase in road accidents, traffic management problems, pervasive noise and increases in local air pollution and greenhouse gas emissions. Government efforts to regulate the market have had the contrary impact of compounding the problem by distorting market structures (Kumar 2011).

The growth in the use of commercial motorcycles has also dispelled one of the commonly held illusions (Pochet, 2007): fare controls in the public bus market are often justified to support affordability for a vast majority of low income population; however, commercial motorcycles are more expensive than the lowest bus fares, but are increasingly being patronized by the poor due to the inadequacy of bus services. In numerous cultures, motorbikes are the primary means of motorised transport. According to the Taiwanese government (Pochet, 2007), for example, "the number of automobiles per ten thousand population is around 2,500, and the number of motorbikes is about 5,000." In places such as Vietnam, motorbike use is extremely high due to a lack of public transport and low income levels that put automobiles out of reach for many. In Vietnam, motorised traffic consists of mostly motorbikes. The four largest motorbike markets in the world are all in Asia: China, India, Indonesia, and Vietnam. The motorbike is also popular in Brazil's frontier towns (Pochet, 2007).

Amid the global economic downturn of 2008, the motorbike market grew by 6.5%. Recent years have seen an increase in the popularity of motorbikes elsewhere. In the USA, registrations

increased by 51% between 2000 and 2005. This is mainly attributed to increasing fuel prices and urban congestion. In Latin America, to the exception of the moto conchos of Dominican Republic which developed in the 1980s, motorbike taxis has been timid to see the day. This is the case in Caracas where it appeared in the mid 1990s, at Lima in Peru and in other small towns such as Sincelejo in Colombia (CNCC: 2007). In Sub Saharan Africa, the ancestor of the motorbike taxi is the “bicycle-taxi” used in the transport of goods and men in rural areas since the colonial era. In Benin, transport by road /Akassa/ was done by bicycle known as /kèkè kannan/. The passenger transport known as /taxi kannan/ came later on to complete this activity. (Tossou: 1993).

In west and central Africa, it's really in the 1980s that the motorbike taxis were introduced in Niger, Nigeria and Cameroon. In countries such as Benin, it's as a result of evolution in the bicycle-taxi. In Nigeria, the name /Okada/ (also: /achaba/, /inaga/) refers to commercial motorbikes. The name is borrowed from the then popular Airline in Nigeria, the Okada Air. This was a local airline that was not popular for its comfort but remained the most used local airline in the country. In an ironic metaphor the first group of motorbike transporters was then given this name /okada/. Because of the comic irony of this name being used for a cyclist and for the popularity of the airline, the name okada/ for the commercial motorcyclist was never to be forgotten and eventually became as popular as it is now. It is one of the chief modes of transport in Nigeria and, by far, the most common form of informal transport system in that country (Agossou: 2004).

In East Africa, Kenya and Uganda developed the /boda-boda/ in the 1960s. The /boda-boda/ taxis are part of the African bicycle culture; they started in the 1960s and 1970s and are still spreading from their origin on the Kenyan-Ugandan border to other regions. The name originated from a need to transport people across the "no-mans-land" between the border posts without the paperwork involved with using motor vehicles crossing the international border. This started in southern border crossing town of Busia (Uganda), where there is over two kilometres between the gates and quickly spread to the northern border town of Malaba (Kenya). The bicycle owners would shout out /boda-boda/ (border-to-border) to potential customers. In Kenya and Uganda, the bicycles are more and more replaced by motorbikes. The motorbike taxis have taken the name /boda-boda/ as well, though in much of Uganda, the Swahili term for motorbike, /piki-

piki/, is used to describe motorbike /boda-bodas/. (Howe, Mander: 2004). In 2004 it was estimated that more than 200 000 men in Uganda were working as bicycle /boda-boda/ and already almost 90 000 as motorised motorbike /boda-boda/.

## **1.2 Statement of the problem**

The relatively cheap price of a motorbike as compared to vehicles favoured its widespread use on Kenya's roads. They were used for personal purposes, transporting people and goods from one place to another. Nevertheless, at the aftermath of the 1990 socio-economic and political crises, motorbikes progressively began to be used for commercial purposes; transporting people and goods at relatively cheap prices. The use of Asian brand motorbikes (Nangfang, Sanili, Kymco, Sanyo etc) which are sold at relatively affordable prices; the increased unemployment rate emanating from the economic crises and structural adjustment plans, the activity of motorbike taxi became a solution for many to make ends meet. This has brought in a number of changes affecting the political, economic and socio-cultural landscape in Kenya.

Although the above researchers have given their contribution on the use of motorbikes, none has clearly put forward the value of motorbike transport in terms of economic development. This study assessed how motorbike transport has helped to create employment opportunities that have enhanced effective economic development. The rural areas, usually vulnerable, are most of the time forgotten. Rural transport doesn't have a high priority in the public transport system, let alone rural transport safety. Proof of this is the transport chart that is given to the transport operators which shows three categories of transport: urban, inter-urban and freight.

The choice of carrying out this study in a mixture of urban and rural setting such as Bungoma South District is motivated by the fact that this area is composed of people with a homogenous cultural background who have less public transport access and this affects their social milieu. Also, focus on the activity of motorbikes and its associated consequences have been laid on urban areas.

### **1.3 Purpose of the study**

The purpose of this study was to investigate the factors influencing motorcycle transport on creation of employment opportunities in Kenya; a case of Bungoma South Sub-county, Bungoma County.

### **1.4 Research objectives**

The objectives of this study were;

- a) To assess how mobility influences creation of employment opportunities in Bungoma South Sub county.
- b) To determine how accessibility influence creation of employment opportunities in Bungoma South Sub county.
- c) To establish how economic growth influences creation of employment opportunities in Bungoma South Sub-county.
- d) To assess how traffic regulation influences creation of employment opportunities in Bungoma South Sub-county.

### **1.5 Research questions**

The pertinent questions for this research proposal were;

- a) Does mobility influence creation of employment opportunities in Bungoma South Sub-county.
- b) Does accessibility influence creation of employment opportunities in Bungoma South Sub-county.
- c) Does economic growth influence creation of employment opportunities in Bungoma South Sub-county.
- d) Does traffic regulation influence creation of employment opportunities in Bungoma South Sub-county.

## **1.6 Significance of the study**

It is hoped that the findings of this study will help stakeholders in the transport sector to devise appropriate strategies enhance the proper use of motorcycles as an effective means of transport and viable business venture. The riders and users will benefit from the study by embracing the best practices that will enhance efficiency in transport sector. Motorcycle owners will benefit by understanding the dynamics and issues that arise during the operations. The government will be able to create and enforce policies that will enhance road safety.

## **1.7 Delimitation of the Study**

Bungoma South Sub-county hosts Bungoma town which is the county's administrative and economic headquarters. Therefore the inhabitant of the town and its surrounding centres like Sang'alo, Mateka, Bukembe and students from the recently established Kibabii University College are the regular users of this mode of transport to and from the town.

The present study; "Factors influencing motorcycle transport on creation of employment opportunities in Kenya; a case of Bungoma South Sub-county, Bungoma County." is centred on motor bicycle business and the inhabitants of Bungoma South Sub-county and its surrounding areas. This study describes the activity of motor bicycle taxis in Bungoma, bringing out its socio-cultural and economic effect on the lifestyle of the people. Our respondents were essentially composed of the motor bicycle business operators and riders within Bungoma town.

## **1.8 Limitations of the study**

The following are some of the limitations experienced during the study; Inadequate finances weighed heavily on the success of this research especially covering the entire district which needed a substantial sum of money to facilitate movement and the overall process. This process therefore depended on volunteer research assistants and pool resources together coupled with proper strategic and logistical planning to cut on the cost. Time constraint due to the magnitude of the research is expected but the research team devoted itself and worked extra hours in order to accomplish this research project. To minimise on the cost of the study and save on time, we had appropriate sample that represented the target population. The respondents for this study are very busy people always on the lookout for customers so getting them to cooperate and



participate in the study was a challenge. However the researcher had to clarify the intention of the study on order to capture their attention.

### **1.9 Basic assumptions of the study**

During the study, the following assumptions were considered; that all respondents would give honest responses. It was also assumed that the sample taken would represent the population adequately. The data collection instrument had validity and would measure the desired outcomes for the study. The respondents answered the questions correctly and faithfully.

### **1.10 Definition of significant terms**

**Motorbicycle:** -refers to two wheeled motor vehicle whose design varies greatly to suit a range of different purposes: long distance travel, navigating urban traffic, cruising, sport, racing and off-road riding

**Mobility:** -refer to the ability to move physically from one point to another

**Job opportunity:** -refer to a chance to do something, or a situation in which it is easy for you to do something to earn a living

**Economic growth:** -refer to the increase in the market value of the goods and services produced by an economy over time as a result of an activity

**Traffic regulation:** -refer to control of the movement of vehicles, motorcycles and pedestrians, chiefly on the streets within town and adherence to traffic rules.

### **1.11 Organization of the study**

The study is organized in five chapters: Introduction, Literature review and Methodology. It has a cover page with the title and the details of the researcher. The preliminary pages contain

declaration, dedication, and acknowledgement, abstract, table of content, list of figures, list of tables, abbreviations and acronyms and the pagination will be in roman numbers.

Chapter one (Introduction) contains; background of the study, statement of the problem, purpose of the study, objectives of the study, research questions, significance of the study, delimitation of the study, limitations of the study, assumptions of the study, definition of significant terms and the organization of the study.

Chapter two (Literature review) contains; Introduction, mobility, employment opportunities, economic growth and traffic regulation, theoretical framework, conceptual framework, extraneous variables and summary.

Chapter three (Research methodology) contains; Introduction, research design, target population, sampling procedures and sample size, data collection instruments and their validity and reliability, methods of data collection, data analysis techniques, operational definition of variables, ethical considerations and summary.

Chapter four (Data analysis, presentations and interpretations) contains; Introduction, instrument return rate, demographic characteristics of the respondents, influence of mobility, influence of accessibility, influence of economic growth and influence of traffic regulation on creation of employment in Bungoma South Sub-conuty.

Chapter five (Summary, conclusion and recommendation) contains; Introduction, summary of the study, conclusions, recommendations and suggestions for further studies

The report also has references clearly outlined in the APA style and appendices; letters of transmission. Questionnaire for the boda boda users and operators, interview schedule for the traffic police, relevant tables, time schedule and research budget.

## CHAPTER TWO

### LITERATURE REVIEW

#### 2.1 Introduction

This chapter provides the reviewed literature of the studies that have been done on the effect of motorcycle business as an effective means of transport in Kenya. The chapter gives highlights on the influences such as; mobility, accessibility, economic growth and traffic regulation.

#### 2.2 Mobility and employment opportunities

In Yaoundé and Douala just as in all cities of Cameroon and worst of all in rural areas, the problem of mobility of persons, resulting from demographic growth is not always accompanied by the means to satisfy the surplus demand for public transport which is posed with acuity. The narrowness of the available roads gives rise to eternal traffic jams on certain road networks in cities. To move from one zone to another, the populations are sometimes obliged to forgo the regular taxi cars to hire the service of a motorbike taxi which has the possibility to slip between vehicles, baffling the elementary rules of the road code.

In the great cities of Cameroon, the populations witness great difficulties in their movements between September and May with exceptions of periods of academic holidays for the priority seems to be the transport of students (Kaffo C, Kamdem P, Tatsabong B, Diebo L. M: 2008) In fact, the existing transport services (buses, cars and taxis...) are unable to satisfy the prevailing demand.

Transport infrastructures are important for the development of exchanges in society. They are indeed indispensable for a country's development. Hence, where the road passes; development follows. In central Africa, its evolution is handicapped by a very hostile environment made up of dense forests and a ramified hydrographical network. This is sometimes characterised by the absence of construction materials which leads to an increase in investment cost. The construction of one kilometre of road costs over 230 million FCFA. This situation explains the lagging behind of this region in relation to the rest of the continent. (UNCTADA II: 2005)

Likewise in other African countries, the dominant transport system in the interior of Cameroon just as for intra communities is road transport. It covers 80 to 90% of transport of goods and 80 to 99% of human transport. The country accounts for 49,598km of roads of which 4,830km are tarred, 16,468km classified as ground roads and 28,300km of unclassified rural roads. The essential part of resources are mobilised for the maintenance of a priority network of 27,935km defined according to criterion of economic profitability and rural development. The roads are generally in a bad or mediocre state. With a daily traffic of some 2000 vehicles on tarred roads and 500 on ground roads, an annual average of 5,000 cases of accidents resulting in 1500 deaths and 6,000 injured. 2/3 of these accidents are due to human causes (inattention, excess speed, overload etc), 12% to the state of the vehicles and 6% on the state of the roads. (CNCC: 2007)

Public transport enterprises have disappeared in most cities (SOTUC closed its doors in February 1995) as a result of the effects of the structural adjustment programmes which restricted government spending and subventions. Thus, government's retreat from this sector and the absence of a coherent transport plan led to its deregulation favouring the development of a private offer. In this less controlled sector, operators of vehicles of great capacities (cars, buses and mini-buses) are more and more in competition with engines of smaller sizes which cover most often a greater share of collective transport. In such an atmosphere of growing population in towns and villages, there is a high demand for public transport as personal transport is still reserved for a minority.

The rapid diffusion of private public transport has been boosted by the absence of firm regulation from the public services who adopt a lukewarm attitude over public transport (Diaz Olvera: 2007). This private offer rests on the exploitation of varied type of vehicles among which second hand refurbished vehicles commonly known as/*clandos*/ (meaning clandestine transport vehicles). Used in public transport, they hold a preponderant place in the mobility system of most towns and villages whether regularly registered or not.

Most recently have appeared in towns and cities a new form of public transport: the commercial motorbike popularly known as motorbike taxi. According to the Oxford Hachette Dictionary

(2008 edition), “A motorbike is a small motorcycle with a low frame and small wheels and elevated handlebars”.

In Nigeria, the reasons for using motorbike taxis vary from one user to the other. These can be regrouped under several spheres. The professional sphere is concerned with civil servants, sole proprietors, farmers and other businessmen who use motorbike taxis for professional reasons. Many students use the motorbike taxis as principal means of transport to school. Businessmen transport their goods and meet up with other engagements. Farmers too use this means of transport to transport farm produces such as cocoa, coffee, cassava, banana, cocoyam, firewood and many more items. The professional reasons account for more than half of the use of motorbike taxis as means of movement. Sociability is another factor which encourages people to use motorbike taxis. People use motorbike taxis to visit friends and family, to meet up for group activities and socialising.

### **2.3 Accessibility and employment opportunities**

Like many economic activities that are intensive in infrastructures, the transport sector is an important component of the economy impacting on development and the welfare of populations. When transport systems are efficient, they provide economic and social opportunities and benefits that result in positive multipliers effects such as better accessibility to markets, employment and additional investments. When transport systems are deficient in terms of capacity or reliability, they can have an economic cost such as reduced or missed opportunities. Transport also carries an important social and environmental load, which cannot be neglected (Minh et al, 2006). 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. Indirect impacts related to the economic multiplier effects where the price of commodities, goods or services drop and/or their variety increases.

The problem of youth unemployment has long been recognized in Kenya. The 1972 International Labour Organization (ILO) report on employment in Kenya acknowledged that the formal sector had limited capacity to generate enough jobs to absorb the existing labour force. Since then this

problem has remained high on the government's policy agenda but, with rapid population and labour force growth as well as economic decline, it continues to be a pressing problem.

There are approximately 1.8 million unemployed people aged between 15 and 64 in Kenya, resulting in a national unemployment rate of 14.6 percent. Sixty percent of all unemployed people are under the age of 30, and 45 percent are under 24 years of age. The Labour Force Report (Central Bureau of Statistics, 2003b) defines the unemployment rate as the proportion of unemployed people in the total labour force.

Unemployed people are defined as those of working age (age 15 to 64) who reported that they were not working but were looking for work. The participation rate is the percentage of the working age population that is economically active. Overall, unemployment rates in rural areas are much lower than those in urban areas. This is partly because many young people migrate to urban areas to look for employment. Young females especially in the 20 to 24 year and 25 to 29 year age groups have much higher unemployment rates than males. The gender disparity is mostly an urban phenomenon as unemployment rates for males and females in rural areas are similar. These gender disparities may be a reflection of discrimination in hiring practices as well as the lower skill levels of females as evidenced in the tertiary enrolment figures seen earlier (CBS, 2003).

The largest number of unemployed people is in the 20 to 24 age group. Only 1.5 percent of the unemployed have any formal education beyond the secondary school level. In addition, the vast majority of unemployed people (92 percent) have no vocational or professional skills training. In effect, unemployment is not just due to a lack of jobs, but it is also due to the workforce lacking the skills needed to support a growing economy.

As a result of unemployment and the shortage of opportunities for gainful employment, some young people are drawn to a life of crime. A crime survey in Nairobi conducted by UN Habitat and the City Council in 2002 found that youth delinquency and crime is a major problem. Society's reaction to youth crime varies. Young people (who are also victims of crime) recognize the pressures that drive their peers to a life of crime. Adult victims are less sympathetic and call for harsh punishment for offenders. The justice system is largely perceived as being slow and

corrupt, and many offenders are released after being arrested – much to the frustration of the police as this leads to repeat offences (UN Habitat, 2002).

The UN Habitat study on youth and crime in Nairobi found the major grounds on which young people are arrested are theft, assault, drug possession, mugging, and manslaughter. The weapons most commonly used by young criminals are guns, swords, pangas (machetes), and knives.

Transport by commercial motorbikes is one of the sectors which attracted many of the unemployed. The difficult economic and political situation of the 1990s offered an increment to this activity as a response to the series of lay-offs in several enterprises. If at the beginning the lay-offs embraced the activity of motorbike taxi riders as a result of the economic crises, the activity rapidly developed to become a job opening for many job seekers. With the volume of revenue generated by this activity, able businessmen got interested into the activity and began acquiring tens and even hundreds of motorbikes, offering jobs to the needy.

According to C Kaffo et al, (2009), this activity provides solutions to the economic crises in terms of transport mobility and employment. They see motorbike taxis as a consequence of the economic crises that have prevailed in sub-Saharan Africa since the 1980s, providing ready solutions to mobility of persons and employment opportunities helping the government who is trapped into a lukewarm attitude over this activity considered dangerous but which is a source of direct and indirect employment for many Cameroonians.

It's in this wise that the activity is organised around several categories of actors following a particular logic. We have the permanent riders (to whom riding is a permanent activity and the temporal riders to whom riding of motorbike taxis constitute a secondary activity. Riding to them constitutes extra revenue. The group of permanent riders is subdivided into two sub-groups: That of “owner-riders” who own their motorbikes and the “self payment” riders who work on the behalf of proprietors who own motorbikes.

In Bafoussam, proprietors of motorbike taxis have gotten two riders: One for the day and the other who works in the night. For Olvera Diaz (2009), a motorbike is acquired from personal income, family aid or even from personal financing networks. The “loan-riders” have the

obligation of bringing back a fixed sum of money on a daily or weekly base. This varies according to the region or town. In Douala for example, an average sum of 3,000FCFA constitutes the daily revenue. Fuel expenditure stands at an average of 1500FCFA and feeding on a daily bases ranges between 500 and 1000FCFA. Thus the motorbike taxi has to work hard in order to make ends meet. Daily revenue oscillates between 7,000 and 9,000 FCFA (Olvera 2009).

In developing cities worldwide, the private sector is the dominant supplier of public transport services and provides employment to a large number of people. In Lagos for example, there are over 100,000 minibuses and 200,000 commercial motorcycles, providing direct employment to over 500,000 people. Assuming one public transport worker per household (with an average household size of 5) then, well over two million people receives their sustenance from the sector (or 15 percent of the total population).

This large numerical strength, allows them to cripple the local economy by calling a strike in response to any perceived negative government interference with access to their common market interest. This gives them enormous political power. In turn, the politicians have a significant stake in maintaining the status quo because of the opportunities for their own financial gain (many informal sector vehicles are owned and operated by public officials) and the ability to use their position to distribute patronage (in return for a financial benefit).

## **2.4 Economic growth and employment opportunities**

A number of studies have shown that rural households in sub-Saharan Africa derive their incomes from a variety of sources with non-agricultural activities accounting for a substantial share of total income.

Despite the importance of non-agricultural activities for rural farm households, we still know little about the impact of such activities on the distribution of income and, hence, on poverty. There are several reasons that have been advanced for income diversification among households who were traditionally exclusively engaged in farming activities. Broadly, one may classify diversification strategies as survival-led or opportunity-led. It has been observed that poor rural households with low asset endowments embrace multiple livelihoods, in particular engagement



in non-agricultural activities, to ensure survival. These households are forced to diversify mainly because they lack sufficient agricultural assets to sustain subsistence (Reardon and Taylor 1996; Haggblade et al. 2005).

Transportation developments that have taken place since the beginning of the industrial revolution have been linked to growing economic opportunities. At each stage of human societal development, a particular transport mode has been developed or adapted. However, it has been observed that throughout history no single transport has been solely responsible for economic growth. Instead, modes have been linked with the function and the geography in which growth was taking place (Elliott et al., 2003).

The first trade routes established a rudimentary system of distribution and transactions that would eventually be expanded by long distance maritime shipping networks and the setting of the first multinational corporations. Major flows of international migration that occurred since the 18th century were linked with the expansion of international and continental transport systems that radically shaped emerging economies such as in North America and Australia. Transport has played a catalytic role in these migrations, transforming the economic and social geography of many nations. Concomitantly, transportation has been a tool of territorial control and exploitation, particularly during the colonial era where resource-based transport systems supported the extraction of commodities in the developing world and forwarded them to the industrializing nations of the time (MRA, 2006).

While some regions benefit from the development of transport systems, others are often marginalized by a set of conditions in which inadequate transportation play a role. Transport by itself is not a sufficient condition for development; however the lack of transport infrastructures can be seen as a constraining factor on development. In developing countries, the lack of transportation infrastructures and regulatory impediments are jointly impacting economic development by conferring higher transport costs, but also delays rendering supply chain management unreliable (Robertson, 2003).

Investment in transport infrastructures is thus seen as a tool of regional development, particularly in developing countries and for the road sector. The standard assumption is that transportation investments tend to be more wealth producing as opposed to wealth consuming investments such

as services. Still, several transportation investments can be wealth consuming if they merely provide convenience, such as parking and sidewalks, or service a market size well below any possible economic return, with for instance projects labeled "bridges to nowhere". In such a context, transport investment projects can be counterproductive by draining the resources of an economy instead of creating wealth and additional opportunities.

Returns to these activities may well be below those in agriculture. At the same time, richer rural households with higher asset endowments will choose to diversify their livelihoods to maximize returns to their assets. Such activities will have at least the same returns as agricultural activities and exhibit entry barriers that the poor are not able to overcome.

The number of passengers is very dependent on the location of the stage and competition, with the relatively wealthy city centers generating proportionately more, but shorter, trips than small towns or rural feeder routes that have fewer but longer journeys. Also, not all operators work continuously – many take time off for other activities and occupations. The surveys of bicycle *boda boda* operators in Jinja found them carrying 35-160 passengers per week, with a mean of 86, or 12 per day. This is the same number per day as was reported for a whole week in Tororo in 1991 [Malmberg-Calvo 1994]. The explanation for the apparent discrepancy is that in the latter case trip lengths were at least five times longer than the typical trip in Jinja.

In Kampala bicycle operators claimed substantially higher numbers of passengers than in the secondary city Jinja, in the range 75-330 per week, with a mean of 153. In both cities the claimed passengers correlate closely ( $r^2 = 0.86$ ) with stated earnings, which gives credence to the figures. These average 42,300 shs (US\$24) per week within a range of 12,000 – 107,000 shs (US\$7-59).

Stated earnings for motorcycle operators differ for owners and hirers, and by location. Because of small sample sizes not too much significance can be read into the differences. Owner earnings in Kampala (100,400 shs per week or US\$56) are almost double those of hirers (54,200 shs or US\$30), but they do have additional costs, especially vehicle depreciation and major repairs. Peri-urban areas yield substantially lower earnings for owners (54,200 shs per week or US\$30), but, contrary to logic, hirers appear to earn more (59,200 shs or US\$33) per week (Naddumba 2011).

In developing cities worldwide, the private sector is the dominant supplier of public transport services and provides employment to a large number of people. In Lagos for example, there are over 100,000 minibuses and 200,000 commercial motorcycles, providing direct employment to over 500,000 people. Assuming one public transport worker per household (with an average household size of 5 then, well over two million people receives their sustenance from the sector (or 15 percent of the total population) (Naddumba 2011).

This large numerical strength, allows them to cripple the local economy by calling a strike in response to any perceived negative government interference with access to their common market interest. This gives them enormous political power. In turn, the politicians have a significant stake in maintaining the status quo because of the opportunities for their own financial gain (many informal sector vehicles are owned and operated by public officials) and the ability to use their position to distribute patronage (in return for a financial benefit) (Naddumba 2011).

## **2.5 Traffic regulation and employment opportunities**

Small Motorbikes popularly known as "Boda-boda", have emerged as a quick means of transport. The Boda Bodas that have been mainly operated by the youths as a means of public transport have been responsible for many "accidents" (Naddumba 2009).

There has been an alarming increase in traffic fatalities in developing countries over the past three decades. While there is considerable debate in all countries about the exact number of traffic injuries, the main point here is that the full extent of the traffic safety problem is far greater than the number of fatalities indicates. All studies agree that injuries are many times more numerous than fatalities, and can cause social and economic problems that rival those of death. Similar to most other transport problems, the poor suffer more than other income classes from traffic dangers. Since they make most of their trips by walking or cycling, they are particularly vulnerable in any traffic crashes. Mohan (2002) documents, traffic deaths and injuries can have devastating financial and social consequences for poor families in India. Lacking any health insurance, they must either forgo professional medical treatment of injuries or sell what little they own to pay for treatment. Lost income from parents killed or seriously injured in traffic

crashes can force children out of school and into the workplace, thus affecting future generations as well.

For instance, road traffic injuries are the leading causes of surgical admission at Mulago Hospital in Uganda. This is mainly because of reckless taxi operators on poorly designed roads. The taxis include small saloon vehicles, 14-seater commuter mini buses, and the big coaches. Of late, bicycles and motorbikes have been introduced as a means of public transport in addition to the taxis as form of employment for the Ugandan youth (Naddumba 2009).

According to the study conducted in Uganda, businessmen and students were the most injured because of the rush through heavy traffic to get to their businesses and to the school. In Malaysia where motorcycle injuries contribute 60% of all road fatalities, improper use of helmets was the most important cause of the fatal accidents. The majority of victims were youths. Similar findings have been reported from Victoria where 80.4% of motorcycle injuries occurred in motorcyclists aged 18 - 20 years.

This emphasizes young age of the motorcyclists as one of the major factors responsible for motorcycle injuries. Measures that reduce the severity of motorcycle related injuries include helmets, lower limb protection, protective clothing, and air bags. Training for motorcyclists, and alcohol restrictions also reduce the risks of motorcycle related injuries. In the study, the majority of patients are in the young age group, and it is believed that the majority hadn't undertaken any training lessons before being licensed. Motorcycling under the influence of alcohol or drugs could not be ruled out among our youth motorcyclists (Naddumba 2009).

According to N. Haworth and others the factors contributing to crash occurrence and injury severity related to motorcycle accidents include: being male, being young, inexperience, being unlicensed, riding a borrowed motorcycle, consumption of alcohol, riding during peak hours, curves, slippery or uneven surfaces and poor motorcycle maintenance.

The commonest motorcycle injuries involved the lower extremity, followed by Head injuries and soft tissue injuries (Abrasions, Lacerations and contusion). Spinal cord injuries are rare, but can be serious if they occur. Among extremity injuries, the majority were below the knee.

The commonest cause of the accidents was collision with motorcycles followed by the impact of landing on the ground and striking roadside objects. The study therefore concluded that Boda Boda Injuries was a major cause of admissions at Mulago Hospital and was second to motor vehicles crashes. The majority of the injuries involved the lower extremity. Multiple injuries, and head injuries were also common. The severity of these injuries was mostly due to lack of protective gear.

In its recommendation, as a safety measure to the motorcyclists the following measures are suggested: -Protective gear to include a Helmet, Eye and Face protection, long pants, gloves, boots and a durable long-sleeved jacket, restriction of alcohol consumption before operating a motorcycle, strict enforcement of road laws and headlights to be kept on all the time during motorcycle riding. All motorcycle riders' should undertake course before being licensed as Boda Boda cyclists. The Boda Boda owners should compulsorily provide the passengers on the motorcycles with helmets. Strict laws on the road will go a long way in controlling the Boda Boda Road Traffic related injuries (Naddumba 2011).

Due to the sensitivity of the population to transport issues and its impact on day-to-day life, any local incident involving mismanagement of the sector gets widely reported by the press and other media and makes national news. The externalities generated by urban transport, e.g., congestion, road accidents, pollution emissions, crime within the confines of an urban area, are a visible manifestation of the impact of poor government management on the quality of life.

The impact is especially made more poignant given the nature of transport demand, which is concentrated both in temporal and spatial terms. In addition, urban transport infrastructure and service provision essentially have the characteristics of a public good, and provide considerable opportunities for private rent seeking, particularly in the form of providing rights to operate a service, offering protection to a particular group to the exclusion of others. Towns are also the

centre of financial, administrative and media activities, concentrating economic and political power and making them a focus of any political agenda (Naddumba 2011).

## **2.6 Theoretical framework:**

Functionalism was to be used to determine the role played by motorbike taxis in Bungoma South Sub County. Functionalism, as a school of thought in anthropology, emerged early in the twentieth century. Bronislaw Malinowski and Alfred Reginald Radcliffe-Brown, two prominent anthropologists in Great Britain at the time, had the greatest influence in this development.

Functionalism sought to be a corrective to the excesses of the evolutionary and diffusionist theories of the nineteenth-century and the historicism of the early twentieth century (Goldschmidt:1996). Underlying functionalist theory is the fundamental metaphor of the living organism, its several parts and organs, grouped and organized into a system, the function of the various parts and organs being to sustain the organism, to keep its essential processes going and enable it to reproduce. Similarly, members of a society can be thought of as cells, its institutions its organs, whose function is to sustain the life of the collective entity, despite the frequent death of cells and the production of new ones. Functionalist analyses examine the social significance of phenomena, that is, the purpose they serve a particular society in maintaining the whole (Jarvie:1973).

Malinowski's theorising included understanding a particular item by identifying its function in the current contemporary operation of that culture (Firth 1957:55); to this, the principal function of a motorbike is to transport passengers and goods. Passengers are of all types (young, old, male, female, natives and foreigners and even the deceased). Goods transported also vary but reflects the economic practices of the people of Bungoma South Sub County.

Nevertheless, in Bungoma South, the use of motorbike taxis as a new means of movement and public transportation has given it a place of choice in the society as it now serves several purposes as disclosed below:

Society is structured into a working unity in which the parts accommodate one another in a way that maintains the whole. (Radcliffe-Brown: 1952) Motorbike taxis in Bungoma South constitute

a part in a working unity to maintain the society into a whole. They constitute the principal means of public transport in Bungoma South and transport individuals (between one to four in number) from one place to another. During the academic year, the volume of transport increases due to the many students of the various primary and secondary schools who are transported to school by motorbike taxis.

Motorbike taxis also play the role of an ambulance in Bungoma South as they transport patients in and out of the hospital. In cases of emergency, they are usually called upon for their flexibility and easy access through rough roads, bumpy paths and other foot paths.

## 2.7 Conceptual Framework

The conceptual framework represents the relationship between independent variables intervening and moderator variables and dependent variables. Conceptual framework has therefore been developed from the reviewed literature and related theories.

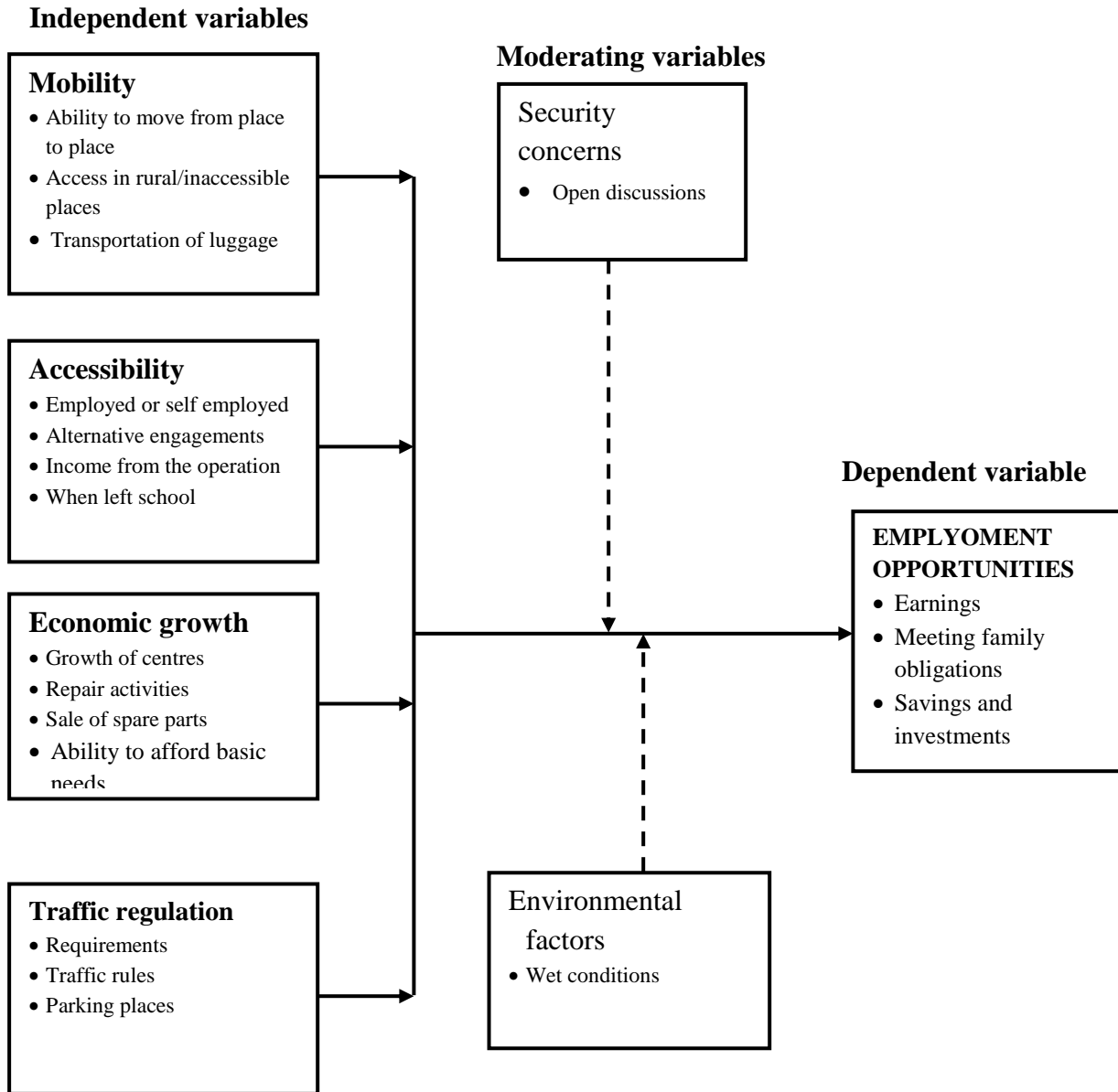


Figure 1: Conceptual framework



## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This chapter deals with the descriptions of methods that will be used to carry out the study. The subsections includes research design, target population, sampling procedures and sample size, data collection instruments and their validity and reliability of the research instruments, methods of data collection and data analysis.

#### **3.2 Research design**

Nachmias and Nachmias (1996) assert that research design refers to the master plan that will be used in the study in order to answer the research questions. Descriptive survey was used in this study to find out the influence of motorcycle transport on creation of employment opportunities in Kenya especially in Bungoma South District, Bungoma County. According to Kerlinger (1973) survey is a method that studies large population (universe) by selecting and studying the samples from the population to discover the relative incidence, distribution and interrelations of sociological and psychological variables

#### **3.3 Target population**

The study population comprised of Boda-boda motorcycle riders or operators operating Bungoma town and its neighbouring satellite towns and centres. According to the Bungoma District Traffic Police department records, the busiest routes operated by the motorcycles are; Nzoia-Mteremko, Mateka-Khetia Crossroads, Kibabii-Khetia Crossroads and Sang'alo-Bus stage. The records estimate estimated that there are approximately 1000 motorcycle riders, on the four routes as shown in table 3.1. Other respondents who participated in the study were traffic police base commander and the in-charge of Municipal council of Bungoma. This gave rise to 1002 as the target population.

### 3.4 Sample Size and Sampling Procedure

This section describes the sample size and sampling procedure to be employed for this study

#### 3.4.1 Sample Size

According to Kothari (1985), Mugenda and Mugenda (1999) and Peter (1996) in a descriptive survey, a sample enables a researcher to gain information about the population.

Gay (1992) suggests that at least 10% of the population is a good representation where the population is large and 20% where the population is small. The 10% of the target population of 1002 respondents will make a sample size of 100 respondents.

#### 3.4.2 Sampling Procedure

Stratified sampling was used where samples came from the routes as strata. Stratified sampling is suitable when dealing with homogenous subgroups like bodaboda riders, owners and users which form several segments or stratas. Random sampling is then used to select respondents for each strata (Mugenda & Mugenda, 1999).

There were four strata based on the routes operated to and from town and the distribution of samples is shown in table 3.1.

Simple random sampling Mugenda and Mugenda (1999), was also used in this study. This is because the strategy is a hybrid sampling process which allows other processes such as convenience and purposive techniques. Simple random was used to draw respondents within the strata and purposive sampling would target to get the traffic police base commander and the in-charge of Municipal council of Bungoma.

**Table 3.1; Sample size**

<b>Route</b>	<b>Population</b>	<b>Sample size</b>
Nzoia-Mteremko	300	30
Mateka-Khetia Crossroads	250	25
Kibabii-Khetia Crossroads	150	15
Sang'alo-Bus stage	300	30
<b>Total</b>	<b>1000</b>	<b>100</b>

### **3.5 Data collection instruments**

The data collection instruments used in this study for data collection were questionnaire and interview schedule.

#### **3.5.1 Questionnaires**

Questionnaires were useful instrument of collecting the primary data since the respondents can read and then give responses to each item and they can reach a large number of subjects (Orodho, 2004). The questionnaire was administered to motorcycle riders who were required to respond to them.

The questionnaire for the riders had five sections. Sections A sought for general background information. Section B consisted of closed and open ended questions which sought for information relating to mobility, section C consisted of closed and open ended questions which sought for information relating to accessibility, section D consisted of closed and open ended questions which sought for information on economic growth and lastly section E consisted of closed and open ended questions which sought for information on how traffic regulation has been affected.

#### **3.5.2 Interview schedule**

The interview schedule was administered to the base commander and municipal council incharge. The interview schedules make it possible to obtain data required to meet specific objectives of the study (Mugenda & Mugenda, 1999). It also helps to standardize the interview such that the interviewer can ask the same questions in the same manner.

#### **3.5.3 Pilot testing**

Piloting ensures that research instruments are clearly stated and that they have same meaning to the respondents. A pilot study was done in Webuye town to avoid contamination of results. This is because the riders in Webuye town operate under the same environment as those within Bungoma town. Besides, the two towns have similar social cultural and infrastructural set up. Two routes (Webuye-Milo and Webuye-Kituni) and the base commander will be used to pilot the research instruments. The riders were selected through simple random sampling procedure.

### **3.6 Validity of the research instrument**

Both face Validity and content validity were checked. Face validity refer to the possibility that a question would be misunderstood or misinterpreted. Pre-testing was done during piloting stage to identify those items and then the items were modified accordingly. This was to increase face validity. The researcher prepared the document in close consultation with the supervisors. Borg and Gall (1985) points out that validity of an instrument is improved through expert judgment. The examiners during proposal defence and the supervisors therefore gave expert judgment which helped improve content validity. The necessary adjustments were then made on the instruments to enhance their validity.

### **3.7 Reliability of the research instrument**

Mugenda & Mugenda, (1999) defines reliability as a measure of the degree to which a research instrument yields consistent results or data after repeated trials. In order to ensure reliability of the instrument, the split-half technique which involves administering only one testing session and taking the results obtained from one self of the scale items and check them against the other half of items to determine their correlation coefficient will be used.

Mugenda & Mugenda, (1999) suggested that a correlation of 0.6 for such studies indicate high reliability.

### **3.8 Data Collection Procedure**

The researcher obtained an introduction letter from the University of Nairobi to obtain a research permit from the National Council for Science and Technology. After this, the researcher again obtained an introduction letter from the Traffic department, Bungoma police station to operate in the area. The researcher will then book appointments with the base commander and Bungoma Municipal council in-charge of parking to visit and administer the questionnaires and interview schedules.

The researcher then visited each of the routes and personally sampled and administered the questionnaires. The respondents were guided on how to respond and were assured of confidentiality after which they will be given the questionnaires to fill. The data collection and analysis process was expected to take two months.

### **3.9 Data analysis methods**

Data was tabulated and analysed using SPSS package incorporating both descriptive and inferential statistics. The quantitative data was processed and analyzed using SPSS software and presented in form of tables, charts and percentages.

Each competence item where necessary measured scores of five point rating scale from 1 (no capability) to 5 (excellent) to evaluate if current training courses address teachers' training need.

### **3.10 Ethical considerations**

The researcher first assured the respondents that the responses they would give would remain confidential. The respondents were not be required to indicate their names on the questionnaires. The respondents will also be informed of the purpose of the study and that the findings of the study will not be hidden at any time.

## CHAPTER FOUR

### DATA ANALYSIS, PRESENTATIONS AND INTERPRETATIONS

#### 4.1 Introduction

This chapter presents and discusses the analysis of the data collected from various respondents. The data was interpreted according to the research questions. The data was analyzed and presented in form of frequency and percentage tables. It also contains the summary of data analysis of all the four variables mobility, accessibility, economic growth and traffic regulation.

#### 4.2 Questionnaire Return Rate

This study targeted boda boda bicycle riders within Bungoma town Table 4.1 shows the distribution and return rates of respondents for this study.

**Table 4.1; Questionnaire Return rate**

<b>Target route</b>	<b>Number targeted</b>	<b>Number responded</b>	<b>Return rate (%)</b>
Nzoia-Mteremko	30	28	93.3
Mateka-Khetia Crossroads	25	22	88.0
Kibabii-Khetia Crossroads	15	13	86.7
Sang'alo-Bus stage	30	27	90.0
<b>Total</b>	<b>100</b>	<b>90</b>	<b>90.0</b>

Out of 100 questionnaires which were administered to the boba boda riders, 90 were responded to representing a return rate of 90.0% ( $90/100 \times 100$ ).

#### 4.3 Demographic Characteristics of the Respondents

This section presents the demographic characteristics of the respondents with the aim of establishing the general background of the respondents that participated in the study. The areas that were to be discussed include gender, age, educational level, route commonly operated and how long the respondent has been operating boda boda motorcycle.

### 4.3.1 Gender of the respondents

From the item which was included in the research instrument to seek information on the gender of the boda boda. Out of the 90 interviewed, all the respondents were male which was 100%. Table 4.2 gives the summary of the gender of the respondents.

**Table 4.2; Gender of the respondents**

	Frequency	Percentage
Male	90	100.0
Female	0	0.0
<b>Total</b>	<b>90</b>	<b>100.0</b>

This finding reveals that boda boda bicycle operation is mainly conducted by men, showing that female are rarely involved in this job. This could be because of the nature of the operation and the vigour with which the job requires. Secondly, the weather does not favour female because of poor roads and late working hours.

### 4.3.2 Age of the respondents

The study sought to establish the age of the respondents involved in motorcycle bodaboda operation. Table 4.3 summarizes the age of the respondents.

**Table 4.3; Age of the respondents**

	Frequency	Percent
30 years or less	45	50.0
31-35 years	18	20.0
36-40 years	12	13.3
41-45 years	13	14.4
More than 45	2	2.2
<b>Total</b>	<b>90</b>	<b>100.0</b>

The study established that the majority of the motorcycle operators were at the age below 30 years which represents 50.0%. This was followed by the group of between age 31-35 representing 20.0%. The group between ages 41-45 years came third which represented 14.0%. The group between 36-40 years came fourth with 13.3% and lastly the age group above 46 years was least with only 2.2%. This shows that motorcycle operators is mainly conducted by young men who are seriously seeking for employment and the age group above 45 years have already settled.

### 4.3.3 Education level of respondents

This section sought to find out the education level of the respondent. The table below gives the summary of the same.

**Table 4.4 Respondents education level**

	<b>Frequency</b>	<b>Percent</b>
No education	2	2.2
Primary	45	50.0
Secondary	33	36.7
College/University	10	11.1
<b>Total</b>	<b>90</b>	<b>100.0</b>

The findings show that the majority of the motorcycle operators are primary school leavers represented by 50.0%. This explains why there are rampant accidents caused by motorcycle operators because they don't understand traffic rules. The next group are secondary school leavers represented by 36.7%. This shows that after secondary school, the young men aggressively start looking for viable employment because they idle. The third group of motorcycle operators are college stroke university graduates which represent 11.1%. this shows that upon completion of university education there is no guarantee that the student will get formal employment. For that reason, some students get involved in motorcycle operation as the only viable option available that can help them generate some income. The last group of motorcycle boda boda operators have no education representing only 2.2 %. This shows that



most people today have acquired education. This may be due to influence of free education offered in Kenya.

#### 4.3.4 Motorcycle boda boda operation routes

This section sought to find out the motorcycle boda boda operation routes in Bungoma South Subcounty. The findings of the study are shown from the table below.

**Table 4.5; Routes**

<b>Route</b>	<b>Frequency</b>	<b>Percent</b>
Nzoia-Mteremko	14	15.6
Mateka-Khetia crossroads	20	22.2
Kibabii-Khetia crossroads	30	33.3
Sang'alo-Bus stage	26	28.9
<b>Total</b>	<b>90</b>	<b>100.0</b>

From the table, the majority of the motorcycle boda boda operators were found to be in Kibabii-Khetia crossroads route representing 33.3%. The second category was found to be in Sang'alo-Bus stage representing 28.9%. The reason for high concentration of motorcycle boda boda in these two routes may be because of availability of college student in both routes. The third category is found on Mateka-Khetia crossroads route, may be because of providing transport services to travellers in Bumula Sub county headquarters and students going to several learning institutions concentrated in this area. Nzoia-Mteremko route had least boda boda operators with only 15.6%. The reason may be most travellers on this routes are Nzoia sugar company employees who may be using company buses for travelling and a few job seekers and casual workers who may be visiting the company.

#### 4.3.5 Motorcycle boda boda operators' experience

On the last item on general background of the respondents, study sought to establish for how long the respondents have been in the operation. The finding of the study are shown in the table below.

**Table 4.6; Experience**

	<b>Frequency</b>	<b>Percent</b>
Less than 1 year	17	18.9
1-3 years	32	35.6
4-7 years	22	24.4
8-10 years	12	13.3
More than 10	7	7.8
<b>Total</b>	<b>90</b>	<b>100.0</b>

Majority of the motorcycle boda boda operators have experience between 1-3 years representing 35.6%. This shows that most of them are school leavers as indicated earlier by finding in education level and the age of motorcycle operators in the previous tables. The second group have an experience of 4-7 years representing 24.4%. This may still be representing a group of school leavers who have created employment for themselves since they may have not had formal employment. Third group is that one with experience of less than one year representing 18.9%. This may still be a group of students or school leavers who had just left school and are trying to look for a meaningful employment to keep them busy meanwhile as they wait for formal employment. The fourth group is that of 8-10 years experience which represent 13.3%. This shows that motorcycle boda boda operation is a recent activity and most operators have not gained much experience. The same argument can be put forward for the operation of experience of more than 10 ten years representing 7.8%.

#### **4.4: Mobility and employment opportunity**

Mobility is simply a measure of the human agency with which people choose to move themselves or their goods around agency with which people choose to move themselves or their goods around. It is dependent on the performance of the transport system available and characteristics of the individual.

This study sought to find out from the respondents how easy it was to perform these movements by asking the question, when you are operating the bodaboda motorbike business on this route, which of the following statements do you agree with? Table 4.7 give the responses given by respondents concerning various aspects of mobility. It is shown that most of the aspects scored high on the ‘Yes’ response as compared on the ‘No’. However the ‘No’ response scored high on the statement that ‘Motorcycles are not affected by poor weather conditions’.

**Table 4.7 Statements on mobility**

	YES		NO	
	Freq.	Percent	Freq.	Percent
Motorcycles can access even the unreachable places	80	88.9	10	11.1
Customers prefer motorcycles because they are faster	81	90.0	9	10.0
Motorcycles can get up to one’s doorstep.	83	92.2	7	7.8
Motorcycles can carry all types of luggages?	71	85.5	9	10.0
Motorcycles can maneuver the poorly maintained roads	84	93.3	6	6.7
Motorcycles are not affected by poor weather conditions	34	37.8	56	62.2

The study finding shows that the majority of the respondents accepted that motorcycle can manoeuvre the poorly maintained roads giving them a greater advantage over other means of transport with 84% accepting and 6% rejecting. The study findings indicate that mobility has been enhanced by the advent of the motorcycles which create employment opportunities to most youths. These findings concur with a study by Elliot who observed that mobility is one of the most fundamental and important characteristics of economic activity as it satisfies the basic need of going from one location to the other, a need shared by passengers, freight and information. All economies and regions do not share the same level of mobility as most are in a different stage in their mobility transition (Elliott et al., 2003). Economies that possess greater mobility are often those with better opportunities to develop than those suffering from scarce mobility. Reduced mobility impedes development while greater mobility is a catalyst for development. Mobility is thus a reliable indicator of development (Mbugua, 2011).

Providing this mobility is an industry that offers services to its customers, employs people and pays wages, invests capital and generates income (MRA, 2006). The economic importance of the

transportation industry can thus be assessed from a macroeconomic and microeconomic perspective: At the macroeconomic level (the importance of transportation for a whole economy), transportation and the mobility it confers are linked to a level of output, employment and income within a national economy. In many developed countries, transportation accounts between 6% and 12% of the GDP. At the microeconomic level (the importance of transportation for specific parts of the economy) transportation is linked to producer, consumer and production costs. The importance of specific transport activities and infrastructure can thus be assessed for each sector of the economy (Arasan and Koshy, 2003). Transportation accounts on average between 10% and 15% of household expenditures while it accounts around 4% of the costs of each unit of output in manufacturing, but this figure varies greatly according to sub sectors.

Motorcycles pose interesting challenges in Developing countries that are not faced by the rest of world. Motorcycle comprise 95% of the nation's private motor vehicle fleet in Vietnam, 84% in Asia, 76% in Cambodia, 28% in Italy and only 4% in the United States (Perco , World Bank, 2008). In the last fifteen years the numbers of motorcycles per capita in many Developing Asian nations has doubled (World Bank, 2006). The vehicles are attractive as incomes of families in the region rise, providing an affordable mobility option that is not otherwise available. They provide door-to-door mobility, unmatched navigability in congested road conditions, ease of parking, capacity for passengers and luggage at low cost (Mbugua, 2011).

#### **4.5 Accessibility and employment opportunities**

'Accessibility' denotes the physical proximity, or ability and ease of reaching various destinations, or places offering opportunities for a desired activity. Accessibility, or the perceived proximity of desired locational destinations, is heavily influenced by the transport mode being used. Accessibility is concerned not with behaviour but with the opportunity, or potential, provided by the transport and land-use system for different types of people to engage in activities.

The study therefore the motorcycle transport provided the riders with opportunities to engage in productive work. On the whether the respondent owned the motorcycle he is operating, only 18.9% owned them while 81.1% did not own the motorcycles as shown in table 4.8.

**Table 4.8 Motorcycle ownership** (Do you own the motorcycle you are riding/operating?)

	<b>Frequency</b>	<b>Percent</b>
Yes	17	18.9
No	73	81.1
<b>Total</b>	<b>90</b>	<b>100.0</b>

A further follow up question sought to find out if the respondents who did not own the motorcycles were employed by the owners or just riding on behalf of a relative or what they commonly refer to as ‘*mkondo*’ (where an employed rider assigns another to ride for especially specific days, then he pays the usual rider some agreed amount) any other option.

**Table 4.9 Not employed** (If NO, are you employed by the owner of the motorcycle?)

	<b>Frequency</b>	<b>Percent</b>
Yes	68	93.2
No	5	6.8
<b>Total</b>	<b>73</b>	<b>100.0</b>

Table 4.9 indicates that 93.2% of the riders are employed by the owners of the motorcycles they ride. 6.8% of the respondents who were found riding but they are not employed reported to be only holding brief for the employed riders who will at the end of the day pay him some commission.

The researcher also sought to find out from the respondents “If you were NOT riding boda boda motorcycle, indicate whether the following statements about you would be TRUE or FALSE”. The statements presented were meant to establish what else the respondent would be doing apart from riding the motorcycle. Table 4.10 shows the responses as given by the respondent who were asked to indicate whether it was “true” that they would be engaging in the stated activity.

**Table 4.10 alternative engagements**

	TRUE		FALSE	
	Freq.	Percent	Freq.	Percent
You would be sitting at home with nothing to do	81	90.0	9	10.0
You would in Nairobi or other towns searching for a job	84	93.3	6	6.7
You deliberately chose to ride the motorcycle instead of a job	78	86.7	12	13.3
The earnings from boda boda business is better and prompt	80	88.9	10	11.1
You were forced by circumstances to ride the bodaboda	81	90.0	9	10.0
You would sell a piece of land to buy a motorcycle	83	92.2	7	7.8
You prefer bodaboda business than farming	84	93.3	6	6.7

The study therefore observes that motorcycle transport has to a large extent absorbed and occupied many young many who would be out of school and have nothing to do. Therefore it has become a major source of their livelihood. Some of them are already married with families and therefore they are able to attend to their parental obligations.

These findings further borrow heavily on a study done by Bryceson *et al* in 2003 in two countries Uganda and Zimbabwe. They observed that in general, total daily short trip distance increases with wealth. In both countries, their survey findings indicated that villagers spend the most time travelling and secondary city dwellers the least. The findings suggested that walking dominated short-distance modal choice, comprising 63% of all journeys in Uganda and 62% in Zimbabwe, and was most pronounced in the village areas at 82% and 93% respectively. Uganda had a larger incidence of bicycle journeys (9%) due largely to the prevalence of the bicycle commercial taxi hire boda boda compared to only 1% of bicycle journeys in Zimbabwe. Fare-paying journeys accounted for 21% of all trips made by respondents in that study in Uganda and 15% in Zimbabwe. The level of kombi usage was 14% in both countries.

Generally, the study concluded that public transport is a boost to accessibility, especially in the primate cities and peri-urban areas. Boda boda bicycle and motorcycle services make a considerable contribution to Ugandans' public transport. However, middle and high-incomed rather than the poor were the main consumers of boda boda transport services. Nonetheless, boda

boda was a major labour-absorbing industry, especially in urban areas and thus was most aptly described as ‘transport by the poor’ rather than ‘transport for the poor’. Uganda’s bicycle and motorcycle boda boda industry testifies to this (Bryceson *et al*, 2003).

#### 4.6 Economic growth and employment opportunities

Investment in transport infrastructures is thus seen as a tool of regional development, particularly in developing countries and for the road sector. The standard assumption is that transportation investments tend to be more wealth producing as opposed to wealth consuming investments such as services. The study sought to establish how motorcycles as a means of transport influence the creation of job opportunities.

Table 4.11 summarises the responses from the respondents on the question ‘On average, what is the range of your daily income from operating a boda boda motorcycle along your favourite route?’

**Table 4.11 Average daily earning**

	Frequency	Percent
Below Kshs. 150	13	14.4
Between Kshs. 150-250	36	40.0
Between Kshs. 250-350	20	22.2
Between Kshs. 350-450	4	4.4
Over 450	17	18.9
<b>Total</b>	<b>90</b>	<b>100.0</b>

The findings show 14.4% of the respondent take home below Kshs. 150, 40.0% earn between Kshs. 150-250, 22.2% earn between Kshs. 250-350, 4.4% earn between Kshs. 350-450 and 18.9% earn over Kshs. 450 daily. It is evident that the riders are capable of accessing disposable daily income that they would otherwise not have accessed. For instance, from table 4.11, 62.2% of the respondents earn between Kshs 150-350 daily. This translates to between Kshs. 4,500-10,500 per month. Majority of those who earned more than Kshs. 450 per day were owners of the motorbikes they ride.

These findings concur with findings from a study conducted by Mbugua in 2011 in Thika town. From the findings on the amount earned by the respondents from their business on average, the study found that 41.9% of the respondents indicated 10,000 to 14,999, those who indicated that they earned between 20,000 to 25,000 and 9000 to 9999 were shown by 15.1% in each case, 6.5% of the respondents indicated above 25,000 whereas 2.2% of the respondents indicated 5,000 to 6999, this shows that there was an increase in the earnings as a result of venturing into the motorcycle business enterprises. Whereas before venturing into the business only 30.1% of respondents were earning above ksh.10,000, the percentage of respondents earning at least ksh.10,000 after venturing into the business is 82.7%. This depicts an immense increase in salary/wage for majority of the respondents (Mbugua, 2011).

The study further sought to establish how the boda boda business has emerged as an economic activity. Several statements were presented to the respondents to gauge their level of satisfaction by asking 'Since you started riding boda boda motorcycle, indicate the level of your satisfaction with the boda boda business as an economic activity in the following statements'. Table 4.12 summarizes their responses.

Majority of the respondents either 'agreed' or 'strongly agreed' with the statements that focused on their investments, how they acquired possessions at home, and other businesses supported by earnings from the boda boda business and having an account where they make savings. Table 4.12 summarizes these responses.



**Table 4.12 Motorcycle boda boda as an economic activity**

	<b>Strongly Agree</b>		<b>Agree</b>		<b>Disagree</b>		<b>Strongly disagree</b>	
	<b>Freq.</b>	<b>%ge</b>	<b>Freq</b>	<b>%ge</b>	<b>Freq.</b>	<b>%ge</b>	<b>Freq.</b>	<b>%ge</b>
All investments I have come from boda boda operations	8	8.9	73	81.1	7	7.8	2	2.2
I have bought animals from the boda boda operation	8	8.9	74	82.2	2	2.2	6	6.7
I have another business with earnings from boda boda	5	5.6	75	83.3	4	4.4	6	6.7
I have an account where make savings from boda boda	0	0.0	86	95.6	3	3.3	1	1.1

These findings demonstrate that the disposable income available for the riders has enabled them to afford and attend to most of the obligations and some have accounts to make savings. Some of them are planning to own their motorcycles in the near future from the savings they are making.

Compared to Mbugua's study in Thika (2011), the findings on whether motorcycle trade bettered their livelihoods, the study found that 95.7% of the respondents indicated that it had bettered their livelihoods whereas 4.3% of the respondents indicated that it had not bettered their lives. This clearly shows that motorcycle taxi business had bettered their livelihoods and that it is therefore is a vital economic activity.

**Table 4.13 Economic opportunities** (Indicate whether the following statement is TRUE or FALSE)

	TRUE		FALSE	
	Freq.	Percent	Freq.	Percent
Small towns have grown due to boda boda motorcycle business.	74	82.2	16	17.8
Business operations are possible due to boda boda operations.	83	92.2	7	7.8
Small petrol stations have sprung up to serve the motorcycles.	82	91.1	8	8.9
There are many shops that sell spare parts for motorcycles.	82	91.1	8	8.9
There are many people who repair motorcycles as a way of earning a living.	83	92.2	7	7.8
Boda boda business has enabled young men to have disposable income	73	81.1	17	18.9
The lifestyles of many families have changed because of boda boda business	74	82.2	16	17.8

From the findings on whether motorcycle trade bettered their livelihoods, the study found that 95.7% of the respondents indicated that it had bettered their livelihoods whereas 4.3% of the respondents indicated that it had not bettered their lives. This clearly shows that motorcycle taxi business had bettered their livelihoods and that it is therefore is a vital economic activity.

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, 22).

Some of these same factors, particularly demographics and income, influence choices in urban transport. Just as secondary African cities are often economically linked to primary cities; there is close interdependence with peripheral rural areas that supply agricultural goods, thereby ensuring regional food security. Combined with the general weakness of rural transportation systems in Sub-Saharan Africa, it would therefore seem essential to consider peri-urban NMT when discussing urban transit. World Bank reports show a clear link between NMT 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).

#### **4.7 Traffic regulation and employment opportunities**

There has been an alarming increase in traffic fatalities in developing countries over the past three decades. While there is considerable debate in all countries about the exact number of traffic injuries, the main point here is that the full extent of the traffic safety problem is far greater than the number of fatalities indicates.

In this section, the first question item sought to determine whether the respondents were in possession of valid driving license, from the findings the study found that 78.9% of the respondents indicated that they were in possession of valid driving license whereas 21.1% of the respondent indicated that they were not in possession of valid driving licenses as shown in table 4.14.

**Table 4.14 Driving licence (Do you have a valid driving licence?)**

	<b>Frequency</b>	<b>Percent</b>
Yes	19	21.1
No	71	78.9
<b>Total</b>	<b>90</b>	<b>100.0</b>

The study found out that the most flouted traffic regulation is the requirement that all the boda boda riders to possess valid driving licences. Obtaining a driving license requires that one must undergo mandatory trainings on observance of road traffic rules and regulations among other

aspects. Most of the riders avoid undergoing the process because it involves payment of class attendance fees in the driving schools or booking for road test exams.

Mbugua (2011) in his findings in Thika observed that on the place where the respondents attended motorcycle training the study found that 67.7% of the respondents indicated an informal training whereas 32.3% indicated that they attended training at a driving school, this clearly shows that majority of the bikers did not receive the required training . On the length of time the training took, the study found that 47.3% of the respondent indicated a few weeks and less than a week, 4.3% of the respondents indicated a month whereas 1.1% of the respondents indicated over two months, this shows that most of the bikers received relatively short training and thus they were not in a position to get the required training with the short training duration. The study found that 74.2% of the respondents indicated that they were in possession of valid driving license whereas 25.8% of the respondents indicated that they were not in possession valid driving licenses. The study revealed that 64.5% of the respondents indicated that they were tested by traffic police in order to get driving license whereas 35.5% of the respondents indicated that they were not tested by traffic police to get driving licenses (Mbugua, 2011).

The study further sought to establish the nature of traffic management by both the traffic police department and the county government of Bungoma. The respondents were thus asked to state how often the listed traffic management occurrences or regulations were reinforced or were carried out. Table 4.15 summarizes the responses to the item ‘Indicate the following statements with regard to the traffic police operations and municipal council authorities.’

**Table 4.15 traffic operations**

Statement	Never		Rarely		Often		Very often	
	Freq.	%ge	Freq	%ge	Freq.	%ge	Freq.	%ge
Traffic police are very strict	16	17.8	8	8.9	37	41.1	29	32.2
Municipal authorities are strict on parking in town	17	18.9	21	23.3	26	28.9	26	28.9
A requirement for every motorcycle to have an insurance	20	22.2	6	6.7	36	40.0	28	31.1
Every motorcycle is restricted to carry one passenger	16	17.8	24	26.7	19	21.1	31	34.4
Traffic police ensure all regulations are met by motorcycles	20	22.2	20	22.2	24	26.7	26	28.9
Experience is required for one to ride a boda boda motorcycle	18	20.0	13	14.4	30	33.3	29	32.2

These findings give an indication that a significant number of the riders are not well prepared to comply with the traffic rules and regulations. This means that there is friction between the riders and the law enforcers. This results in a standoff where the riders boycott operations accusing the police of harassment. There has been an alarming increase in traffic fatalities in developing countries over the past three decades. While there is considerable debate in all countries about the exact number of traffic injuries, the main point here is that the full extent of the traffic safety problem is far greater than the number of fatalities indicates.

The new traffic rules require that motorcycle riders should have the protective gear and the motorcycles should be licensed. The protective gear consists of two helmets, one for the rider and the other for the passenger, the rider should always wear a reflective jacket for easier visibility and identification by other road users. The riders should have valid driving licenses while the motorcycles should have insurance licenses so as to insure both the rider and the passenger against any eventuality. It was therefore important for the study to establish the availability of these essentials by asking “which of the following do you or the motorcycle you operate possess?” Table 4.16 indicates that 71.1%, 77.8% and 66.7% of the riders and the

motorcycles they operate possessed two helmets, insurance certificates and reflector jackets respectively. However it is still shown that 73.3% of them do not possess valid driving licenses.

**Table 4.16 Other possessions**

	YES		NO	
	Freq.	Percent	Freq.	Percent
Two helmets	64	71.1	26	28.9
Insurance certificate	70	77.8	20	22.2
Reflector jacket	60	66.7	30	33.3
Riders license	24	26.7	66	73.3

All studies agree that injuries are many times more numerous than fatalities, and can cause social and economic problems that rival those of death. Similar to most other transport problems, the poor suffer more than other income classes from traffic dangers. Since they make most of their trips by walking or cycling, they are particularly vulnerable in any traffic crashes. Mohan (2002) documents, traffic deaths and injuries can have devastating financial and social consequences for poor families in India.

Lacking any health insurance, they must either forgo professional medical treatment of injuries or sell what little they own to pay for treatment. Lost income from parents killed or seriously injured in traffic crashes can force children out of school and into the workplace, thus affecting future generations as well. From the findings in the on the safety measures for motorcyclists, the most important are; wearing protective clothing/helmets/boots as shown by 92.5%, not riding while under the influence of drink or drugs as shown by 79.6%, properly maintaining your motorcycle as shown by 79.6%, making yourself visible to other road users as shown by 60.2%, 40 observing the speed limit as shown by 53.8%. Those that were least important were using the correct observation techniques as shown by 18.3%, correctly positioning your motorcycle according to road conditions as shown by 15.1 % and not riding while tired as shown by 7.5%.

A similar picture is given by research in other countries. Motorcycle riders in New Zealand accounted for approximately 20% of fatalities and 25% of hospitalizations for road traffic accidents as a whole, but motorcycles represented only 5% of licensed vehicles and accounted

for only 1.4% of estimated total vehicle mileage in that country (Reeder et al., 1999). Young male riders, in particular, were identified as a problem; 12 riders aged 15–24 years accounted for 67% of all motorcycle accident fatalities. This led to the introduction of a graduated licensing scheme in New Zealand, which has reportedly reduced casualties in the target group of 15 to 19 year olds by 22%, though this mainly occurred by reducing that groups' overall exposure to motorcycle riding.

Kopjar (1999) investigated young riders' moped accidents, the use of mopeds Norway apparently being relatively widespread in the 16 to 17 year old age group. Kopjar discovered that moped-related accidents accounted for 50% of hospitalizations for traffic accidents as a whole, and that 43% of moped accidents were single vehicle incidents. He concluded that moped injuries were a serious problem in late adolescence, and that road safety professionals often overlooked the moped problem.

## CHAPTER FIVE

### SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

#### 5.1 Introduction

This chapter summarizes, discusses and makes conclusions on the findings of this study in relation to the objectives put forward in chapter one. It also discusses the recommendations for further research as well as recommendations for policy and practice.

#### 5.2 Summary of Findings

First on mobility, the findings show that the ease of manoeuvre, ability to penetrate in the remotest areas of the country and the ability to be used for multiple tasks, motorcycles are emerging to be a major employment opportunity for the youths who have left school either because of dropping out, missing on progression opportunities or totally missing on employment after school or colleges.

Secondly on accessibility, the study revealed that boda boda bicycle and motorcycle services make a considerable contribution to public transport. However, middle and high-incomed rather than the poor are the main consumers of boda boda transport services. Nonetheless, boda boda is a major labour-absorbing industry, especially in urban areas and thus is most aptly described as ‘transport by the poor’ rather than ‘transport for the poor’. Kenya’s bicycle and motorcycle boda boda industry testifies to this.

Thirdly on economic growth, the study revealed that majority of the riders are youths, with ages of below 35 years having a score of 70.0%. From the findings on the level of monthly salary/wage for those who ventured into the motorcycle business, the study found that 85.6% indicated to earn above ksh.150 per day, with majority, 62.2% earning between ksh.150-350 per day. This depicts an immense increase in salary/wage for majority of the respondents. It was also revealed that there has been an emergence of opportunities such as village fuel-selling kiosks, motorcycle repairers, spare parts sellers among other opportunities which have opened up rural



areas. This indicates an upward graduation in earnings, a clear show of economic growth in the households of those in the motorcycle taxi business.

Lastly on traffic regulation, failure to follow traffic rules and enforce the same results in accidents that are preventable. The resultant accidents result in the loss of lives and serious injuries. To bury the dead the poor families use the little savings and resources that they direly need for survival. This results in loss of income and hence poor livelihood that denies the households basic needs. This anchors them into worse livelihood and lower economic levels of life.

### **5.3 Conclusions**

The planning and implementation of poverty measures for public transport needs to be urgently addressed in the capitals, peri-urban and secondary towns. Dedicated walking and motorcycle paths along main roads and favourable tax relief on the purchase of bicycles could also stimulate demand.

Harmonizing the economic gains from the motorcycle revolution in line with the enforcing of traffic rules is vital. There is need to relook the training curriculum of the riders in order to make them more conscious of the risks that they face and they cause on other road users. The economic gains of following traffic rules to themselves and the country at large would be great, thus making the revolution a sustainable form of urban transport and economic liberation. There is need to sensitize the traffic police on the economic potential to households that the motorcycle taxi business holds. This should be hinged to the dangers on the health and safety of road users when traffic rules are not enforced by the traffic officers. A consortium of the motorcyclists, traffic police and municipal councils should come together to ensure that there is mutual agreement and ownership of the traffic rules as a component of economic development.

### **5.4 Recommendations**

The immense economic gains and opportunities from the motorcycle revolution need to be tapped by the government through economic policies that are in line with the Kenya Vision 2030. This calls for a wide spectrum of actors as captured in the following recommendations;

A consideration should be made to bring on board public private partnerships in managing the motorcycle industry in a manner that is economically viable and sustainable. Since majority of the riders are youths, then the ministry of youth and sports, the vision 2030 secretariat, SMSES, banking industry, ministry of transport, ministry of planning, universities and international development partners, should develop a structure for the training of these motor cycle taxi businessmen on entrepreneurship, business management and availing of loans should be undertaken. A model of the structure should be piloted in a few urban centres with a view of replicating it out across all counties within a stipulated span of time.

A best practice award should be introduced for the counties with a high number of motorcycle businesses. This should then be replicated at a national level. This would ensure that there are effective and efficient management structures within the motorcycle SACCOS and the day to day transport practices .In every urban area there should be a stipulated number of motorcycle SACCOS that the traders must belong to .This would aid in regulating the riding habits, character and saving schemes.

The insurance industry with its low penetration rate of nearly five 5% needs to undertake research into the fact that majority of these traders have no insurance covers .Therein lies a great opportunity to make the business sustainable by acting wisely on the findings .This could call for innovative insurance packages that would be leveraged by the partnerships outlined in recommendation above.

The ministry of public health and sanitation in partnership with private sector needs to undertake free clinics to assess the extent of health effects with consequent treatment. This should also involve the continuous sensitization of the motorcyclists on the need for protective gear and frequent medical checkups. Past victims of motorcycle accidents should be involved in the campaign towards safe riding.

The traffic police department will need beefing up in terms of officers and motorcycles in order to enforce traffic rules away from main roads. Regular retraining of the motorcyclists should be

undertaken through partnership among the police service of each division, driving schools and motorcycle associations. The police service must ensure that all the motorcyclists have valid driving licenses. The testing centres should be decentralized owing to unnecessary costs that hinder the motorcyclists.

The ministry of industrialization needs to rethink the importation of motor cycles and the accessories .This calls for public private partnership that should start assembling the motorcycles and manufacturing tyres, helmets among other components. This would offer employment opportunities. It would also serve as a nerve centre for the region and tilt the balance of trade in favour of Kenya. It would also strengthen the shilling from a decrease in sum total of expenditure on imports. The consequent economic gains are immense.

The media, ministry of information and communication, transport, internal security, education, civil society organizations and international development partners need to institute a public campaign towards road safety in line with riding of motorcycles towards all users of the mode of transport. This should involve celebrities, motorcyclists in the racing sport and the motorcyclists in the taxi business

#### **5.4 Suggestions for further study**

- Further research should be undertaken to find out the link between age of a biker and the probability of causing an accident.
- The influence of drug abuse on the fatalities caused by motorcycle business.
- What is the relationship between motorcycle business as an employment opportunity and other employment opportunities?
- Another area should be the effect of having saving schemes for the motorcycle taxi businessmen on their livelihoods

## REFERENCES

- Adams, R.H. (2002). Non-agricultural income, inequality, and land in rural Egypt. *Economic Development and Cultural Change* 50 (2): 339–363.
- Agossou N., (2004). *The Stages of Economic Growth: A Non-communist Manifesto*. London, Cambridge University Press.
- Barrett, C.B. (2004). Rural poverty dynamics: Development policy implications. Paper prepared for invited presentation at the 25th International Conference of Agricultural Economists. Durban, South Africa.
- Central Bureau of Statistics, 2003
- CNCC, 2007, *Annuaire maritime national, 9e partie- Transports*. Douala
- Francis, E., and J. Hoddinott (1993). Migration and differentiation in Western Kenya: a tale of two sub-locations. *Journal of Development Studies* 30 (1): 115–145.
- Gauthier, A. & Hook, W. 2005. Tapping the market for quality bicycles in Africa. *Sustainable Transport* 19: 8-11, 30. 51
- Gauthier, A. 2005. Scaling up for healthcare mobility in Africa. *Sustainable Transport* 19: 20-23, 25.
- Haggblade, S., P. Hazell, and T. Reardon (2005). The rural non-agricultural economy: pathway out of poverty or pathway in? International Food Policy Research Institute and Michigan State University. Proceedings of the research workshop ‘The Future of Small-Farms’, June 26–29, 2005, UK.
- Howe J., 2003, 'Filling the middle': Uganda's appropriate transport services, *Transport Reviews*, n°2, p.161-176.

- Howe J., Maunder D.A.C., 2006, Boda boda – lessons from East Africa's growing NMT industry, communication to the 10th World Conference on Transport Research, Istanbul, 4-8 July, 2006, 10 p.
- Islam, N. (1997). The nonfarm sector and rural development. Food, Agriculture and Environment Discussion Paper 22. Washington D.C: International Food Policy Research Institute.
- Jalan, J., and M. Ravallion (1998). Geographic Poverty Traps? Institute for Economic Development, Discussion Paper 86. Boston University.
- Kumar A. (2011), Understanding the emerging role of motorcycles in African cities, A political economy perspective. April 2011.
- Lerman, R.I., and S. Yitzhaki (1985). Income inequality by income source: a new approach and application to the United States. *Review of Economics and Statistics* 67: 151–156.
- Marenja, P.P., W. Kosura-Olouch, F. Place, and B. Christopher (2003). Education, nonfarm income, and farm investment in land-scarce Western Kenya. BASIS BRIEF 14, February 2003.
- Naddumba, M.M., (2011). A Cross-Sectional Retrospective Study of Boda Boda Injuries At Mulago Hospital IN Kampala-Uganda.
- Olvera D.L., Plat D., Pochet P., 2007, Household transport expenditure in Sub-Saharan African cities: Measurement and Analysis, *Journal of Transport Geography*.
- Oyesiku K.O., 2001, City poverty and Emerging Mobility Crisis: The Use of Motorbike as Public Transport in Nigerian Cities, communication at the 9th World Conference of Transport Research, Seoul, 22-27 juillet, 16 p.

- Reardon, T. (1997). Using evidence of household income diversification to inform the study of rural non-agricultural labour market in Africa. *World Development* 25 (5): 735–748.
- Reardon, T. (1999). Rural non-farm income in developing countries. Rome: Food and Agriculture Organization.
- Reardon, T., and J.E. Taylor (1996). Agro-climatic shock, income inequality, and poverty: evidence from Burkina Faso. *World Development* 24 (5): 901–914.
- Seppala, P. (1996). The politics of economic diversification: re-conceptualizing the rural informal sector in South-East Tanzania. *Development and Change* 27 (3): 557–578.
- Stark, O., J.E. Taylor, and S. Yitzhaki (1986). Remittances and inequality. *Economic Journal* 96 (3): 722–740.
- UN Habitat, 2002. The Situation faced by Young People in Kenya.
- Kopjar, B. (1999). Moped injuries among adolescents – a significant forgotten problem? *Accident Analysis and Prevention*, 31(5), 473–478
- Mack, A. and Rock, I. (1998) *Inattention Blindness*. Cambridge, MA: MIT Press.
- Kopjar, B. (1999). Moped injuries among adolescents – a significant forgotten problem? *Accident Analysis and Prevention*, 31 (5), 473–478.
- Leinbach, T. R. 2000. Mobility in development context: changing perspectives, new interpretations, and the real issues. *Journal of Transport Geography* 8: 1-9.
- Mannering, F.L. and Grodsky, L.L. (1995) Statistical Analysis of Motorcyclists' Perceived Accident Risk. *Accident Analysis and Prevention*, 27(1), 21–31.

Mohan, D. (2004) *The Road Ahead: Traffic Injuries and Fatalities in India*. Indian Institute of Technology, Transportation Research and Injury Prevention Program, Delhi, India.

Mozer, D. 2000. *Transportation, Bicycles and Development in Africa*. International Bicycle Fund: Seattle, WA.

World Bank (2002) *India's Transport Sector: The Challenges Ahead*. The World Bank, Washington, DC.

World Bank. 2002. *Cities on the Move: A World Bank Urban Transport Strategy Review*. Washington D.C.: World Bank Publications.

World Health Organization. Geneva. 2004. "World report on road traffic injury prevention"  
Edited by Peden Margie and others.

## APPENDICES

### APPENDIX A: LETTER OF TRANSMISSION

**NANDWOLI, FERDINAND .N. WEKESA,  
P.O BOX 2040,  
BUNGOMA.**

Dear Sir/Madam,

#### **RE: RESEARCH QUESTIONNAIRE**

I am a Master of Arts student at the University of Nairobi specializing in Project Planning and Management. My research project is '**Factors influencing Motorcycle Business as an effective means of transport in Kenya; A case of Bungoma South Sub-county, Bungoma County**'.

In order to gather data for the research, I have prepared a questionnaire to be filled by the heads of departments. I kindly request your assistance in this academic endeavour by filling this questionnaire. I would like to emphasize that your responses are extremely valuable to me and I would greatly appreciate you answering all the questions.

I assure you that the information provided here will be held in confidence.

Thank you in advance for your cooperation.

Regards.

**NANDWOLI, FERDINAND WEKESA NYONGESA**

**L50/84223/2012**



## QUESTIONNAIRE

### APPENDIX B: QUESTIONNAIRE

#### SECTION A: PERSONAL INFORMATION

*In this section, you are kindly requested to provide your personal information by ticking(✓) where appropriate.*

1. What is your gender?

- 1)  Female      2)  Male

2. How old are you?

- 1)  30 years or less  
2)  31-35  
3)  36-45  
4)  46-55  
5)  More than 55

3. Which of the following routes do you operate on (Tick where applicable)

1.  Nzoia-Mteremko  
2.  Mateka-Khetia Crossroads  
3.  Kibabii-Khetia Crossroads  
4.  Sang'alo-Bus stage

3. For how long have been riding motorcycles on this route (experience)?

1.  Less than 1 year  
2.  1-3 years  
3.  4-7 years  
4.  8-10 years  
5.  More than 10

**SECTION B: MOBILITY**

1. When you are operating the bodaboda motorbike business on this route, which of the following statements do you agree with? *Tick yes or no for each*

Statements	Please tick (✓) appropriately	
	YES	NO
Motorcycles can access even the unreachable places	<input type="checkbox"/>	<input type="checkbox"/>
Customers prefer motorcycles because they are faster	<input type="checkbox"/>	<input type="checkbox"/>
Motorcycles can get up to one's doorstep.	<input type="checkbox"/>	<input type="checkbox"/>
Motorcycles can carry all types of luggages?	<input type="checkbox"/>	<input type="checkbox"/>
Motorcycles can manoeuvre the poorly maintained roads	<input type="checkbox"/>	<input type="checkbox"/>
Motorcycles are not affected by poor weather conditions	<input type="checkbox"/>	<input type="checkbox"/>

**SECTION C: JOB OPPORTUNITIES**

1. Do you own the motorcycle you are riding/operating? *Tick yes or no*

1.  YES  NO

2. If NO, are you employed by the owner of the motorcycle?

1.  YES 2.  NO

3. If you were NOT riding boda boda motorcycle, indicate whether the following statements about you would be TRUE or FALSE.

Statements	Please tick (✓) appropriately	
	TRUE	FALSE
You would be sitting at home with nothing to do	<input type="checkbox"/>	<input type="checkbox"/>
You would in Nairobi or other towns searching for a job	<input type="checkbox"/>	<input type="checkbox"/>
You deliberately chose to ride the motorcycle instead of a job	<input type="checkbox"/>	<input type="checkbox"/>
The earnings from boda boda business is better and prompt	<input type="checkbox"/>	<input type="checkbox"/>
You were forced by circumstances to ride the bodaboda	<input type="checkbox"/>	<input type="checkbox"/>
You would sell a piece of land to buy a motorcycle	<input type="checkbox"/>	<input type="checkbox"/>
You prefer bodaboda business than farming	<input type="checkbox"/>	<input type="checkbox"/>

**SECTION D: ECONOMIC GROWTH**

1. On average, what is the range of your daily income from operating a boda boda motorcycle along your favourite route? *Tick one box only*

- 1.  Below Kshs. 150
- 2.  Between Kshs. 150-250
- 3.  Between Kshs. 250-350
- 4.  Between Kshs. 350-450
- 5.  Over 450

2. Since you started riding boda boda motorcycle, indicate the level of your satisfaction with the boda boda business as an economic activity in the following statements.

**5 =Strongly agree, 4=Agree, 3= Somehow agree, 2= Disagree, 1=No comment**

Statement	Please tick (√) appropriately				
	5	4	3	2	1
a) All investments I have come from boda boda operations					
b) I have bought animals from the boda boda operation					
c) I have another business with earnings from boda boda					
d) I have an account where make savings from boda boda					
e) Partnering with other organizations and groups that offer similar services					

3. Indicate whether the following statements is TRUE or FALSE.

Statements	Please tick (√) appropriately	
	TRUE	FALSE
Small towns have grown due to boda boda motorcycle business	<input type="checkbox"/>	<input type="checkbox"/>
Business operations are possible due to boda boda operations	<input type="checkbox"/>	<input type="checkbox"/>
Small petrol stations have sprung up to serve the motorcycles	<input type="checkbox"/>	<input type="checkbox"/>
There are many shops that sell spare parts for motorcycles	<input type="checkbox"/>	<input type="checkbox"/>
There are many people who repair motorcycles as a way of earning a living.	<input type="checkbox"/>	<input type="checkbox"/>
Boda boda business has enabled young men to have disposable income	<input type="checkbox"/>	<input type="checkbox"/>
The lifestyles of many families have changed because of boda boda business	<input type="checkbox"/>	<input type="checkbox"/>

**SECTION E: TRAFFIC REGULATION**

1. Do you have a valid driving licence?

1.  YES    2.  NO

2. Indicate the following statements with regard to the traffic police operations and municipal council authorities.

**4 =Very often, 3=Often, 2=Rarely, 1=Never**

Statement	Please tick (√) appropriately			
	4	3	2	1
a) Traffic police are very strict				
b) Municipal authorities are strict on parking in town				
c) A requirement for every motorcycle to have an insurance				
d) Every motorcycle is restricted to carry one passenger				
e) Traffic police ensure all regulations are met by motorcycles				
f) Experience is required for one to ride a boda boda motorcycle				

3. Which of the following does you or the motorcycle you operate possess?

	Please tick (√) appropriately	
	YES	NO
Helmet	<input type="checkbox"/>	<input type="checkbox"/>
Insurance certificate	<input type="checkbox"/>	<input type="checkbox"/>
Reflector jacket	<input type="checkbox"/>	<input type="checkbox"/>
Riders licence	<input type="checkbox"/>	<input type="checkbox"/>

*Thank you. Your participation in this survey is much appreciated!*

## **APPENDIX C: INTERVIEW GUIDE**

1. What is the traffic situation within Bungoma town with regard to Boda boda motorcycle operations?
2. What is your comment concerning the accidents caused by boda boda motorcycles?
3. Between boda boda motorcycles and matatus, which one is the major cause of accidents within Bungoma town?
4. How do you ensure traffic rules are enforced by the boda boda operators?
5. On average, how many offenders are arrested daily?
6. What measures are taken for offenders or the operators who violate the traffic rules?
7. There are operators who are employed. In case of an offence, whom do you charge between the rider and the owner of the motorcycle?

## APPENDIX D: TIME FRAME

This project proposal has been fully prepared and looking forward to for its presentation during the month of May 2014. This will pave way for the field visits and collection of necessary data during in the month of June. The data analysis will be done by July thereafter the research report will be ready for presentation.

Table 4: Work plan

ACTIVITY	MONTH						
	JAN	FEB	MAR	APR	MAY	JUN	JUL
Proposal preparation							
Proposal presentation							
Field visits/Data collection							
Data analysis and interpretation							
Report presentation							

## APPENDIX E: BUDGET ESTIMATES

<b>S/N</b>	<b>Item</b>	<b>Amount</b>
1.	Transport	30,000.00
2.	Equipment and supplies	20,000.00
3.	Data collection and analysis	20,000.00
4.	Secretarial services	15,000.00
5.	Miscellaneous contingencies	15,000.00
	<b>Total</b>	<b>100,000.00</b>

TELEGRAMS: "POLICE"



TEL: 055-30317

email: [bungomacountycommander@yahoo.com](mailto:bungomacountycommander@yahoo.com)

COUNTY POLICE HEADQUARTERS  
P.O. BOX 81,

BUNGOMA.

**REF.NO.C/GEN/6/11/(57)**

**25<sup>TH</sup> JUNE, 2014.**

**TO WHOM IT MAY CONCERN**

**REF: NANDWOLI FERDINAND WEKESA**  
**REG. NO. L50/84223/2012**

The above named person is a student at the University of Nairobi, College of Education and External Studies, School of continuing and Distance Education, Department of Extra Mural Studies pursuing a course leading to the award of Masters of Arts, Project Planning and Management.

The purpose of this letter is to let this student carry out research within Bungoma County on Motor Cycle transport and any related field.

Any assistance accorded to him will be highly appreciated.

  
**(CHARLES M. MUNYOLI)HSC,  
COUNTY POLICE COMMANDER,  
BUNGOMA COUNTY.**





UNIVERSITY OF NAIROBI  
COLLEGE OF EDUCATION AND EXTERNAL STUDIES  
SCHOOL OF CONTINUING AND DISTANCE EDUCATION  
DEPARTMENT OF EXTRA-MURAL STUDIES  
KAKAMEGA & WESTERN KENYA AREA

Your Ref:

P.O. Box 422

Our Ref: Uon/Cees/Kak/2/2/SPF/ (11)

KAKAMEGA  
KENYA

Telephone: Kakamega 056-31038

24<sup>th</sup> June, 2014

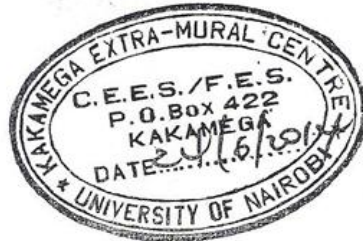
TO WHOM IT MAY CONCERN

**REF: NANDWOLI FERDINAND WEKESA - REG NO. L50/84223/2012**

This is to confirm that the above named person is a student at the University of Nairobi, College of Education and External Studies, School Of Continuing and Distance Education, Department Of Extra-Mural Studies, pursuing a course leading to the award of Masters of Arts, Project Planning and Management. He has completed the coursework and is now working on research work.

Any assistance accorded to him will be highly appreciated.

Yours faithfully,



Mr. Stephen Okelo,  
Resident Lecturer,  
Kakamega & Western Kenya Area.