RELATIONSHIP BETWEEN SOCIO-DEMOGRAPHIC CHARACTERISTICS OF MOTORCYCLE TAXI RIDERS AND THEIR SOCIO-ECONOMIC WELLBEING: CASE OF HOMA BAY COUNTY, KENYA

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DECLARATION

This thesis is my original work and has not been presented for a degree in any other University

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DEDICATION

To my very supportive parents Mr. Walter Ogoto Owuor and Mrs Judith Okinda Owuor for having unwavering confidence in me. To my lovely children Reina, Ricky and Rollan for being my motivation to serve and positively impact humanity.

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ABBREVIATIONS AND ACRONYMS

AIDS	Acquired Immune-deficiency Syndrome
DFID	Department for International Development
DTIIC	Department of Trade, Industrialization, Investment and Co-operative
FGD	Focus Group Discussion
HB	Homa Bay
HIV	Human Immuno-deficiency Virus
IGA	Income Generating Activity
ILO	International Labour Organization
KARPR	Kenya AIDS Response Progress Report
KDHS	Kenya Demographic and Health Survey
KM	Kilometer
KNBS	Kenya National Bureau of Statistics
MIS	Medical Insurance Scheme
MDG	Millennium Development Goal
MT	Motorcycle Taxi
MTR	Motorcycle Taxi Rider
NACOSTI	National Commission for Science, Technology and Innovation
NAYS	National Adolescence and Youth Survey
NBS	National Bureau of Statistics
NCPD	National Council for Population and Development
NHIF	National Hospital Insurance Fund
NGO	Non-Governmental Organization
NTSA	National Transport Safety Authority

OECD	Organization for Economic Co-operation and Development
OYOB	Own Your Own Bicycle
PBO	Public Benefit Organization
RBA	Retirement Benefits Authority
SACCO	Savings and Credit Co-operative
SC	Social Capital
SDG	Sustainable Development Goal
SEWB	Socio-economic Well-being
SRIC	Security Research and Information Centre
UHC	Universal Health Care
UN	United Nations
WHO	World Health Organization

DEFINITION OF TERMS

Demographic characteristics	The classifiable characteristics of a given population (New Mexico Department of Health, 2017)
Informal transport	Mode of transporting that is not regulated by the law Cervero, 2000).
Livelihood	Assets (including both material and social resources) and activities required for a means of living (Acholo, McNamara and Morse, 2009)
M-Pesa	M for mobile, pesa is Swahili for money. Therefore this is a mobile phone-based money transfer, financing and micro-financing service (Safaricom, 2007)
M-Shwari	M for mobile, Shwari is Swahili for 'calm' or 'smooth'. Therefore M-Shwari is a combined savings and loans paperless account which is convenient since it is linked to your phone (Safaricom, 2012)
Non-formal education	Educational activities outside of the school system (Field, 2000)
Shock	An event that can trigger decline in wellbeing, which can affect individuals, a community or a nation (World Bank, 2000-01)
Social characteristics	Attitudes that people have towards others and their possessions (Kurtus, 2014)
Social connectedness	The momentary affective experience of belonging to a social relationship or network (Van Bel, IJsselsteijn, and de Kort, 2009)

Socio-demographic characteristics	A group defined by its sociological and demographic characteristics (Koukouli, Philalithis & Vlachonikolis, 2002)
Socio-economic wellbeing	Perceived levels of satisfaction of a person with reference to education, income, health and occupation (Dodge, Daly, Huyton & Sanders, 2012).
Social inclusion	The process of improving the terms for individuals and groups to take part in society (World Bank, 2017)
Social status	Defining groups in terms of their relationship to ownership and control over the means of production, and their control over the labor power of others (Kohn and Słomczyński, 1990).
Stocks	Money invested in the product (Okutmus, Kahveci and Kartašova, 2015).
Universal health care	Health care that is provided to everyone regardless of their income, race, age, pre-existing conditions, gender, or wealth (Williams, 2015)
Wellbeing	The process of doing well and feeling good due to the material, subjective and relational possessions (White, 2008)
Wellbeing enhancement	Current and future possibilities of improving a human being's life (Savulescu, Sandberg and Kahane , 2011)
Youth	Persons between the ages of 15 and 24 (United Nations, 2000)

OPERATIONAL DEFINITION OF TERMS

Boda boda	Motorcycles that offer public transport services by carrying one or more passengers sitting behind the motorcycle rider
Communal activities	Initiatives that benefit the whole community irrespective of one's social, economic, political or any other categorization in society e.g digging a village bore hole
Demographic characteristics	Locality of motorcycle taxi operations, sex, age, highest level of education, marital status, household size, possession status of a riding license
Elderly	A person aged 50 years and above
Enterprise	The act of offering transport services using a motorcycle in exchange for money
Flows	Experiences that Motorcycle Taxi Riders (MTRs) go through at different times
Informal transport	Mode of transporting people and goods on land other than motor vehicle, train and tram
Lifestyle	These include social aspects of motorcycle taxi riders' lives such as entertainment, relationships, dressing, living conditions, ways of spending money
Livelihood	Means from which riders' support their daily basic needs of food, shelter, clothing, health care

Non formal education	Knowledge and skills acquired without attending school
Ownership status of motorcycle taxi	Whether a motorcycle taxi belongs to the rider or whether the rider is renting from someone else (self-owned or rented) respectively
Pick-up stages	Localities where motorcycle taxi riders wait for passengers
Rider	A person who offers transport services to passengers using a motorcycle in exchange for money
Self-owned motorcycle taxi	Motorcycle that is property of the rider
Shock	Sudden upsetting and surprising events experienced by MTRs such as road accidents, poor health
Social characteristic	The perception that a MTR has towards his possessions and relationships with others
Social connectedness	Relationships that result in a sense of belonging between a MTR and his/her family, colleagues and community members
Socio-demographic characteristics	Social connectedness, involvement in groups, ownership status of motorcycle taxi, localities of motorcycle taxi operation, age, gender, education level, marital status, household size and possession status of riding license of MTRs
Socio-economic wellbeing	Perceived levels of satisfaction of motorcycle taxi riders with reference to access to social services, social status, income, savings, health, safety and security

Social inclusion	The involvement of MTRs in communal activities and social functions without discrimination from the community
Social status	The rank accorded to a MTR within the community
Stock	Condition of a MTR at a particular time, with reference to demographic and social characteristics
Target	Mandatory amount of money given to the owner of motorcycle taxi by a renting rider on a daily basis
Universal health care	Health care that can be accessed by every citizen without paying any money or buying any item needed for medical attention when seeking medical care services at any public health facility
Wellbeing	Perceived levels of satisfaction among motorcycle taxi riders
Wellbeing enhancement	Improvement of motorcycle taxi riders' levels of satisfaction
Youth	Males and females aged between 18 and 35 years

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ABSTRACT

Motorcycle taxis have become a popular means of transportation which generates income for many riders in Kenya. However, there are various factors which expose riders to internal and external shocks and stresses which inevitably influences the riders' socio-economic wellbeing (SEWB). Studies that have been conducted so far largely focus on "social vices" allegedly being committed by motorcycle taxi riders (MTRs) hence a persistent knowledge gap about SEWB of riders'. Acknowledging that MTRs are a valuable community resource because they facilitate transportation of people and goods, this study investigated the relationship between socio-demographic characteristics of motorcycle taxi riders and their socio-economic wellbeing: Case of Homa Bay County, Kenya. The study objectives included to: establish the relationship between demographic characteristics of MTRs and their SEWB, assess the relationship between social connectedness among MTRs and their communities and the riders' SEWB, determine the relationship between involvement of MTRs in groups and their SEWB, analyze the relationship between ownership status of motorcycle taxi among MTRs and their SEWB and establish the levels of socio-economic wellbeing of motorcycle taxi riders in Homa Bay County. Cross-sectional community-based analytical survey design was used to investigate the problem, guided by social capital theory. Social protection approach was adopted to conceptualize this study. Simple random sampling was used to select 322 MTRs out of which 315 participated in the study, hence a 98% response rate was established. Key informants including six traffic police officers, nine officials of Homa Bay County boda boda SACCO and 10 community leaders were purposively sampled and interviewed for additional information. Research instruments used included: questionnaires, interview guide and focus group discussion guide as well as observation checklist. Data from this study was analyzed both quantitatively and qualitatively. Descriptive and inferential statistics were used to analyze quantitative data whereas qualitative data were thematically analyzed and also used to complement quantitative data. Findings were presented using tables and bar graphs. Chi-square test statistically confirmed a significant relationship ($p=0.013$) between localities of motorcycle taxi operation (rural and urban) and SEWB and a significant relationship ($p=0.036$) between ownership status of motorcycle taxi and SEWB of MTRs. Chi-square tests also revealed that there is no significant relationship ($p=0.622$) between genders of MTRs and their SEWB, MTRs riding license possession status and their SEWB ($p=0.783$), social connectedness among MTRs and their communities and the riders' SEWB ($p=0.226$) as well as MTRs involvement in groups and their SEWB ($p=0.176$). The study concluded that motorcycle taxi riders in Homa Bay County experience high levels of SEWB at 63% with probability error of 5%. Implications of the study findings to MTRs, policy makers and academic researchers were also outlined. The study recommended the following for policy, practice and further study respectively: Designing policies that promote the establishment of medical facilities within reach for MTRs and their families, promotion of riding of self-owned motorcycle taxi if disposable income of MTRs were to increase hence possibility of higher SEWB and comparative study of socio-economic wellbeing of motorcycle taxi riders who operate in the rural and urban locality.

CHAPTER ONE: INTRODUCTION

1.1 Background to the Study

Button, Hensher, Haynes and Stopher's research on transport geography (2004) as cited in Dinye (2013) noted that transport is an important element in development and it affords the social, economic and political interaction that most people take for granted. Poor access to transport constrains economic and social development and contributes to poverty whereas better transport services can stimulate economic activity and social improvement, leading to poverty reduction (Ellis, Hine, Starkey & Ternell, 2002). Motorcycle taxi enterprise is a growing transport sector which addresses the social, economic, political and cultural mobility needs of many communities. Motorcycle taxi transportation in Kenya currently falls in both the formal and informal sectors. It is formal in the sense that motorcycle taxi regulations were gazetted by national transport and safety authority (NTSA) in 2014 hence the authority regulates motorcycle taxi operations. On the other hand, it is also informal because the terms of engagement between the motorcycle owners and the riders are not legally binding, the wages and hours of work not fixed as is the case in the formal sector.

Mulley and Nelson (2009) observed that motorcycle taxi is a flexible and demand-responsive transport system which has been identified as one of the promising solutions for widespread public transport in rural areas, especially in developing countries where public transport system is underdeveloped. Porter (2013) concurs that expansion of motorcycle taxi services in Africa, which gathered pace in the 1990s, is transforming rural transport services in many countries. The expansion of motorcycle taxi transport services is necessitated by inability of many citizens to afford private

means of transport and unreliable nature of public transport systems using motorized multi-wheeler modes such as vehicles and trains (Porter, 2013).

In Kenya, Ndungu, Kibua and Masinde (2014) as cited in Nyachieo (2015) noted that overall, transport sector makes crucial contribution to economic growth and development. According to the Kenya Ministry of Transport (2009), motorcycle taxis provide relief to an inadequate transport system by supplementing passenger and goods transport services. Since the government, through the Ministry of Finance zero rated motorcycles below 250cc in 2008, Kenya has recorded increasing numbers of motorcycles ownership and use (Nyachieo, 2015). This, coupled with unemployment and poverty which are the two basic problems that are plaguing many developing nations, is prompting many young people in Kenya to ride motorcycle taxis as a source of livelihood (International Labour Organization, 2007). This is reiterated in Homa Bay County Draft Strategic Plan (2013) which indicates that motorcycle taxis have become a major means of transportation and a popular income generating activity (IGA) among the youth in the County.

Cervero (2000) recognizes that informal transport options are among the least understood, partly because little concerted research has been carried out on this mode of transport. As a result, much continues to be speculated about how motorcycle taxi transport is affecting the lives of individual motorcycle taxi riders' and communities socially, economically, politically and even culturally. The knowledge gap on socio-economic wellbeing outcomes of motorcycle taxi riders was therefore identified.

Socio-economic wellbeing is a construct that is widely studied by social scientists and can generally be defined as perceived levels of satisfaction (by an individual) towards the social and economic standards that he/she enjoys (Somaratne, Dayaratne & Wickramasuriya, 2011). Fitoussi, Sen and Stiglitz (2009) have however described wellbeing as a multi-dimensional character with elements such as material standard of living, health, education, social relations, natural environment and sense of physical and economic security. Socio-economic wellbeing is largely influenced by social, economic and human capital resources and therefore measured using indicators such as level of education, income, access to resources, political power and an individual's health (Li, Mattes, Stanley, McMurray & Hertzman, 2009). The study by Li et al (2009) observed that in as much as the ideal situation is high SEWB, there are factors that constrain the wellbeing of individuals, especially populations that are vulnerable and inadequately prepared to cope with shocks. This study observed that the nature of work being done by motorcycle taxi riders expose them to income, health, safety and security shocks which inevitably influences their socio-economic wellbeing.

In this study, socio-economic wellbeing has been operationalized as perceived levels of satisfaction towards access to social services, social status in the society, income, savings, health, safety and security. Notably, hardly any research had been done on the relationship between socio-demographic characteristics of motorcycle taxi riders and their socio-economic wellbeing outcomes. Homa Bay County has approximately 20,000 motorcycle taxi riders as indicated in Homa Bay County Motorcycle Taxi Industrial Cluster Implementation Strategy 2014/2015. Among this population, 77% are youth. According to Shah and Marks (2004) as cited in Dodge, Daly, Huyton and Sanders (2012), wellbeing means developing as a person, being fulfilled and making

contributions to the community. In this regard, this study argued that enhancing the socio-economic wellbeing of this youthful population can maximize their contribution to the development of their communities.

1.2 Problem Statement

Kenya Demographic and Health Survey (2008-09) recorded that 76% of Homa Bay County's population are youth aged below 30 years. It also indicates that for an estimated 65% of Homa Bay County's population, the highest education attained is primary level of education, a situation that reduces chances of securing professional formal employment among this segment of the population. The need to earn a living therefore pushes many young people to venture into motorcycle taxi enterprise either by riding rented motorcycle taxis or as entrepreneurs riding self-owned motorcycle taxis (Cervero, 2000).

Although Motorcycle Taxi Riders are a valuable community resource due to the reliable and accessible transport services they offer, research done so far has widely focused on social "vices" that are allegedly being committed by the riders. These "vices" include: contribution towards increase in traffic accidents (Manyara, 2013; Mbugua, 2011), involvement in aiding run-away criminal activities such as abductions, robberies and murder (Achula, 2015) as well as accusations that motorcycle taxi riders' are increasing the prevalence of teen pregnancies and school drop-out rates among girls in rural areas (National Council for Population and Development, 2014; National Adolescents and Youth Survey, 2015; Bwayo, 2016).

Even though studies earlier conducted acknowledge that motorcycle taxi enterprise provides a livelihood option for many youth, there are various factors which expose motorcycle taxi riders to shocks and stresses thereby influencing their socio-economic wellbeing. For instance, Manyara (2013) recorded that Kenya's largest referral hospital, Kenyatta National Hospital's wards 6A, C and D have been converted into emergency wards to receive victims of motorcycle taxi accidents. Traffic fatalities and injuries in developing countries have consequently resulted in social and economic problems, especially among the poor who may lack health insurance, prompting them to sell their property or spend their savings to pay for medical treatment (Mbugua, 2011). Generally, socio-economic wellbeing of riders is an area that has received little attention from researchers. The knowledge gap on socio-economic wellbeing of motorcycle taxi riders has led to lack of policies and evidence-based interventions that could enhance the riders' wellbeing and subsequently, maximize the riders' contributions to the development of their communities.

1.3 Purpose of the Study

The purpose of this study was to investigate the relationship between socio-demographic characteristics of motorcycle taxi riders and their socio-economic wellbeing outcomes: Case of Homa Bay County, Kenya.

1.4 Objectives of the Study

The study was guided by the following objectives:

i. To establish the relationship between selected demographic characteristics of motorcycle taxi riders and the riders' socio-economic wellbeing

ii. To assess the relationship between social connectedness among motorcycle taxi riders and their communities and the riders' socio-economic wellbeing

iii. To determine the relationship between involvement of motorcycle taxi riders in groups and their socio-economic wellbeing

iv. To analyze the relationship between riders' ownership status of motorcycle taxi and their socio-economic wellbeing

v. To establish the levels of socio-economic wellbeing outcomes of motorcycle taxi riders in Homa Bay County

1.5 Hypotheses

The following hypotheses were tested in this study:

H_{01} There is no significant relationship between selected demographic characteristics of motorcycle taxi riders in Homa Bay County and their socio-economic wellbeing

H_{02} There is no significant relationship between social connectedness among motorcycle taxi riders and their communities in Homa Bay County and the riders' socio-economic wellbeing

H_{03} There is no significant relationship between motorcycle taxi riders involvement in groups and their socio-economic wellbeing

H_{04} There is no significant relationship between ownership status of motorcycle taxi and the riders' socio-economic wellbeing

1.6 Significance of the Study

This study established factors that influence socio-economic wellbeing of motorcycle taxi riders and recommended viable evidence-based interventions aimed at enhancing

the riders' quality of life. This is in line with sustainable development goals (SDG) 3.4 on promoting wellbeing, 3.6 on halving the number of global deaths and injuries from road traffic accidents, 3.8 on access to quality essential health-care services as well SDG 8.3 on promoting development-oriented policies that support entrepreneurship, growth of micro, small and medium-sized enterprises. Results of this study will be beneficial to motorcycle taxi riders who will get to know which options could be explored to enhance their socio-economic wellbeing. Within the academic milieu, the study findings will also bridge the knowledge gap on socio-economic wellbeing of motorcycle taxi riders. The knowledge can inform program developers and policy makers on possible targeted interventions aimed at improving the informal transport sector and enhancing the riders' socio-economic wellbeing. In addition, study findings may be used for further research by social and academic researchers to increase the knowledge base about motorcycle taxi enterprise.

1.7 Delimitations of the Study

Motorcycle taxi riders aged 18 years and above who were operating in Homa Bay County formed the scope of this study. This was because those aged below 18 years were considered to be minors who should not be involved in labour for payment as stipulated in The Children Act, Cap. 141, Revised Edition 2012 [2010] of the laws of Kenya.

1.8 Limitations of the Study

The limitation of this study was the withdrawal of some motorcycle taxi riders from the study during the survey as they opted to transport customers who showed up at the pick-up stages. While others returned to complete the questionnaires, some did not.

1.9 Theoretical Framework

This study was guided by social capital theory.

1.9.1 Social Capital Theory

Social capital (SC) is defined by the Organization for Economic Co-operation and Development (OECD) as "networks together with shared norms, values and understandings that facilitate co-operation within or among groups" (Cote & Healy, 2001, p.41). According to Babb and Mc Ormand (2005), in economics, social capital is viewed as a resource that can be mobilized and utilized for gain or advancement, personally or for someone else. These two definitions have been adopted for this study, with OECD's definition representing the social aspects and Babb and Mc Ormand's definition representing the economic aspect of mototcycle taxi riders' wellbeing.

The Full Frame Initiative (2013) on the other hand defines social capital as the actual and potential social resources available to individuals, groups or communities through connections. These relationships could be with family, friends, colleagues, communities, the government, local authorities and non-governmental organizations (NGOs) or other private organizations. Requena (2003) as cited in Claridge (2004) suggested that social capital theory is important because it brings together several important sociological concepts such as social support, civil society, social connectedness, integration and social cohesion. Somaratne, Dayaratne and Wickramasuriya (2011) note that social capital is an important resource in creating wellbeing and define it as the total stock of social relationships that an individual possesses.

Therefore, social capital among motorcycle taxi riders is a resource that can be harnessed and exploited for enhanced wellbeing of the riders. For instance, when riders organize themselves in welfare or investment groups, financial resources can be pooled to assist in mitigating the effects of social or economic shocks thereby reducing vulnerability. Social capital theory is multidimensional and multidisciplinary with various SC components which can be operationalized depending on the context of application. Claridge (2004) noted that even though SC theory is multidimensional with varied definitions, commonalities of most definitions are the focus on social relations that have productive benefits. This study focused on the following SC theory components: group dynamics, sense of belonging, trust and networks as indicated in Figure 1.1.

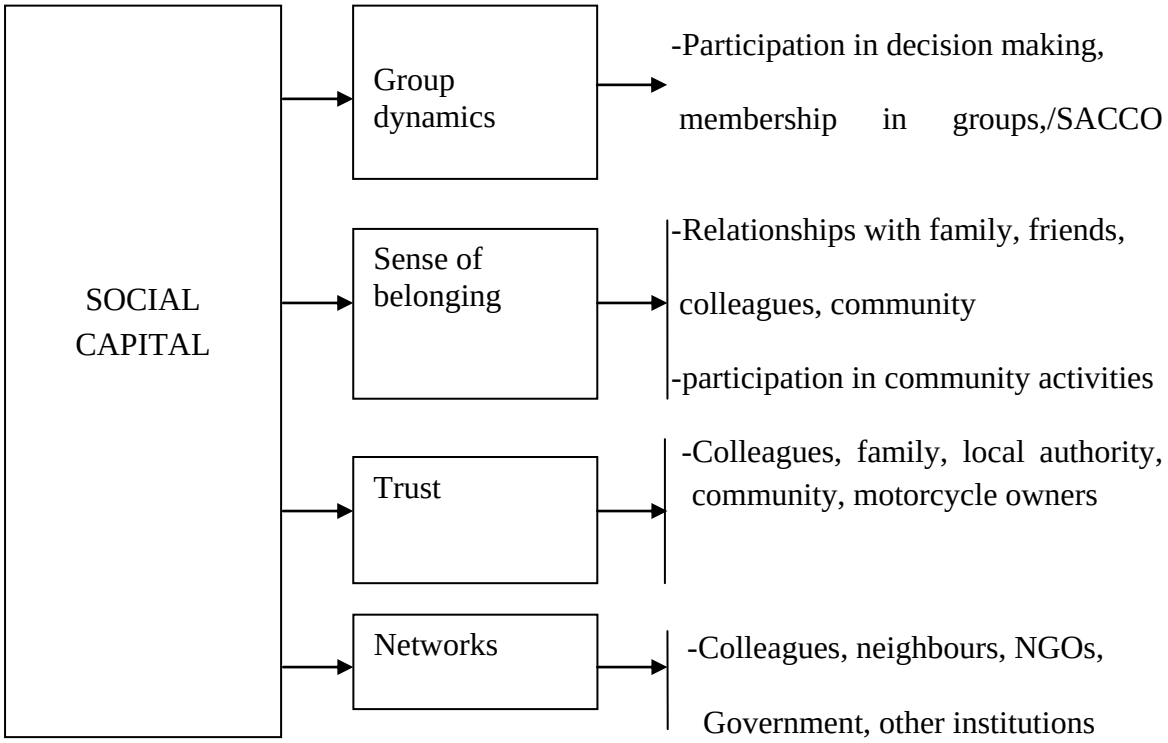

Figure 1.1: Social capital components which can benefit motorcycle taxi riders

Source: Adopted and modified from Narayan and Cassidy (2001)

1.9.1.1 Group Dynamics

Group members often have people with varied opinions, ideas and general outlook towards life; qualities that can help in sound decision making. These dynamics can act as a resource when motorcycle taxi riders learn from and support one another as well as save in groups or SACCOs, pool resources, take loans and invest.

1.9.1.2 Sense of Belonging

Whenever motorcycle taxi riders have good and healthy relationships with family, friends, colleagues and the community, they are likely to willingly participate in activities that benefit them and community members due to the sense of belonging hence ownership.

1.9.1.3 Trust

Social capital can have positive outcomes if there is trust among group members. For instance, if motorcycle taxi riders join savings groups where they trust one another with their money, take loans and invest, deposits can increase and economic power of members improved hence possibility of higher socio-economic wellbeing.

1.9.1.4 Networks

Networks are interconnections or individual social relationships among people. Motorcycle taxi riders could have connections that are diverse. These connections can be tapped into for opportunities, knowledge, skills and best practices with the aim of enhancing the riders' socio-economic wellbeing.

1.10 Conceptual Framework

Key concepts in this study are illustrated in Figure 1.3 and subsequently discussed:

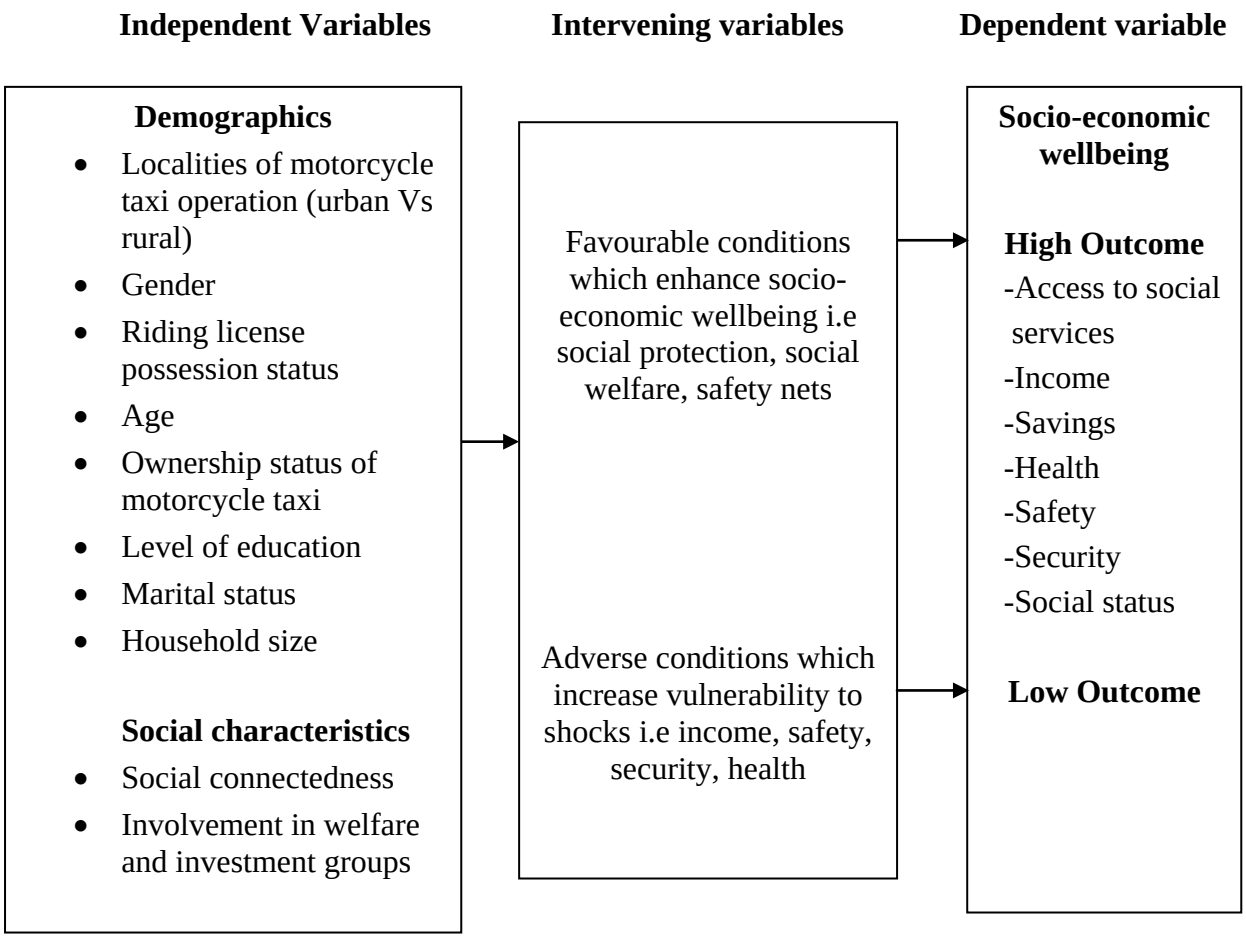

Figure 1.3: Conceptual Framework of the relationship between the study's independent variables and the dependent variable

Source: Adapted from Headey and Wearing (1991)

As shown in Figure 1.3, the study conceptualizes that demographic and social characteristics of motorcycle taxi riders' can influence the riders' socio-economic wellbeing. Whether the socio-economic wellbeing of a motorcycle taxi riders' will be high or low is however determined by the intervening variables which are favourable

conditions or adverse conditions respectively. Analyses of favourable conditions which can enhance socio-economic wellbeing of motorcycle taxi riders' have been guided by the social protection approach. Subsequently, analyses of adverse conditions which can lower socio-economic wellbeing of motorcycle taxi riders' have been discussed.

1.10.1 Social Protection Approaches

As illustrated in Figure 1.3, social protection approaches have been adopted as enablers of favourable conditions which can enhance the socio-economic wellbeing of motorcycle taxi riders. For instance, when a motorcycle taxi rider is riding a self-owned motorcycle, they do not remit daily target to their "employer" as is the case with those renting motorcycles. This therefore leaves them with more disposable income which enhances their economic wellbeing. Kenya National Social Protection Policy (2011) indicates that social protection can be achieved in totality through social assistance, social security and health insurance. According to Holzmann and Jorgensen (1999), social protection encompasses public interventions meant to assist individuals, households and communities in better management of income risks.

World Bank (2017) broadens the term by defining social protection as a collection of measures to improve or protect human capital, ranging from labour market interventions, publicly mandated unemployment or old-age insurance to target income support. When motorcycle taxi riders' come together in welfare or investment groups, they can organize for trainings on personal development, road safety, communication skills, entrepreneurship, financial management and others so as to improve their human capital for better socio-economic outcomes. This study argues that it is

important for motorcycle taxi riders' to enhance their socio-economic wellbeing by having social protection measures which can reduce their vulnerability whenever a rider's income, savings, health, safety and security is compromised.

Inversely, in the absence of favourable conditions, adverse conditions set in to increase vulnerability among motorcycle taxi riders'. These adverse conditions may include: exposure to shocks that are social, economic, political, cultural or environmental in nature such as inadequate income, insecurity, involvement in road accident and inability to access medical care. The study observed that the differences in riders' socio-economic wellbeing are largely due to their demographic and social characteristics. Consequently, these characteristics influence the riders socio-economic wellbeing outcomes either positively (high SEWB) or negatively (low SEWB). It is important to note that socio-economic wellbeing of motorcycle taxi riders is dynamic. For instance, a motorcycle taxi ride could have been renting a motorcycle at the time of this study hence low disposable income, low social status and possible low socio-economic wellbeing.

However, when the rider saves and eventually buys own motorcycle taxi, their income and social status could improve hence possible high SEWB. In order to continuously enhance the socio-economic wellbeing of motorcycle taxi riders', there is need therefore to identify adverse conditions that the riders' experience together with the motorcycle taxi riders' capabilities. Using local and externally sourced resources while actively engaging motorcycle taxi riders, the study argues that adverse conditions can be addressed for the benefit of many motorcycle taxi riders.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter begins with literature about motorcycle taxi as a mode of transport. The subsequent sub-sections focus on literature on demographic characteristics of motorcycle taxi riders, social characteristics of motorcycle taxi riders and measures of the riders' socio-economic wellbeing; in line with the study objectives. The chapter concludes by summarizing the knowledge gap that informed this study.

2.2 Motorcycle Taxi

Motorcycle taxi as a mode of transport is rapidly growing in different countries in the world (Kumar & Barret, 2008). This was attributed to the global increase in motorization particularly in low and middle income countries, and the disorganized and inefficient transport systems in many developing countries. Particularly, many inhabitants of rural areas in developing countries lack adequate and affordable access to transport infrastructure and transportation services. Kumar (2011) observed that ownership of private cars is low in developing countries thereby forcing communities to develop creative solutions to meet their daily travel needs. This supports the argument by Cervero (2000) that availability of motorcycle taxi in the developing world is due to the existing market in addition to their inherent advantages such as door-to-door service capabilities, ability to access narrow footpaths that are inaccessible by other motorized modes, fast speeds and affordability compared to other modes of transport. Door-to-door services by motorcycle taxis could be a starting point for harnessing social capital among motorcycle taxi riders and their communities with regards to developing trust, networks and even sense of belonging

from the interactions. These networks can be utilized for advancement of all parties involved and the community at large.

During the colonial era across Sub-Saharan Africa, bicycle taxis were used to transport goods and men. As the need for affordable public transport increased, motorcycle taxis slowly replaced the bicycles. According to Chinwokwu, Ojedoku and Michael (2013), after the economic recession of Late General Murtala Mohammed administration of 1975/1976, the use of motorbikes as means of transport gained acceptance as many retrenched workers and jobless Nigerian youth began to use motorcycles as a means of livelihood. This benefits the riders as well as their community who get reliable and accessible transport services. Motorcycle taxi as a mode of transport then expanded to other West African countries such as Niger and Cameroon in the 80s (Nkede, 2012). According to Mokuwa and Peters (2017), the spread of commercial motorcycle taxis started from the early 2000s when the civil wars came to an end in Sierra Leone and Liberia. This was because many car taxis were either destroyed or driven to safety and sold in neighbouring countries during the war. In addition, lower purchasing costs of motorcycles as compared to cars and mini-buses, lack of road construction and maintenance also contributed to the introduction and rapid spread of motorcycle taxis in both countries, first in the urban areas and later to rural localities.

Mahlstein (2009) as cited in Obiri, Singoro, Wakhungu and Were (2016) noted that while the motorbike taxi is very popular in Uganda and Kenya under the name of boda-boda, it's use has above all developed in West and Central Africa under a variety of different local names: *zemidjan* in Benin and Togo, *bendskin* in Cameroon,

kabu-kabu in Niger, *okada* or *alalokin* in Nigeria and *oleyiain* in Togo. Howe and Maunder (2004) as cited in Nkede (2012) indicated that in East Africa, motorcycle taxis, referred to as "*boda-boda*" in Kenya and Uganda emerged in the 1960s. The name boda boda originated from the transportation of people across Kenya-Uganda border. The operations of these bicycle taxis started in southern border crossing the town of Busia (Uganda) and quickly spread to the northern border town of Malaba (Kenya). The transportation of goods and people across borders of Kenya and Uganda has led to a lot of business connections, intermarriages and friendships that has contributed to social cohesion and development of both Countries.

2.3 Demographic Characteristics of Motorcycle Taxi Riders and Wellbeing

2.3.1 Age and Education of Motorcycle Taxi Riders

According to Cervero (2000), many riders are uneducated and unskilled therefore cannot get jobs in highly competitive formal job markets. Cervero (2000) further argues that motorcycle taxis in Sub-Saharan Africa are commonly involved in accidents because of aggressiveness, inexperience, tendencies to 'show off', youthfulness of riders' in addition to many riders taking drugs to immunize themselves from the hot sun and rigors of work. This could be an indication that certain characteristics among the riders are partly contributing to their socio-economic wellbeing outcomes. According to Nkede (2012), it is a law in Cameroon that riders must be at least eighteen years of age and a holder of Category "A" driving license. However, these riders do not comply with the regulatory measures put in place and are perceived as outlaw citizens. This study argues that these kind of perceptions are marginalizing the motorcycle taxi riders without establishing what factors could be contributing to their behaviour. Nkede (2012) reiterates that motorcycle taxi riders in

Cameroon have spearheaded strikes and are at the backbone of a number of social unrest in locations where they operate. These are indications of a population that is projecting their frustrations, probably because their communities or government does not seem to care about their wellbeing even though they have social capital that can be a resource if positively utilized. According to International Labour Organization (ILO, 2005), unemployment can result in hopelessness, frustrations and loss of productivity which is detrimental to the socio-economic wellbeing of the unemployed and slow growth of a nation.

Unemployment rate in Kenya increased to 40% in 2011 from 13% in 2006 with the highest percentage of the unemployed in Kenya being youth aged between 18 and 34 years (KNBS, 2012). The need to earn a living continue to push young people to venture into the informal sector while others settle for jobs that are low-paying, unsafe, temporary or jobs for which they are overqualified (Bennell, 2007). Motorcycle taxi riding is one such job that can be unsafe, temporary and sometimes ventured into by over-qualified people just to eke out a living. The high unemployment among youth could be due to the high numbers of graduates leaving institutions of higher learning yet the economic growth is not producing commensurate job opportunities.

It is for this reason that the wellbeing of motorcycle taxi riders should be enhanced to promote job-creation and productive engagements among the youthful population. A people who feel that their wellbeing is prioritized by their employer, community or government are likely to be committed to making positive contributions in their communities.

According to McCowan et al (2016) in a research commissioned by British Council, there are no official statistics to indicate what proportion of unemployed youth are university graduates, adding that recent expansion of the university sector has contributed to the perceptions that a number of the increased number of graduates joining the labour market are failing to obtain jobs because they are "half-baked". In an attempt to address this situation, institutions of higher learning have been encouraged by Commission for Higher Education, employers and other stakeholders to offer practical skills courses which could produce entrepreneurs or job-creators and consequently promote self-employment as opposed to job-seekers (ibid). Motorcycle taxi enterprise is a sector that largely promotes self-employment hence the need for the government and stakeholders to support it.

The impending partnership between the Kenya Government and the World Bank to revamp and reform Vocational Education and Training Institutes in the country is also aimed at producing graduates that match industry needs. This is likely to positively contribute towards reducing unemployment in Kenya. Motorcycle taxi enterprise is a sector that could benefit from this initiative. For instance, many youth could be trained as competent mechanics of motorcycles which will consequently promote self-employment, create job opportunities and consequently enhance their socio-economic wellbeing. The World Bank (2017) observed that unemployment rate among youth aged between 15-24 years who are available and actively seeking for employment significantly reduced to 22.2% in 2016. The World Bank report further noted that informal employment exceeds 50% in developing countries. Motorcycle taxi enterprise is one such source of informal employment to people who would otherwise

be unemployed. This therefore means that motorcycle taxi enterprise is reducing unemployment and other social vices that result from idleness.

2.3.2 Localities of Motorcycle Taxi Operations and Wellbeing

Larkin (2008) as cited in Sopranzetti (2013) argued that mobility constitutes and shapes the birth, growth, and functioning of the modern metropolis, adding that the circulation of people and objects establishes infrastructures. According to the Ministry of Transport (2009), in Kenya, motorcycle taxis operate in urban areas as well as many rural areas. Motorcycle taxis provide relief to an inadequate transport system in rural areas while in urban areas they supplement passenger and goods transport services. This therefore means that motorcycle taxi riders in the rural areas are likely to be on higher demand with respect to transport services compared to the urban areas. This however might not translate to their wellbeing based on a number of factors such as: income (transport charges in some rural areas are quite low), availability of customers, competition for customers among the riders, security, health of the rider, harsh terrain among other challenges.

Studies conducted in Kenya have largely focused on motorcycle taxi operations in towns: Mbugua (2011) in Thika town, Chepchieng' (2011) in Kitui town, Kayi (2007) in Nairobi city, Nyachieo (2013) in Kitengela township, Alando and Scheiner (2016) in Kisumu town and Nyachieo (2015) in Kisumu town, with many focusing on economic growth and employment opportunities. However, analysis of how the benefit from motorcycle taxi riding in the stated towns is influencing the wellbeing of the riders still persists as a knowledge gap. Bearing in mind that devolved governments have increased economic activities hence transportation needs at rural

community levels, there is need to conduct studies on motorcycle taxi operations in the rural areas for comparative analysis.

2.3.3 Gender and Wellbeing

World Bank (2002) defines gender as culturally based expectations of the roles and behaviors of males and females, adding that the term gender distinguishes the socially constructed from the biologically determined aspects of being male and female. With reference to motorcycle taxi enterprise, the aspect of gender can be viewed in two perspectives namely male or female (i) passenger or (ii) service provider (motorcycle taxi riders). Mokuwa and Peters (2017) remarked that informal transport operators provide flexible and market-responsive services which are better suited to women's complex travel demands. Likewise, Appiagyei and Tuffour (2014) also noted that patronage of motorcycle taxi services in the Accra metropolis is gender and age-biased as majority of the riders are male and young, making most females passengers and the males motorcycle taxi riders. Appiagyei and Tuffour (2014) further observed that the female gender is generally less likely to find employment in urban transport sector due to unequal power relationship between the sexes (i.e. 'patriarchy').

Aspects such as gender-based division of labor, disparities in power and control of resources often favour one gender while marginalizing another depending on the context. This trend is likely to have changed to some extent due to the women empowerment and equality debates across the world. Professions or jobs that were previously viewed as reserved for specific genders are no longer the case. However, the female gender may be physically weak for the rigours of motorcycle taxi riding hence likely to put in fewer working hours compared to their male counterparts. This

may therefore affect their economic wellbeing. In the same regard, a female rider juggles between earning income and raising children; a factor that could be physically and mentally exhausting thereby affecting the rider's wellbeing with reference to health.

2.3.4 Riding License Possession Status and Wellbeing

A riding license is a document issued as an authority allowing a person to ride on public roads. In Kenya, the riding license is issued to a person aged 18 years and above since the law considers one an adult at this age. In spite of this, there are people who use motorcycles to transport passengers and goods without valid riding licenses. Cities Development Initiative for Asia (2011) established that motorcycle taxi transportation, like other informal public transportation across the world is characterized by: operating without licenses, use of unregistered means of transport, picking up of passengers from undesignated places and operators not following traffic rules. This predisposes the riders to traffic accidents and conflict with the authorities. As a result, their safety and general wellbeing is compromised.

In the year 2015, National Transport and Safety Authority (NTSA) in Kenya gazetted motorcycles regulations aimed at bringing safety and order to the transport industry (Kenya Gazette Supplement, Legal Notice No. 19). Among the regulations is a requirement that every motorcycle taxi rider must have Public Service Vehicle (PSV) insurance, riders must be licensed by NTSA and every rider must have a valid riding license and minimum third party insurance before carrying passengers on Kenyan roads. Despite the regulations, inconsistent enforcement of the laws leaves loopholes

that are often taken advantage of by some motorcycle taxi riders, oblivious of the risks to the rider, passengers and other road users.

2.4 Social Characteristics and Wellbeing of Motorcycle Taxi Riders

2.4.1 Social Connectedness and Wellbeing

According to Full Frame Initiative (2013), social connectedness is the degree to which a person has a sufficient number and diversity of relationships that allow him to give and receive information, get emotional support and material aid as well as create a sense of belonging and value. Full Frame Initiative (2013) adds that the quantity, quality, and diversity of people's social connections, as well as their perceptions of those connections matter. Social connectedness was conceptualized as the feeling by motorcycle taxi riders that they are valued by family, friends, colleagues and the community to an extent that the riders willingly participate in communal activities and social functions. People can be socially connected as members of welfare or investment group, colleagues or other associations with trust for each other, sense of belonging and ability to network. These are some of the social capital components that this study views as resources that can enhance socio-economic wellbeing of motorcycle taxi riders if tapped and developed. Positive social connectedness results in social inclusion whereas negative social connectedness results in social exclusion, which is detrimental to an individual's wellbeing.

According to the World Bank (2017), social inclusion is the process of improving the terms, abilities and opportunities for individuals and groups to take part in society. Kenya is a signatory to SDGs and as envisaged in SDG 16, United Nations (UN) members countries should promote peaceful and inclusive societies for sustainable

development, provide access to justice for all, have accountable and inclusive institutions by 2030 so as to "leave no one behind" (Sustainable Development Goals, 2015). Therefore, there is need for the government, NGOs and communities to promote initiatives that foster social connectedness among motorcycle taxi riders and their communities. Such initiatives can promote the riders' active involvement in communal and societal functions. This can in turn enhance the riders' socio-economic wellbeing.

This study argues that lack of social connectedness can lead to self-exclusion or social exclusion. Self-exclusion is whereby a person 'stays away' from people whereas social exclusion is whereby people stay away from a person. The reasons for either are varied. For instance, self-exclusion can be due to low self-esteem, poverty or inert qualities whereas social exclusion is largely influenced by unjust structural systems. World Bank (2017) further reiterate that failure to include people or individuals in communal activities or social functions (social exclusion) can be costly socially, politically and economically with damaging consequences on human capital development, adding that social exclusion can be manifested through stereotypes, stigmas, race, ethnicity, gender identity and economic or disability status. Social connectedness between riders and their communities is therefore important if the riders' human capital is to be developed for their benefit and that of their community. Stereotypes that motorcycle taxi riders are outlaw citizens (Nkede, 2012) among other negative perceptions erode the riders' connectedness with their communities with implications on their social status and participation in their communities.

Olvera, Plat, Poche and Sahabana (2012) noted that the increasing role of motorbike taxis in public transport gradually led the authorities in Cameroon to acknowledge this mode of public transport and possibly come up with regulatory policies. Olvera and colleagues (2012) further indicated that within a short time, motorbike taxis came to be demonized by the general public because of their competition with other operators, their power as a pressure group, their aggressive behaviour and riding skills and the negative externalities (accidents, air pollution, security) that they generate. These attributes can contribute to negative perceptions about motorcycle taxi riders which consequently may affect the riders' social connectedness hence possible lower levels of socio-economic wellbeing.

2.4.2 Involvement in Welfare or Investment Groups and Wellbeing

Involvement in welfare or investment groups is a social capital theory component that can allow members to empower and support one another in times of economic or social challenges. Groups can be set up by motorcycle taxi riders purely for financial security (SACCO) but also for social security in form of associations, simply referred to as "groups". Njoroge (2015) reported that in the Kenyan transport industry regulation, membership to a SACCO is a mandatory requirement, aimed at assisting authorities in controlling activities within the sector, as well as offering opportunities for members to save and invest. According to Homa Bay County Draft Strategic Plan (2013), the potential of motorcycle taxi enterprises had been recognized by Homa Bay County government. Subsequently, in 2014, Homa Bay County government supported motorcycle taxi riders to launch a Savings and Credit Cooperative (SACCO) society to enable riders to access affordable loans to boost their businesses, envisaging that the association would enable motorcycle taxi riders to access enterprise funds from

the national government as well as from Non-Governmental Organizations. Such initiatives, if well managed, can make motorcycle taxi enterprise more dependable hence more opportunities for youth to be financially secure. SACCOs and other groups set up by motorcycle taxi riders can assist members to save, borrow money and invest. Involvement in groups can also act as safety nets during eventualities thereby reducing vulnerability among motorcycle taxi riders.

Homa Bay County's Draft Strategic Plan (2013) indicates that the management of boda boda activities in Homa Bay County falls under the Department of Trade, Industrialization, Investment and Co-operative (DTIIC) and is reported to generate approximately Ksh. 140,000,000 (USD 1.4) million a year. Tapping into the boda boda sector by promoting set up of vibrant welfare and investment groups to pool resources and share productive ideas can improve the economy of Homa Bay County and enhance socio-economic wellbeing of motorcycle taxi riders.

2.4.3 Ownership Status of Motorcycle Taxi by Motorcycle Taxi Riders and their Wellbeing

According to Musungu (2015), the motorcycle market grew by 6.5% globally amid the global economic downturn of 2008. Tossou (1993) as cited in Nkede (2012) documented that in Vietnam, motorcycle use is extremely high due to inadequate public transport and low income levels that put automobiles out of reach for many. Musungu (2015) further observes that the situation in Vietnam resonates with Taiwan where the government records indicate that the number of automobiles per ten thousand population is around 2500, whereas the number of motorbikes is about 5000. This shows that many people in Taiwan use motorbikes compared to automobiles.

According to Mateo-Babiano and Tuan (2013), almost 100% of motorcycle taxis in Vietnam were run by individuals who owned and operated the taxi at all times, with only 5% riding motorcycle taxi as a part-time job. In Kampala, Uganda, an organization called Own Your Own Bike (OYOB) was set up by Michael Wilkerson who realized that a big portion of riders' income goes towards rent payment (target) to the motorcycle owner (Cernansky, 2012). The study goes further to acknowledge that OYOB empowers riders to own motorcycle taxis and earn more income which they can then invest in addition to starting new businesses and being able to afford school fees for their children. Cernansky (2012) in his study established that owners of motorcycle taxis, in most cases, pay standard daily target to the motorcycle owner, fuel the motorcycle then keep extra money made. Maintenance, registration costs and insurance are taken care of by the motorcycle owner.

Since the Kenyan government exempted motorcycles below 250cc from paying tax in June 2008, many young Kenyans joined the motorcycle taxi enterprise occasioned by numerous business opportunities (Nyachieo, 2013). According to KNBS (2013) the number of new registered motorcycles rose from 85,324 units in 2007 to 121,831 units in 2008, with many entrepreneurs taking advantage of the low cost of motorcycles at the time. Despite the lower prices of motorcycles, the number of new registered motorcycles has steadily decreased to 56,302 units in 2015 up from 111,124 units in 2014 (NTSA, 2015), a situation that could be related to the numerous challenges facing those in the motorcycle taxi enterprise sector. In a bid to promote local industries and create employment for the youth, Kenya Finance Act 2016 scrapped the excise tax on locally assembled motorcycles. This can be seen as the

government's efforts towards reducing vulnerability among young people who can now afford to own motorcycles or rent motorcycles owned by others for daily income.

According to Nyachieo (2013), after the zero rating of all motorcycles below 250cc, prices of motorcycles went down considerably. This prompted many entrepreneurs to get into the lucrative transport business, adding that many bought the motorcycles for their children and brothers to operate while others hired idle youth who then remitted certain amounts of money to motorcycle owners at the end of each day. Nyachieo (2013) further reiterated that majority of motorcycles on Kenyan roads belong to the "rich" and not the riders seen operating them. This observation is contrary to the findings by Mateo-Babiano and Tuan (2013) in Vietnam where almost 100% of motorcycle taxis were run by individuals who owned and operated the taxi at all times.

2.5 Levels of Socio-economic Wellbeing of Motorcycle Taxi Riders

Socio-economic wellbeing measures for this study included: Access to social services by motorcycle taxi riders, the riders' social standing in their communities, income, savings, health, safety and security among motorcycle taxi riders. A review of these measures gives an insight into the socio-economic wellbeing of motorcycle taxi riders.

2.5.1 Access to Social Services, Social Status and Socio-economic Wellbeing

According to Nkede (2012), motorcycle taxi riders in Tombel, Cameroon are viewed as instruments of both positive and negative change by the local communities. People view the fact that motorcycle taxi transport services are affordable, accessible and

reliable as a positive change that saves time and lives since people riding on motorcycle taxis reach their destinations within a short time, especially during emergencies where patients or pregnant women are rushed to hospital. Sommers (2012) as cited in Rollason (2012) observed that the bulk of motorcycle taxi riders in Kigali, Rwanda come from backgrounds of informal or illegal trade and that they continue to suffer from income insecurity. Since social status in communities is largely influenced by one's economic status, motorcycle taxi riders with income insecurity challenges are likely to experience low social status which may then have a negative effect on their socio-economic wellbeing. Eramian (2010) as cited in Rollason (2012) notes that income estimates given by motorcycle taxi riders in Rwanda are almost certainly quite inaccurate since there is a tendency amongst Rwandese to misrepresent their income to manipulate their social standing. This implies that the desire for high social status can put a lot of pressure on motorcycle taxi riders which may in turn negatively impact on their wellbeing.

2.5.2 Income, Savings and Socio-economic Wellbeing

Cervero (2000) as cited in Mateo-Babiano and Tuan (2013) asserts that motorcycle taxis create jobs and generate income for many youth. This is the general perception of the public who view motorcycle taxis enterprises as a sector that can address youth unemployment, a perception that was reiterated by Kenya's former President Kibaki during his public speech on June 1st 2011 to commemorate Kenya's attainment of internal self-rule (Madaraka day). According to Nkede (2012), in Cameroon, transport by commercial motorbikes is one of the sectors which attracted many of the unemployed youth. The difficult economic and political situation of the 1990s led to the proliferation of motorcycle taxis due to a series of lay-offs in several enterprises.

Nkede (2012) adds that motorbike taxi riders have become a new socio-economic class who are becoming a powerful lobby in the cities and villages of Cameroon.

In Vietnam, motorcycle taxi riders' productivity seemed to be low; since an average rider works almost every day (including weekends), 12 hours a day, making about 7-8 trips and half of the time is spent on waiting for passengers. This is due to the fact that many riders operate on the same route without any coordination (Mateo-Babiano & Tuan, 2013). Cervero (2000) observed that high unemployment combined with poor quality rural roads has spurred the numbers of motorcycle taxis in developing countries, with many operators earning enough money to support themselves and families. Dinye (2013) concurs that motorcycle taxi enterprise comes with host of opportunities such as employment to motorcycle mechanics and motorcycle spare parts dealers. It is also a source of revenue to the government through levies, motorcycle registration and licensing. The Kenya National Bureau of Statistics (KNBS, 2013) have also recorded that the sale of motorcycle taxis in the country injected into the economy approximately USD 7 Million in 2008 and USD 6.7 Million in 2010. The originally higher earnings could be attributed to the June 2008 directive by the Kenyan Government that motorcycles below 250cc be exempted from paying tax leading to more purchase and use for income generation. However, the decline in the amount injected into the economy by 2010 could be attributed to increase in road accidents involving motorcycle taxi riders which then reduces amount of income occasioned by injuries, medical expenses or deaths. For instance, in Kenya, deaths and injuries related to motorcycles accidents increased by 4.4%, from 451 in 2005 to 1,991 in 2013 as documented in KNBS (2012).

Fluctuation in the earnings of motorcycle taxi riders should be a source of concern for the stakeholders, with regards to sustainability of livelihoods and general wellbeing of riders. Menzel (2011) argues that motorcycle taxi riding is a double-edged enterprise both at the individual and collective level. This is because it is a source of livelihood for many families and is also a source of social challenges which affect the wellbeing of riders and the community at large.

In addition to being a signatory to Sustainable Development Goals (SDGs) spearheaded by the United Nations (UN), Kenya as a country came up with Vision 2030 as a development blueprint covering the period 2008 to 2030. Kenya's Vision 2030 was developed through a participatory and consultative process with the aim of transforming Kenya into an industrializing middle-income country that provides high quality lives to all citizens. Vision 2030 is based on three pillars: Social, economic and political development. These pillars are anchored on macroeconomic stability, energy, human resource development, security, governance reforms, equity and wealth creation opportunities among others.

According to Kenya Vision 2030 (2007), the informal economy employs 75% of the country's workers hence the need to support this economy so as to raise productivity, increase employment opportunities, increase incomes among the workers as well as to increase government revenue. Motorcycle taxi enterprise is currently a growing informal economy whose productivity could greatly improve with macroeconomic stability, security, feasible policies developed through a widely participatory process and commitment by all stakeholders in implementing the policies. The enterprise can in turn provide a lot of opportunities to create wealth within communities such as the

sale of motorcycle spare parts, wide distribution of fuel pump stations, market for mechanics repairing motorcycles, increased accessibility to markets and expansion of technical and vocational training institutes and driving/riding schools. This will inevitably engage many young people positively and provide income hence reduced chances of hopelessness that could lead to abuse of drugs and involvement in criminal activities.

Mohan (2002) as cited in Mbugua (2011) argue that there are many accidents caused by motorcycle taxis and that lost income from parents killed or seriously injured in traffic crashes can force children out of school thus affecting livelihoods of future generations as well. Such situations are likely to create a cycle of uneducated population hence hopelessness and persistent poverty, in addition to reducing economic growth of the nation.

According to the Retirement Benefits Authority (RBA, 2016), over 80% of Kenyans will end up in old age poverty for failing to save money by the time they will be retiring, adding that saving with registered RBA schemes guarantees pensioners' lifetime retirement income. In Kenya, membership to an RBA registered pension scheme is mandatory for the working force in formal employment but optional among workers in the informal sector. Since motorcycle taxi enterprise is largely informal, the riders are not compelled to save hence the likelihood of financial insecurity among this category of people upon retirement. This inevitably affects their socio-economic wellbeing outcomes since they are vulnerable to economic shocks. On the other hand, the situation can be different in case an individual is financially disciplined and committed to saving either in pension schemes or through other means.

2.5.3 Health, Safety and Socio-economic Wellbeing

HIV and AIDS is a health condition that weakens the immune system, making the infected susceptible to opportunistic infections and other diseases. National AIDS Control Council through Kenya AIDS Response Progress Report (KARPR, 2014) estimates that HIV prevalence in Kenya is highest in Homa Bay County at 27.1%. The productive segment of the population in Homa Bay such as youth boda boda riders are therefore at risk of contracting HIV and AIDS since they are sexually active. According to the National Adolescent and Youth Survey (2015), boda boda operators and teachers are the key culprits behind teenage pregnancies in Kenya, adding that drug and substance abuse, parental negligence and inadequate health information are contributing to risky and unsafe sexual behaviour which can also result in the spread of HIV and AIDS and other sexually transmitted infections. A report by Kenya National Bureau of Statistics and Society for International Development (2013) corroborate allegations that riders and fishermen across Homa Bay County entice female primary and secondary school students with free rides and promises to pay for the girls' school fees in exchange for casual sex. As a result, the riders' are at risk of reducing their disposable income in addition to compromising their health and social status within their communities.

Oduor (2010) observed that motorcycle taxi riders sometimes opt out of business when they are weakened by HIV/AIDS infection since the job is labour intensive. This can lead to redundancy hence loss of livelihood in cases where the infected cannot access professional medical care or other forms of social protection. In reference to safety on the road, Cervero (2000) states that motorcycle transport is one of the most dangerous motorized transportation. Due to the small size of motorcycles

on the road, compared to vehicles, motorcycle riders represent a vulnerable group of road users. The proliferation of motorcycle taxis has surely worsened the safety record of the informal transport sector. Hou's (2013) research, as cited in Manyara (2013) raises a concern that motorcycle taxi operating practices are geared to maximizing short-term profits as opposed to growing a sustainable enterprise that delivers quality service to its customers.

The Kenya National Bureau of Statistics (KNBS, 2012) indicates that 140,215 motorcycles were registered in 2011, with the number dropping to 93,970 in 2012. Motorcycle taxis in Kenya have for a long time operated without formally laid down regulations from the government until 2015 when National Transport and Safety Authority (NTSA) gazetted motorcycles regulations aimed at bringing safety and order to the transport industry (Kenya Gazette Supplement, Legal Notice No. 19). Motorcycle regulations assign specific safety responsibilities to motorcycle taxi riders, motorcycle taxi owners, motorcycle vendors as well as law enforcement agencies. The regulations further factor in the safety of motorcycle passengers by stating that riders must carry one passenger at a time and that the passenger must sit astride and use foot rests except for persons with disability.

The challenge however is lack of personal discipline among motorcycle taxi riders and passengers to abide by the regulations or inconsistency in the enforcement of the regulations by the traffic police and NTSA. Manyara (2013) indicated that according to the Kenyan Police Department, a total of 582 cases of motorcycle crashes were recorded in 2011 representing more than seven per cent of all road traffic crashes. The number of cases has continued to sour that several public hospitals have dedicated

some wards to victims of boda boda accidents. For instance recently Kenya's largest referral hospital, Kenyatta National Hospital's wards 6A, C and D have been converted into emergency wards to receive the swelling numbers of motorcycle accident victims (Manyara, 2013).

Statistics as reported by Permanent Secretary for the State Department of Transport, Mr. Nyakera in (DN, 2016, July 12) indicate that there have been 1454 fatalities since January 2016, with boda boda-related accidents accounting for 18% of the deaths. Traffic fatalities and injuries in developing countries have resulted in social and economic problems, especially among the poor who may lack health insurance, prompting them to forgo professional medical attention for injuries or sell their property to pay for treatment (Mbugua, 2011). According to Njoroge (2015), transport regulations in Kenya require motorcycle taxis to have commercial third party insurance cover to compensate their passengers, pedestrians and other motorists in the event of an accident.

World Health Organization (2016) estimates that over 1.2 million people die from road traffic accidents worldwide every year, with Africa leading in road fatality rates (24 per 100,000 population), way above the global average of 18 deaths per 100,000. In 2012, Kenya came up with measures to address road fatalities by establishing National Transport and Safety Authority (NTSA). The mandate of NTSA is to implement policies relating to road transport and safety, ensure the provision of safe, reliable and efficient road transport services, advice and make recommendations to the cabinet secretary on matters relating to road transport and safety among other functions. Muchui (2016, January 16) reported that NTSA has set up regulations for

motorcycles aimed at preventing boda boda (motorcycle taxi) accidents. These regulations took effect from January 2016. The new regulations require riders to have two helmets and two reflector jackets inscribed with the registration number of the motorcycle. The regulations also require riders to have Public Service Vehicle (PSV) insurance, valid riding license and minimum third party insurance. According to Mr. Maroko, a traffic commander, cases of accidents involving boda boda riders remain high due to blatant disregard of the law. As reported by Wanja (2015, November 15), NTSA through their Director General, Mr. Meja, acknowledges that boda boda riders are the leading traffic offenders forming the highest number of casualties, adding that most riders aged between 19 and 39 are reckless and not professionally trained.

Cervero (2000), in his research concluded that involvement of motorcycle taxis in road accidents in Sub-Saharan Africa is associated with aggressiveness, inexperience, tendencies to 'show off', youthfulness of riders' in addition to many riders taking drugs to immunize themselves from the hot sun and rigors of work. The principle secretary for the state department of transport, Nyakera (2016, July 12), argued that road accidents are avoidable and in cases where they occur, deaths can be avoided if regulations are adhered to and enforced consistently in an accountable and transparent manner. But until that happens, socio-economic wellbeing of motorcycle taxi riders will continue to be compromised with respect to safety, health and economically since motorcycle taxi riders who are accident victims may be compelled to spend their savings on medical care.

2.5.4 Security of Motorcycle Taxi Riders and their Socio-economic Wellbeing

Motorcycle taxi enterprise has lately been viewed as a security threat, with motorcycle taxi riders being accused of perpetrating or aiding criminals to commit crime (robberies and murders) and speedily escape from the crime scene. A report by Achula (2015, May 10) alleged that motorcycle taxi operators in Bungoma County are aiding cross-border robberies which are threatening security and diplomatic relations between Kenya and Uganda. While motorcycle taxi riders are aiding criminals they too put their lives at risk in addition to risking the lives of the community. NTSA acknowledged allegations that boda boda operators are aiding run-away crimes and ask the police to investigate and address the issue. According to Achula (2015, May 10), criminal gangs and politicians are exploiting the boda boda industry with the former disguising themselves as riders and the later using riders for political gain, especially in rallies and political demonstrations. Involvement in activities that breach public security can result in arrest and prosecution of a motorcycle taxi rider thereby negatively affecting the rider's socio-economic wellbeing.

On the other hand, studies by security research and information centre (SRIC) have revealed that motorcycle taxi riders have also become targets of criminal attacks, usually with the aim of stealing motorcycles or robbing the riders off the daily earnings. Citing Daily Nation (DN 2011, November 27), SRIC reported that a boda boda cyclist was overpowered, strangled and hacked to death by gangsters posing as passengers in Kirinyaga County before taking off on his motorcycle. In a similar incident, a report by Michuhie (2016, February 22) revealed that 18 motorcycles had been stolen and more than 10 riders left with injuries inflicted by their attackers in Githurai, Nairobi County. Michuhie (2016) added that boda boda riders are constantly

living in fear, with some contemplating quitting motorcycle taxi riding work. Cases of motorcycle taxi riders being attacked by criminals while at work continue to be reported by the media across Kenya. Whether or not motorcycle taxi riders are criminals or victims of crime is a knowledge gap that should be bridged by social and academic researchers.

2.6 Summary

This chapter has analysed documented studies on motorcycle taxi enterprise. Studies have revealed that motorcycle taxis provide a host of economic opportunities for the youth and is a source of livelihood for many families. Some studies indicate that many riders are uneducated and unskilled therefore cannot get jobs in highly competitive professional job markets. Nyachieo (2013) identified that majority of those who own motorcycle taxis in Kenya are the "rich" and not the people who are seen riding the motorcycles (riders). It was also noted that motorcycle taxi riders are at risk of ending up in old age poverty like other workers in the informal sector since joining registered pension schemes among this category of people is optional unlike those in the formal sector whose saving in the pension schemes is mandatory. In light of this, exploring the social capital among motorcycle taxi riders could help cushion the riders from shocks and stresses arising from their work.

According to Cervero (2000), involvement of motorcycle taxis in road accidents in Sub-Saharan Africa is associated with aggressiveness, inexperience, tendencies to 'show off', youthfulness of riders' in addition to many riders taking drugs to immunize themselves from the hot sun and rigors of work. Literature established that social status of motorcycle taxi riders' in Cameroon and Rwanda is both high and low

depending on specific contexts, even though overall, a number of studies and media report that motorcycle taxi riders' are responsible for social vices such as abductions, traffic accidents, run-away criminal activities and prevalence of teen pregnancies.

2.7 Gap in Literature

From the reviewed literature, it was established that previous researchers' focused on social vices allegedly being committed by motorcycle taxi riders' such as: contribution towards increase in traffic accidents (Manyara, 2013 and Mbugua, 2011), taking of drugs (Cervero, 2000), involvement in aiding run-away criminal activities such as abductions, robberies and murder (Achula, 2015) as well as accusations that motorcycle taxi riders' are increasing the prevalence of teen pregnancies and school drop-out rates among girls in rural areas (National Council for Population and Development, 2014; National Adolescents and Youth Survey, 2015; and Bwayo, 2016). "Weaknesses" of motorcycle taxi riders' such as lack of education or training hence their inability to secure professional employment opportunities (Cervero, 2000) and working as hired motorcycle taxi riders' as opposed to riding self-owned motorcycles (Nyachieo, 2013) were also noted. Consequently, a knowledge gap on socio-economic wellbeing outcomes of motorcycle taxi riders' with regards to their; access to social services, income, social status, health, savings, security and safety was identified. This study therefore attempted to bridge the knowledge gap by investigating the relationship between socio-demographic characteristics of motorcycle taxi riders and their socio-economic wellbeing outcomes: Case of Homa Bay County, Kenya.

CHAPTER THREE: METHODOLOGY

3.1 Introduction

This chapter presents the study design and how variables were measured. It also discusses the location of study, target population, sampling techniques, research instruments, data collection techniques and how data was analyzed. The chapter concludes by highlighting logistical and ethical issues that were considered for the study.

3.2 Research Design

This study employed a cross-sectional community-based analytical survey design. Cross-sectional survey was appropriate for this study because the study was conducted at a specific point in time on a representative subset of the study population. The study was also community-based in the sense that those affected by the problem (motorcycle taxi riders) themselves formed part of the research team as enumerators as well as study respondents. The design was also chosen because the study aimed at investigating why and how demographic and social characteristics of motorcycle taxi riders' in Homa Bay County were influencing their socio-economic wellbeing outcomes; based on lived experiences.

3.3 Measurement of Variables

3.3.1 Independent Variables

Demographic and social characteristics of motorcycle taxi riders' are the independent variables. The demographic characteristics included: Localities of motorcycle taxi operation, gender of the motorcycle taxi rider, age, level of education, marital status, household size and riding license possession status. The social characteristics

included: social connectedness, involvement in groups and ownership status of motorcycle taxi among motorcycle taxi riders'. Localities of motorcycle taxi operation were categorised as rural or urban and measured as such. Suba sub-county represented rural locality whereas Homa Bay sub-county represented urban locality. Gender of the motorcycle taxi riders' was measured as either male or female. Ages of motorcycle taxi riders' on the other hand were measured using age groups (18-25, 26-35, 36-47 and 48 and above). The motorcycle taxi riders' level of education was measured using levels of formal education system (Primary, Secondary, Tertiary and University) and non-formal education as a last category.

Marital status was measured by categorizing motorcycle taxi riders' into four groups: (married, single, divorced and widowed). Household size was measured by asking the exact number of people who had been living in a rider's house three months prior to the study. This was done to leave out temporary guests who may not have an effect on daily expenditure of the household. The number given was then classified into a range (less than 5, between 5 and 10 and more than 10 people in a household) for purposes of statistical analysis. Riding licence possession status was measured by asking a dichotomous question as to whether a motorcycle taxi rider is a holder of a riding licence or not (Yes or No).

Social characteristics among motorcycle taxi riders' on the other hand were measured as follows: Social connectedness was measured by asking motorcycle taxi riders' whether they participated in making decisions within their welfare groups, received invitations to community functions or participated in community functions. Involvement of motorcycle taxi riders' in welfare groups was measured by

establishing whether motorcycle taxi riders' were members of welfare groups and qualifications that allowed one to join a welfare group. Involvement in welfare groups was further measured by asking about activities of the groups, whether a motorcycle taxi riders' participates in their welfare group and whether a rider has ever received support from any of the welfare groups that they belonged to (specifications of the kind of support was sought). Ownership status of motorcycle taxi among motorcycle taxi riders' was measured by determining whether the motorcycle taxi was self-owned; that is, riding one's own motorcycle and keeping all the income, or rented; that is, riding someone's motorcycle and giving the motorcycle owner daily remittance, commonly referred to as targets. See (*Appendix I)* for measurement of variables.

3.3.2 Dependent Variable

The dependent variable for this study was socio-economic wellbeing of motorcycle taxi riders and was measured based on the motorcycle taxi riders' perceived levels of satisfaction regarding their social and economic wellbeing. Specifically, the indices used to compute socio-economic wellbeing levels in this study included dichotomous questions on seven items namely: access to social services, social status, income, health, savings, safety and security. To further inform the study, additional qualitative information on the seven items was gathered using open-ended questions. This information was used to add meaning to the quantitative responses during discussion. Access to social services was measured by asking questions on access to health centers, markets, shopping facilities, postal offices, police station, chiefs' camp and banking services. Social status of motorcycle taxi riders' was measured by asking the riders about their perception on how they are viewed by the community due to their

involvement in the boda boda business and whether they hold leadership positions within the community.

In order to measure access to health care among motorcycle taxi riders', the riders were asked whether they subscribed to a medical insurance scheme and if in the affirmative, whether they used their medical cards to access medical care. Savings was measured by asking the riders' if they were members of any investment groups or SACCO, participants who affirmed that they were members of an investment group were asked if they saved money in those groups, whether they saved money from boda boda riding, how much they saved per day, main reasons for saving and whether they contributed to retirement benefits schemes. Riders who were not members of any investment group were asked to clarify where they saved their money.

Safety of motorcycle taxi riders' was measured by asking whether motorcycle taxi riders' held riding licenses, whether they put on helmet and reflector jackets whenever they were riding motorcycles and whether they have ever been involved in a road accident while riding a motorcycle taxi. The riders were also asked if they have ever suffered any physical injury as a result of involvement in road accidents. Security of motorcycle taxi riders' was also investigated by asking the respondents whether they have ever been attacked by their passengers, been robbed off their motorcycle taxis, carried criminals in their motorcycles or rented out their motorcycles to criminals.

Except for income, each of the other six variables (access to social services, social status, health, savings, safety and security) was measured using dichotomous questions of Yes or No. Income was however measured by asking exact amount of

money a motorcycle taxi rider makes each day of the week as well as the disposable income after deducting recurrent expenditure (fuel, lunch, daily house shopping and target). Target is the mandatory amount of money given to the owner of motorcycle taxi by a renting rider on a daily basis and is therefore applicable only to those renting motorcycle taxis (Ksh.300 in the study area).The relationships between independent variables and the dependent variable measures were analyzed using Chi-square tests. Using SPSS, a composite score of all responses of socio-economic wellbeing measures were then unit weighted i.e data from each of the 7 measures of socio-economic wellbeing were equally weighted then computed to give a composite/mean score which is the outcome variable.

3.4 Study Area

The study was conducted in Homa Bay County which has six sub-counties namely; Rachuonyo North, Rachuonyo South, Homa Bay, Ndhiwa, Mbita and Suba. According to Kenya Population and Housing Census (2009), it was estimated that by the end of year 2012, Homa Bay County's population would be 1,038,858, out of which 498,472 will be males and 540,386 females. Homa Bay County was selected because of the high number of motorcycle taxi riders', estimated to be 20,000 by Homa Bay County Motorcycle Taxi Industrial Cluster Implementation Strategy (2014/2015). This is in comparison to a total of 704, 026 registered motorcycle taxis across Kenya's 47 counties as recorded by Kenya Bureau of Statistics in 2013 (therefore, approximately 14,979 per county).

According to County Government of Homa Bay Integrated Development Plan (CGHIDP) 2013-2017, poverty remains a major challenge in the county, with

majority of the poor being women and the youth. CGHIDP (2013-2017) highlighted the major factors which contribute to poverty as: high and rising unemployment, high cost of living, population pressure, poor yields, low agricultural produce prices, poor infrastructure, lack of credit and high incidence of HIV/AIDS. County Government of Homa Bay Integrated Development Plan states that absolute poverty in the county has greatly reduced from 58% in 2005/06 to 44.1% in 2011. It is noted in the CGHIDP document that the reduction in absolute poverty in Homa Bay County can be attributed to government interventions which have led to increase in livelihood opportunities hence more income to the county's population. These interventions include: the Constituency Development Fund, Local Authority Trust Fund, the Youth and Women Enterprise Funds among others. Considering the wellbeing of motorcycle taxi riders in Homa Bay County, the county government launched a motorcycle taxi riders' SACCO that was aimed at promoting savings and investment among the riders.

The study was carried out in Homa Bay sub-county and Suba sub-county within Homa Bay County. Homa Bay sub-county which has an urban orientation was selected because the introduction of devolution in 2013 created high demand for reliable and accessible transport services (Homa Bay County Strategic Plan, 2013), therefore availability of adequate number of participant for the study. Suba sub-county which has a rural orientation was however selected for the study because the sub-county has the lowest population density with fewer administrative units compared to other Homa Bay sub counties (County Government of Homa Bay Integrated Development Plan, 2013-2017). This makes the riders to experience challenges in; accessing government offices to acquire documents such as national

identity cards to be able to register in SACCOs or open bank accounts, accessing riding schools which are based in towns and health facilities which are sparsely distributed within the sub-county. In addition, low population density and sparse population distribution in the sub-county may influence the number of clients one transports each day and the distance travelled by the rider respectively. Therefore, there is a possibility of negative socio-economic wellbeing outcomes of the MTRs with reference to income, savings and health.

3.5 Target Population

The target population for this study was motorcycle taxi riders in Homa Bay County. The accessible population consisted of motorcycle taxi riders in Suba sub-county and those in Homa Bay sub-county.

3.5.1 Inclusion Criteria

All motorcycle taxi riders who operate in Homa Bay sub-county and Suba sub-county, were 18 years and above and members of Homa Bay County Boda boda SACCO were included in the study. In addition, the participants included males and females who operated the taxis at designated pick-up stages and had been full-time riders of motorcycle taxis for a minimum of one year. The later was to considerably associate the riders' socio-economic wellbeing with motorcycle taxi enterprise and not other sources of income.

3.5.2 Exclusion Criteria

Riders who were aged below 18 years and those operating from undesignated motorcycle taxi pick-up stages were excluded from participating in this study.

3.6 Sampling Techniques

3.6.1 Sample Size Determination

According to Homa Bay County Motorcycle Taxi Industrial Cluster Implementation Strategy 2014/2015, Homa Bay County has approximately 20,000 motorcycle taxis. Fisher *et al* (1991) sample size formula was used to calculate the minimum sample size for this study since the target population was estimated to be greater than 10,000. Fisher and colleagues' sample size formula is as stated below:

$$n = \frac{Z^2pq}{d^2}$$

n= desired sample size where the population is > 10,000

Z= standard normal deviate, set at 1.96 which corresponds to 95% confidence level

p= proportion in the target population estimated to have particular characteristics desired, usually estimated at 0.5

q= 1-p (proportion in the target population not having the particular characteristics desired)

d=degree of accuracy required, usually set at 0.05 level

In this study, proportion of target population with desired characteristics was set at 0.5 deviation standard, proportion of target population not having desired characteristics were also set at 0.5, Z is 1.96 and desired accuracy level set at 0.05 therefore the sample size was calculated as:

$$n = \frac{Z^2pq}{d^2}$$

$$n = \frac{(1.96)^2 * (0.5) * (1-0.5)}{0.05^2} = \frac{0.9604}{0.025}$$

Therefore **n= 384**

However, the purposively sampled target population from a registered Homa Bay boda boda SACCO was determined as 1230. Since this was below 10,000, the required sample size had to be smaller than the calculated 384. Therefore, a final sample estimate (nf) was calculated using the Fisher et al. formula:

$$nf = \frac{n}{1+ (n/N)}$$

Where:

nf = The desired sample size (where target population is below 10,000)

n = The desired sample size (when the population is more than 10,000)

Therefore:

$$nf = \frac{384}{1+ (384/1230)} = \frac{384}{1+0.312195}$$

Therefore nf = **293**

Guided by the calculated sample size (293) and attrition rate of 10% (n=29), a total of 322 motorcycle taxi riders were expected to participate in the study. Ultimately, 315 respondents participated in the study, making the response rate to be 98%.

3.6.2 Sample Selection

Purposive and simple random sampling techniques were used to sample participants for this study. A total of 24 pick-up stages within Homa Bay sub-county and Suba sub-county were purposively identified through Homa Bay boda boda SACCO. This was because all motorcycle taxi riders at these stages were registered with the

SACCO. Out of these 24 stages, nine were in Suba sub-county and 15 in Homa Bay sub-county, representing rural and urban set-up respectively. In order to obtain the sample size at each of the pick-up stages, the study began by calculating the ideal number of motorcycle taxi riders' that could have been selected from each of the 24 pick-up stages (322/24=13 MTRs per pick-up stage).

However, some stages had a bigger population compared to others hence proportionate sampling was done within the pick-up stages for representativeness. Simple random sampling was subsequently done at each of the 24 pick-up stages where a total of 315 motorcycle taxi riders' who met the inclusion criteria were selected to participate in the study. The sampling frame is indicated in Table 3.1.

Table 3.1: Sampling Frame

Localities of motorcycle taxi operation	Pick-up Stage	Stage population (Sampling frame)	Proportion (%)	Selected riders (Sample size)
Suba sub-county (*Rural*)	Kigoto	167	20	39
	Wira	42	5	10
	Nyaburu	42	5	10
	Magunga	167	20	43
	Mirore	66	8	17
	Nyandiwa	84	10	21
	Uterere	84	10	26
	Kisegi	92	11	24
	Olando	92	11	24
Total		**836**	**100**	**214**
Homa Bay sub-county (*Urban*)	Makongeni	16	4	4
	Sofia	11	3	3
	Olare	20	5	5
	Bank stage	32	8	8
	Mobishe	11	3	3
	Shivling	55	14	14
	Main stage	70	18	18
	Arujo	32	8	8
	Ka'Governor	28	7	7
	New garage	32	8	8
	Hippobuck	20	5	5
	Sauri yako	24	6	6
	Hillview stage	16	4	4
	Miwa	11	3	3
	Junction	16	4	4
Total		**394**	**100**	**101**
GRAND TOTAL		**1230**	**100**	**315**

The motorcycle taxi pick-up stages in Suba sub-county included: Kigoto, Wira, Nyaburu, Olando, Magunga, Mirore, Nyandiwa, Uterere and Kisegi whereas the

staged in Homa Bay sub-county included: Makongeni, Sofia, Olare, Bank stage, Mobishe, Shivling, Main stage, Arujo, Ka'Governor, New garage, Hippobuck, Sauri yako, Hill view stage, Miwa and Junction. Possibility of double sampling was avoided by allocating research assistants (RA) to specific pick-up stages prior to actual data collection. i.e each RA was assigned specific pick-up stages where they would administer questionnaires on different days throughout the field study. Field work lasted for 20 days (two days to train research assistants and review the research tools, five days for pre-testing of the research tools, 10 days for collecting data with each of the four research assistants administering 8 questionnaires per day and three days spent interviewing key informants).

In addition, six traffic police, nine officials of Homa Bay County boda boda SACCO and 10 community leaders were purposively selected as key informants. Since all the six traffic police officers in the entire Homa Bay County were stationed in Homa Bay town police post, all the six were selected to participate in the study (See Appendix E for the questions asked). The entire population of officials of Homa Bay County boda boda SACCO is nine hence all the nine were also selected to participate in the focus group discussion (FGD) that revealed qualitative information on variables that influence socio-economic wellbeing outcomes of motorcycle taxi riders' (See Appendix G). The SACCO officials were selected since they are riders too and their composition represents motorcycle taxi riders' from urban and rural set-up. In addition, they experience situations similar to other motorcycle taxi riders' with reference to access to social services, social status, income, savings, health, safety and security.

In order to ensure that SACCO officials were not double-sampled for the study since they are riders too, they were identified before the study and informed about the importance of not being double-sampled and requested to cooperate. The nine SACCO officials were also well known to the enumerators hence reduced chances of double-sampling. Ten community leaders who were also key informants (KIs) consisted of two ward administrators, two chiefs, two members of Homa Bay county assembly and four clan elders from Homa Bay sub-county and Suba sub-county. The KIs were purposively sampled and selected from different professional and social backgrounds so as to give diverse opinions on motorcycle taxi enterprise and the riders' socio-economic wellbeing. This was because they were viewed to be interacting with motorcycle taxi riders' in different capacities (See Appendix F for specific questions asked).

3.7 Research Instruments

A questionnaire, interview guides, focus group discussion guide and observation checklist were used to collect data for this study. The instruments captured both quantitative and qualitative data.

3.7.1 Questionnaire

A questionnaire (Appendix D) was used for the survey among motorcycle taxi riders. The questions in the questionnaire were both closed and open-ended which yielded quantitative and qualitative data respectively. The questions addressed all study objectives arranged sequentially.

3.7.2 Interview Guides

In addition, two different key informant interview (KII) guides (Appendix E and F respectively) were developed for two categories of key informants; one for traffic police officers and the other for community leaders. Appendix E focused on the socio-economic wellbeing of motorcycle taxi riders' with reference to safety whereas Appendix F focused on social connectedness and social status of motorcycle taxi riders' in the community as well as the general socio-economic wellbeing of the riders. The questions for both categories of key informants were structured in line with study objectives.

3.7.3 Focus Group Discussion (FGD) Guide

An FGD guide (Appendix G) was used for the Homa Bay County boda boda SACCO officials. The FGD guide acted as a tool for gathering qualitative information from SACCO officials with reference to the study objectives. The guide also gathered information on what can be done to enhance the riders' socio-economic wellbeing outcomes. The guide consisted of open-ended questions that allowed for probing and gave participants the option of sharing their thoughts, opinions, perceptions, beliefs and views.

3.7.4 Observation Checklist

According to Swanborn (2010), observation checklist serves a complimentary purpose by focusing primarily on human behavior, observation of physical artifacts, material resources and of people's surroundings so as to develop insight in the processes at hand. The observation guide (Appendix H) was used to observe the dressing code and

general conduct among MTRs at the pick-up stages. This information complimented data on safety which is a SEWB measure.

3.8 Pre-Testing

Pre-testing of research instruments was done on respondents who were not part of the sample for the study in order to ensure validity and reliability of research instruments. The population composed of 20 motorcycle taxi riders' who were randomly selected across four motorcycle taxi pick-up stages within Ndhiwa Township. Ndhiwa Township was selected because it is a peri-urban area within Homa Bay County hence capturing the opinions of motorcycle taxi riders' in both rural and urban settings, similar to the locations of the study. Since Ndhiwa is in Homa Bay County, cultural background and literacy levels among motorcycle taxi riders' in Ndhiwa is similar to motorcycle taxi riders' in the study sites hence the likelihood of similar interpretations and understanding of the research questions.

Pre-testing assisted in clarifying ambiguous questions and omitting or re-phrasing questions that were considered insensitive by the respondents or infringing on their privacy and security. Feedback from the pre-test was used to fine-tune the instruments before actual data collection.

3.8.1 Validity

Validity of the research instruments was assured by ensuring that the research instruments items were answering the study objectives. The study also ensured that the questions asked were clear and unambiguous. This was achieved by having a

series of discussions to review the tools with supervisors and an experienced social researcher as well as pre-testing the tools before using them for actual data collection.

3.8.2 Reliability

In order to ensure reliability of the tools for consistency of results, test-retest method was done by first administering the motorcycle taxi riders' questionnaire using same procedures to 20 motorcycle taxi riders' in Ndhiwa Township. The same questionnaire was re-administered to the same respondents after five days, responses were computed in SPSS using Cronbachs Coefficient Alpha, yielding a value of 0.72 which confirmed that the research instrument produced consistent responses hence a reliable research tool.

3.9 Data Collection Techniques

Data for this study was collected through survey, interviewing, focus group discussion and observation.

3.9.1 Survey

The principal researcher and research assistants conducted a survey where a total of 315 motorcycle taxi riders participated in the study out of the 322 determined as the sample frame. This is because some motorcycle taxi riders' got clients and left before completing the questionnaires yet they could not be replaced since all the riders who met the inclusion criteria at the selected pick-up stages had participated in the survey. Prior to data collection, a total of four research assistants (RAs) were identified based on their data collection experience, knowledge of motorcycle taxi pick-up stages in the study localities, knowledge of the main local language, ability to read and write

correct English and their availability throughout the 20 days field study period when training of RAs, pre-testing of tools, survey, FGD and interview of key informants took place.

Survey did not take place on Wednesdays and Fridays which were market days in Homa Bay town and Suba sub-county (Magunga) respectively. This was due to the consideration that motorcycle taxi transport services were on demand hence possibilities of more income for motorcycle taxi riders' compared to other days. Each of the four members of the research team administered 8 questionnaires in a day (8x4=32) for 10 days among motorcycle taxi riders' who met the inclusion criteria at the pick-up stages. The RAs were trained by the researcher on the purpose, objectives, study variables and research tools as well as on how to use the study tools to gather accurate data. A motorcycle taxi rider who is also a popular official of Homa Bay County boda boda SACCO acted as a gate keeper for the research team so as to avoid any suspicion by the motorcycle taxi riders' and to gain their confidence.

Respondents were informed about the objective of the study and their consent obtained before research assistants read out the questions and noted down the responses. The enumerators were able to take approximately one hour with each respondent to complete a questionnaire. Enumerators read the questions and interpreted to respondents in *Dholuo* (the local language) or *Kiswahili* depending on the language the respondent is most familiar with. All enumerators were fluent in both languages.

3.9.2 Interviews

Two different interview guides were used to gather information from six traffic police officers and 10 community leaders. Interviewing of key informants was deemed appropriate since the technique allowed probing which promoted clarification and sharing of detailed information. Appointments were made with the key informants at different times and venues convenient to them. At the start of the interview, the researcher introduced herself and the research assistant (RA) and gave the interviewee time to introduce him/herself too. The researcher then used the interview guide to ask questions and probe the interviewees for clarity while the RA noted down the responses. The information gathered was used to complement and corroborate some of the responses from motorcycle taxi riders' and also gave additional information regarding the study topic.

3.9.3 Focus Group Discussion (FGD)

Focus group discussion among SACCO officials who also doubled as motorcycle taxi riders was necessary for this study since qualitative information on variables which influence the socio-economic wellbeing of motorcycle taxi riders' was discussed. Focus group discussion was chosen as a technique for this study because it promoted interactive discussion of open-ended questions which allowed deeper insights into issues about socio-economic wellbeing of motorcycle taxi riders'. The discussion focused on ownership status of motorcycle, income, health, social status and social connectedness among motorcycle taxi riders. Opinions of FGD participants were also sought on initiatives that could enhance the socio-economic wellbeing of fellow motorcycle taxi riders'. According to Tynan and Drayton (2007), the composition of

between eight and twelve participants is most appropriate for FGD since it allows for meaningful interaction and easier management of the group.

Focus group discussion for this study composed of nine participants and it took place in the outskirts of Homa Bay town which reduced chances of interruptions and ensured privacy of participants. Consent of participants was sought before the FGD began and the discussion was moderated by the researcher using an FGD guide while a research assistant took notes of the discussion.

3.9.4 Observation

While interviewing motorcycle taxi riders' at the pick-up stages, the researcher and research assistants keenly observed and noted down the dressing code with reference to safety and the riders' general observable behaviour. Observation technique focussed on providing additional information used to complement what the survey revealed on road safety among motorcycle taxi riders.

3.10 Data Analysis

Data from this study was analyzed both quantitatively and qualitatively.

3.10.1 Quantitative Data Analysis

Descriptive and inferential statistics was used to analyze quantitative data by determining the frequency and percentages of variables as well as testing of hypotheses. The data was first cleaned then coded by grouping data into responses on independent variables and measures of the dependent variable. Statistical Package for Social Sciences (SPSS) version 21.0 was used to analyze the data. Frequencies and

percentages of demographic and social characteristics were calculated and cross-tabulation of independent variables by measures of socio-economic wellbeing done to assess the statistical relationship. Since variables for this study were categorical, Pearson's chi-square test for independence was conducted to test if there was a significant relationship between independent variables and the dependent variable with the probability error set at 0.05. The dependent variable had two outcomes (low SEWB and high SEWB) as indicated in the subsequent chapter (See Figure 4.2). Statistical results of this study have been presented using tables and graphs.

3.10.2 Qualitative Data Analysis

Qualitative data from interviews and FGD were analyzed by outlining emerging themes that are in line with study objectives. Data was then coded, analyzed and interpreted to identify similarities, differences and patterns in the variables. Qualitative findings and observations made at the pick-up stages were then used to discuss and add meaning to quantitative data with direct quotes from respondents being used to emphasize on key study findings.

3.11 Logistical and Ethical Considerations

3.11.1 Logistical Considerations

Research approval was obtained from Kenyatta University Graduate School (Appendix B) and consequently a research authorization obtained from National Commission for Science, Technology and Innovation (NACOSTI – Appendix C). Ministry of Transport & Infrastructure officials in Homa Bay County were also informed about the purpose of the study before its commencement. The research assistants were also trained on basic communication skills such as clarity, audibility

and inter-personal skills as well as the importance of observing ethics while interviewing respondents.

3.11.2 Ethical Considerations

Ethical approval was sought from Kenyatta University Ethics Review Committee (KU-ERC) allowing the researcher to proceed with field study. The study also considered confidentiality, anonymity and privacy of the respondents as well as ensuring that the communities in the study area were not negatively affected by the study.

3.11.2.1 Confidentiality, Anonymity and Privacy of Respondents

Even though actual names of study participants were taken during field work so as to authenticate the survey, participants' confidentiality was assured by numbering the questionnaires. Therefore, while feeding data into the SPSS, the numbers on the questionnaires were used as codes as opposed to real names of participants. While presenting qualitative data, the sex and study location where the respondent was interviewed were stated and not their real identity. During the FGD session, all the participants, the researcher and the research assistant were requested to switch off their mobile phones and put them at a central place to avoid cases of private recordings of the session. This was done because participants declined to have their voices recorded for confidentiality. Therefore no recording device or camera was allowed in the FGD room.

Among other rules governing the FGD session, participants at the FGD agreed not to mention names while sharing information to protect identities of FGD participants,

other motorcycle taxi riders and community members. Participation in the study was voluntary and participants adhered to the agreed rules. Since potential respondents were adults, the purpose of the study was clearly explained and the consent form read to them. Interview schedules were only administered to respondents who signed or put their thumbprints on the consent form (Appendix A).

3.11.2.2 Community Considerations

In order to consider the interest of communities within the study sites, survey was not conducted among MTRs who were carrying passengers but only on riders stationed at the pick-up stages so as to normalize the activities of the community as much as possible during the study period. The interview schedules were also not carried out on Wednesdays and Fridays in Homa Bay sub-county and Suba sub-county respectively. This was because these were weekly open-air market days when transportation services were in high demand hence the study avoided inconveniencing the community and the riders (however, observations at the pick-up stages took place even on market days).

CHAPTER FOUR: FINDINGS

4.1 Introduction

This chapter presents the findings of this study in line with the study objectives outlined in chapter one. The chapter begins by explaining the response rate. The independent variables which comprised of demographic characteristics and social characteristics of MTRs in Homa Bay County are then described. Subsequently, results of tested hypotheses have been presented.

4.2 Response Rate

A total of 322 respondents were sampled for the survey even though 315 participated in the study. This was because MTRs who were eligible had been exhausted at the selected pick-up stages. The response rate was therefore 98% which was deemed adequate for generalization of the study findings to the target population.

4.3 Demographic Characteristics of Motorcycle Taxi Riders

The study sought to describe the demographic characteristics of motorcycle taxi riders in Homa Bay County, Kenya. The specific demographic characteristics were localities of motorcycle taxi operations, age, gender, level of education, marital status, household size and possession of a valid riding license. Demographic characteristics of MTRs in Homa Bay County are presented in Table 4.1:

Table 4.1: Demographic Characteristics of Motorcycle Taxi Riders

	Total N=315	
Characteristic	**Frequency (n)**	**Percentage (%)**
Locality of motorcycle taxi operation		
Suba sub-county (*rural*)	214	68
Homa Bay sub-county (*urban*)	101	32
Gender		
Male	293	93
Female	22	7
Age		
18-25	9	3
26-35	233	74
36-49	57	18
50 and above	16	5
Highest level of education		
Primary	145	46
Secondary	126	40
Tertiary	25	8
University	13	4
No formal education	6	2
Marital status		
Married	224	71
Single	63	20
Divorced/Separated	9	3
Widowed	19	6
Household size		
Less than 5	208	66
Between 5-10	85	27
More than 10	22	7

	Total N=315	
Characteristic	**Frequency (n)**	**Percentage (%)**
Riding license possession status		
Yes	88	28
No	227	72

4.3.1 Locality of Motorcycle Taxi Operation

Table 4.1 shows that 68% of the respondents operated motorcycle taxis in the rural set-up and 32% operated in the urban set-up. These percentages represent motorcycle taxi riders' who operated in various pick-up stages within Suba sub-county and Homa Bay sub-county respectively. More riders at pick-up stages in the rural areas (n=214) were selected for the survey compared to a lesser number of riders in the urban areas (n=101). This is because the rural study site had minimal public service vehicles (PSV) hence a higher population of motorcycle taxi riders' to meet the demand for transport services compared to the urban setting.

4.3.2 Gender

Motorcycle taxi riders in Homa Bay County composed of males and females. Out of the 315 motorcycle taxi riders', majority at 93% (n=293) were males and minority at 7% (n=22) females. This is an indication that in Homa Bay County, more males than females venture in motorcycle taxi enterprise. Qualitative data from Focus Group Discussion (FGD) revealed that female motorcycle taxi riders' are preferred by many customers due to "proper hygiene", good bargaining skills and safe speed while transporting passengers. The females also had strategies that reduced their exposure to

insecurity risks when riding motorcycle taxis. These strategies included: carrying passengers from 8am and not earlier, stopping to transport passengers by 3 pm, dropping passengers only in open places, carrying only regular trusted customers after a background check as well as insisting on the customer paying the fare upfront to avoid a confrontation that could lead to an attack at the destination.

A female rider admitted that many criminals prefer to hire female motorcycle taxi riders' for criminal missions and to transport proceeds of crime, believing that females are rarely suspected to be criminals. She further added that she was once approached to aid run-away criminal activity but declined for fear of the possibility of losing her life if caught and leaving her children as orphans.

4.3.3 Age

The study established that 3% (n=9) of motorcycle taxi riders' were aged between 18-25 years, 74% (n=233) aged between 26-35 years, 18% (n=57) aged between 36-49 with the rest aged 50 years and above at 5% (n=16). The age categorization was informed by the understanding that different age groups perceive levels of satisfaction (SEWB) differently. Age group 18-25 was viewed as young adults who may be content with their current life as they explore opportunities and social relations. On the other hand, the age groups of 26-35 begin to have responsibilities and tend to focus more on goals. Subsequently, age groups 36-49 are in their middle age, probably more mature and beginning to diversify their livelihood options through investment. Those aged above 50 years were considered elderly and so could be preparing for retirement due to low energy for riding motorcycle taxis. With the operationalized definition of youth as males and females aged between 18 and 35

years, this study established that more than three quarter (77%) of MTRs in Homa Bay County are youth. A key informant shared his experiences and observations:

"We have handled cases where riders' aid thieves by transporting them and stolen goods to distant places…people's wives too. Many young riders have been caught and badly beaten… others even lynched by the public"

Key informant, Suba sub-county

4.3.4 Level of Education

Among motorcycle taxi riders' who participated in the study 46% (n=145) had primary level of schooling as their highest attained education level; this was nearly half the study population, 40% (n=126) had secondary education while 8% (n=25) had tertiary education. Among motorcycle taxi riders' who were interviewed, only 4% (n=13) were university graduates who cited frustrations while trying to secure formal job opportunities as a reason for riding motorcycles in order to earn a livelihood. In addition, 2% (n=6) of motorcycle taxi riders' responded that they had no formal education which they attributed to poverty.

4.3.5 Marital Status

With regards to marital status, nearly three quarter at 71% (n=224) of motorcycle taxi riders' were married while 20% (n=63) of the riders stated that they were single at the time of the survey. Among the respondents, 3% (n=9) stated that they were divorced whereas 6% (n=19) were widowed at the time of the survey.

4.3.6 Household Size

The study established that more than half at 66% (n=208) of motorcycle taxi riders' had less than five people in their households whereas slightly more than a quarter at 27% (n=85) had household members of between five to 10 people while a minority at 7% (n=22) had more than 10 people in their households. According to Central Bureau of Statistics (2002 pg: 15), the average Kenyan household size is 4.4 persons.

4.3.7 Riding License Possession Status

Possession of a riding license gives the perception that a rider is competent in riding skills. However, based on the study findings, the safety of motorcycle taxi riders' and their passengers in Homa Bay County are at risk in that only 28% (n=88) admitted to having riding licenses whereas 72% (n=227) did not have riding licenses.

4.4 Social Characteristics of Motorcycle Taxi Riders

This study operationalized social characteristics as the perceptions that motorcycle taxi riders' have towards their possessions and relationships with others. These characteristics included: social connectedness, involvement in groups and ownership status of motorcycle taxi. Findings on social characteristics of motorcycle taxi riders' are discussed below:

4.4.1 Social Connectedness

Social connectedness between motorcycle taxi riders' and their families, colleagues and the community can provide the riders with physical, material, financial and emotional support which they need for enhanced socio-economic wellbeing. Based on the mean of three dichotomous questions on social connectedness; participation in

decisions within boda boda groups, invitations to community functions and participation in community activities, a total of 80% (n=252) of motorcycle taxi riders' reported that they are socially connected with their colleagues and community members. A participant at the focus group discussion (FGD) however shared that motorcycle taxi riders' in Homa Bay town experienced challenges from public service vehicle (PSV) operators who view them as "unfair" competitors due to their ability to drop off customers at their door-step, pick up passengers from wherever they are and their ability to access narrow pathways unlike the PSVs hence preferred by many passengers. This translates to strained relationships between PSV operators and motorcycle taxi riders' which reduces the riders' social connectedness.

4.4.2 Involvement in Welfare Groups

Over 90% of motorcycle taxi riders' who participated in the survey admitted that they are members of a welfare group. However, less than a half (42%) of the said motorcycle taxi riders' responded that they had ever received welfare support from fellow group members. They observed that support is often given in form of cash and occasionally in-kind. From the FGDs, this study established that within the riders' groups, what qualifies for welfare support is dependent on the constitution of each group even though loss of a family member appeared to be common. Among the response given, it was notable that the riders' welfare groups do not give financial support whenever a motorcycle taxi riders' has lost his/her source of livelihood (motorcycle withdrawn among those renting or loss of a motorcycle through theft).

Focus group discussion termed these kind of loses as common occupational hazards that are usually addressed individually by those affected, often by renting another

motorcycle or taking loans to purchase another motorcycle respectively. Membership to most of these groups is conditional so as to lock out those who are not committed and whom members feel may not be beneficial to the group. Some of the common conditions that must be met by the riders included: attained the age of 18 years and above with a national identity card (ID), a rider within the village, registered at a recognized boda boda pick-up stage, ready to abide by group rules as well as the ability to make financial contribution or give material support to the group (savings and welfare) respectively. However, some of the groups had notable conditions such as: a requirement to own at least a piece of land before joining the group, have another source of income other than motorcycle taxi riding in addition to producing a certificate of good conduct from the police before being allowed to join the group.

Activities of most of the groups included: monthly contribution, saving and loaning, social welfare or acting as a safety net to members, advising members on how to successfully run an enterprise, engaging in agri-business, offering refresher trainings on riding skills and traffic laws, purchasing tents for hire and general youth empowerment. A group comprising of female riders' only in Suba sub-county revealed that they also promote girl-child education aimed at reducing child labour in the area.

"In our group of female riders, we want to ensure that Sindo is a child labour-free zone…We educate fellow women on the importance of education"

Female rider, Suba Sub-county

4.4.3 Ownership Status of Motorcycle Taxi

Regarding ownership status of motorcycle taxis, 37% (n=117) of motorcycle taxi riders' reported that they were riding self-owned motorcycle taxis whereas 63% (n=198) were riding rented motorcycles. This study established that more riders were renting motorcycle taxis and remitting daily targets of Ksh 300 (USD 3) to motorcycle owners compared to those who owned motorcycle taxis. Distribution of ownership status of motorcycle taxi is presented in Figure 4.1.

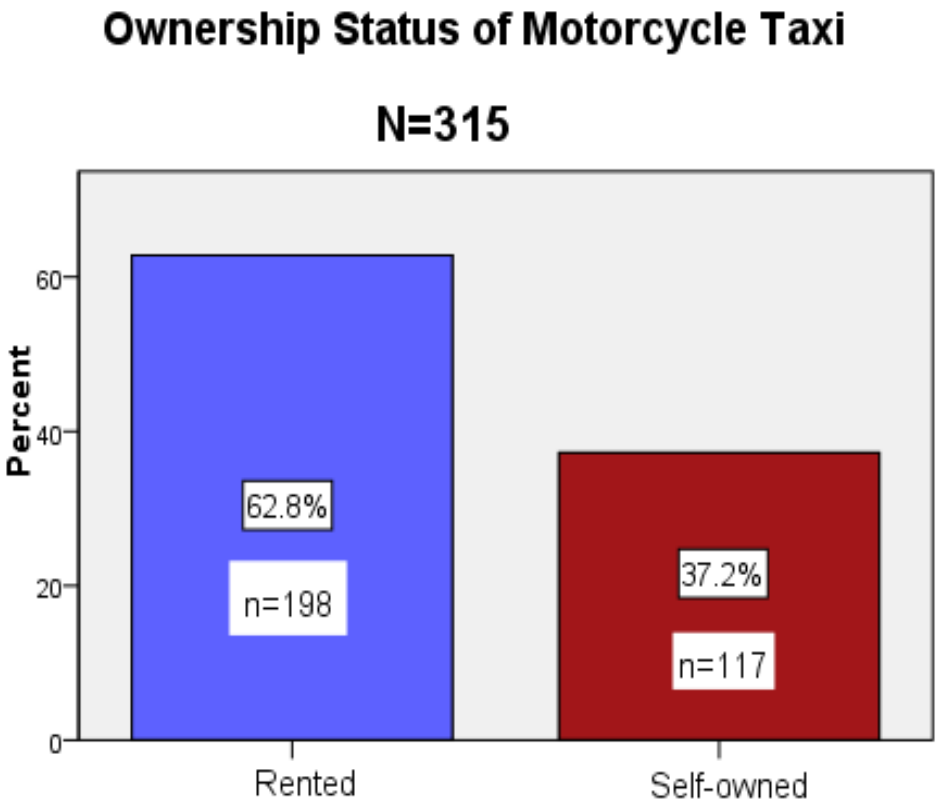

Figure 4.1: Distribution of ownership status of motorcycle taxi

4.5 Socio-economic Wellbeing of Motorcycle Taxi Riders in Homa Bay County

Socio-economic wellbeing measures for this study included: Access to social services, social standing, income, savings, health, safety and security among motorcycle taxi riders. Findings about the measures are discussed in the following sub-section:

4.5.1 Access to Social Services by Motorcycle Taxi Riders

Access to social services is an important component of wellbeing. Often, access to social services is increased when one has social security. According to the ILO (2006), social security includes all measures that are intended to provide income security and alleviate poverty. ILO (2006) clarifies that these measures guarantee access to medical care, health and social services and are designed to protect the income, health and wellbeing of workers and their families. In order to measure access to social services among motorcycle taxi riders', the riders were asked if (including their families) access services in facilities such as health centers, shops, markets, postal office and banking halls. The riders were also asked the distances from the facilities and the providers of the services (whether public or private sector) so as to gauge the challenges the riders could be facing with respect to ready access and affordability (or lack of it). Findings were as indicated in Table 4.2.

Table 4.2: Access to Social Services by Motorcycle Taxi Riders and their families by Locality

Facility	Access				Average distance from rider's home in (Km)	
	Suba (Rural)		HB (Urban)		Suba (Rural)	HB (Urban)
	Freq.	%	Freq.	%		
Health center	96	45%	74	73%	7	3
Markets	210	98%	99	98%	2	2
Shops	210	98%	100	99%	2	2
Postal office	30	14%	17	17%	35	3
Police station	68	32%	56	55%	21	3
Chief camp	101	47%	63	62%	7	3
Banking hall	13	6%	23	23%	15	3

In Suba Sub-county, the population is sparsely populated and so are the administrative offices such as police stations, chief's camp and other government offices. This constrains motorcycle taxi riders' and their families from accessing public services. For instance, other than majority accessing markets and shopping facilities at 98% (n=210) within a distance of two kilometers, access to all other social services was at less than 50% partly due to longer distances from the riders homes. Access to health facilities by motorcycle taxi riders' and their families was at 45% (n=96), access to postal services at 14% (n=30), access to public services from police stations was at 32% (n=68), access to chief's camps at 47% (n=101) with a paltry 6% (n=13)

accessing banking services (often in towns far away from their villages). Services from markets, police stations and chief's camps were offered by public service providers while medical services, shopping facilities, postal services and banking services were provided by both public and private providers.

In this study, the places where motorcycle taxi riders access social services were considered to be: health centres, markets, shops, postal offices, police stations, chief camps and banking halls. In Homa Bay sub-county, almost three quarters (73%) of motorcycle taxi riders' admitted to accessing health centers at an average distance of three Kilometers from their homes, adding that they seek medical services at both public and private health facilities. A large majority (99%) reported that they can easily access shops and shopping facilities, closely followed by 98% (n=99) who could access markets easily at distances of approximately two kilometers from their homes. Postal services on the other hand were least accessed by motorcycle taxi riders' at 17% (n=17), police station at 55% (n=56), public services from chief's camp at 62% (n=63) and banking services at 23% (n=23), all at distances of approximately three kilometers.

4.5.2 Social Status of Motorcycle Taxi Riders

Social status is the position or status accorded to an individual in a society. Social status can be earned by one's own achievement (achieved status) or through inherited positions that classify individuals depending on the achievements of a family member or the clan where one belongs (ascribed status). This study focused on achieved social status among motorcycle taxi riders'. Social status is often influenced by socio-economic status of an individual in terms of level of education, leadership positions in

a community and financial ability of a person. Among 51% (n=161) of motorcycle taxi riders' who perceive their social status as improved, many associated this improvement with their ability to cater for their families as well as fulfil other financial obligations. In addition, these motorcycle taxi riders' justified their perceived higher social status by claiming that riders are occasionally invited for fund-raising functions, they own property, pay dowry, participate in decision making in their communities, have constructed permanent houses, pay school fees for their children in private schools, educate their siblings and even self-educate in vocational training institutions, middle level collages and Universities.

Perception among some motorcycle taxi riders' that their social status has been elevated may boost their esteem. In turn the motorcycle taxi riders' contribute to development by fund-raising to help educate needy children, pay medical bills for needy community members in addition to participating in communal activities initiated by community members, NGOs or government agencies. The sense of being "useful" in society could be a recipe for higher socio-economic wellbeing among the riders as remarked by one male respondent.

"I used to be an idler who was despised by many, including my family…..now I've paid dowry and is educating my siblings…the community admires me as a hard worker"

Male respondent, Suba Sub-county

Responses concerning perception of motorcycle taxi riders' about their social status within their communities are presented in Table 4.3:

Table 4.3: Perceived Social Status of Motorcycle Taxi Riders in Homa Bay County

Status	Frequency (n)	Percentage (%)
Improved	161	51
Reduced	16	5
No change	75	24
Do not know	63	20
Total	**315**	**100**

There was a perception among slightly more than half (51%) of motorcycle taxi riders' that their social status has improved since they started riding motorcycle taxis. Some of the riders (24%) responded that there was no change in the way the community viewed them prior to joining motorcycle taxi enterprise as riders. Probably this is because the riders' living standards have not changed either. An almost similar percentage of the riders (20%) did not know whether their social status in society had increased or reduced. Qualitative information from these category of respondents emphasized that they are too busy with their work to notice or hear "rumours" about their social status, adding that the community highly rates politicians and people from rich families (mostly ascribed social status) while they look down upon "*watu wa jua kali kama sisi*" , meaning, people who work in the informal sector.

Motorcycle taxi riders who felt that their social status had reduced (5%) associated this to changing from professional careers such as teaching, employment in the

government and the NGO sector to boda boda riding. One former teacher lamented that:

'I was sacked from teaching and decided to ride boda boda for income…My community and fellow riders view me as a failure"

Male rider, Homa Bay sub-county

4.5.3 Income

Income among motorcycle taxi riders' was measured by asking how much a rider earned on a daily basis from Sunday through to Saturday (7 days). Average daily income among motorcycle taxi riders' in the rural setting and the urban setting were diverse as indicated in Table 4.4.

Table 4.4: Average Daily Income among Motorcycle Taxi Riders by Localities

Locality of MT operation	**Day**	Sun	Mon	Tue	Wed	Thu	Fri	Sat	**Mean**
Suba (*Rural*) (n=214)	**Amount (Ksh)**	-	900	500	500	400	900	700	650
HB (*Urban*) (n=101)	**Amount (Ksh)**	1200	600	600	900	600	650	-	760

In the rural setting of the study area, analysis revealed that motorcycle taxi riders' earn an average daily income of Ksh. 650 (USD6), with more income being earned on

market days since many people seek transportation services to and from the market. Market days in the rural setting (Suba Sub-county) are Mondays and Fridays. The study also revealed that over the weekends, riders make more money from people who hire their motorcycle taxi services to functions such as weddings or funerals. Residents of Suba Sub-county are largely subscribers to the Christian faith (Specifically Roman Catholic) who go to church on Sundays. This explains why the average income for Sunday was not calculated since many riders did not give a figure, citing that they do not work on Sundays. However, motorcycle taxi riders' who are members of the Seventh Day Adventist (SDA) or those who do not go to church continue to offer motorcycle taxi services even on Sundays.

In the urban setting on the other hand, it was revealed that on average, a motorcycle taxi rider earns a daily income of Ksh. 760 (USD7) which is more than the average daily income earned by a motorcycle taxi rider in the rural setting (Ksh. 650). Market days in Homa Bay town fall every Wednesday and Sunday and so motorcycle taxi riders' tend to make more money due to the demand of transportation to and from the market. In addition, focus group discussion revealed that motorcycle taxi riders in Homa Bay town tend to also earn more money at the end of the month due to influx of people in the town who withdraw salaries from the banks and proceed to do monthly shopping.

As the headquarter of Homa Bay County, Kenya Commercial, Equity, Co-operative and Post Banks and a host of other micro-finance institutions are situated within Homa Bay town. Residents of Homa Bay sub-county, in contrast to those of Suba Sub-county, largely subscribe to the Seventh Day Adventist (SDA) faith whereby

faithful attend church services on Saturdays and are forbidden from engaging in any form of labour.

This therefore means that most motorcycle taxi riders' do not earn income on Saturdays even though minority who are not SDA faithful continue to transport passengers on Saturdays but earn less compared to other days. This they associated with minimal economic activities since many locals close their businesses and go to church. Motorcycle taxi riders who changed from other occupations to motorcycle taxi riding (n=112) cited daily quick income from the sector as their motivation. A view that was affirmed by one motorcycle taxi riders':

"I'm always sure that my family cannot sleep hungry as was the case earlier when I worked as a shamba boy and was paid only at the end of the month"

Male rider, Homa Bay sub-county

On average, daily income among motorcycle taxi riders' in both rural and urban setting within Homa Bay County was Ksh. 705 (USD7). Qualitative information from FGD however reiterated that motorcycle taxi riders' in Homa Bay County who ride rented motorcycles often have unreliable income occasioned by withdrawal of motorcycles by the taxi owners at will, majority of youth motorcycle taxi riders' were also reported to be transporting girlfriends or potential lovers for free despite making many trips and spending money on fuel. These situations increase the rider's vulnerability. Motorcycle taxi riders' who rent motorcycles also added that their employers often send them to run errands without paying for transport services yet the employers expect daily targets. The fact that some motorcycle taxi riders' offer free

transport services yet they pay targets and fuel the motorcycle is an indication that some of the riders do not operate motorcycle taxis as a serious business meant to generate profits. This negatively affects the riders' income and the nation's economic growth.Using FGD guide (Appendix G) to interview Homa Bay boda boda SACCO leadership, it was established that there were other factors which affected the daily income of all individual motorcycle taxi riders' irrespective of motorcycle taxi ownership status. These factors included; number of customers transported, economic status of customers (the "rich" pay more), distance travelled, fuel prices, daily working duration, health of the motorcycle taxi rider, customer-relation skills, time of the month (customers bargain a lot mid-month), location of pick-up stage (stages in crowded towns are more lucrative) and day of the week (market days are busier hence more income).

4.5.4 Savings among Motorcycle Taxi Riders

Saving some amount of income is important for a number of reasons, some of which include: to act as economic security when an individual's income subsides, to be a source of welfare during emergencies and also as a form of social protection upon retirement. Joining a savings group is an indication that an individual is willing to save some money from his/her income. However, objectives of saving differ among individuals. Findings of this study revealed that almost three quarter (73%) of motorcycle taxi riders' who were members of savings groups were motivated to do so with the aim of savings so that they could get loans to cater for funeral expenses in case of death of a family member, relative or in-laws. The remaining percentage (27%) mentioned that their reasons for saving was to be able to take loans to pay

dowry, build a house, buy additional motorcycles, pay school fees for their children and pay for their college fees in that order.

Focus group discussion (FGD) results also revealed that membership to a savings group does not guarantee actual savings, with a participant confirming that some members only had minimum balances in their Homa Bay boda boda SACCO accounts. Participants at the FGD also unanimously agreed that saving culture among motorcycle taxi riders' could be poor because a big percentage of motorcycle taxi riders' are youth, therefore they spend most of their income in purchasing expensive clothing, regularly visiting night clubs, "upgrading" from local brew to drinking expensive alcohol as well as engaging in promiscuous lives where they spend money on young girls and widows.

As a follow-up question on savings, motorcycle taxi riders who did not save mentioned the following as factors hindering them from joining saving groups: lack of confidence and trust in savings group leadership, ignorance, collapse of many savings groups within Homa Bay County which discourages others, leadership wrangles among SACCO officials, inability to obtain certain documents required to register in a savings group e.g National Identification card, lack of commitment to spare time from work to go to savings group offices to register as well as proximity to some of the well-established saving institutions such as SACCOs, especially among those living in rural areas. Even though motorcycle taxi riders' were open to revealing their daily income, the question on daily savings at the time of the survey did not elicit considerable response from majority of motorcycle taxi riders'. Minority (7%) of MTRs who responded to the question saved an average of Ksh. 80 (USD8) each day.

A motorcycle taxi rider who did not respond to the questions on savings gave this as his lack of motivation to save:

"*I live with a rich widow whose motorcycle I ride and she provides for all my needs. Why should I bother about how much I earn or save?...Life begins at forty*"

Male youth rider, Homa Bay sub-county

Among the 230 motorcycle taxi riders' who saved, a bigger percentage (62%) saved in their saving groups, 30% (n=69) in their mobile phone M-Pesa accounts while the remaining 8% (n=18) saved either in their M-Shwari mobile accounts, the bank or at home in containers. motorcycle taxi riders' were also asked if they saved in a government-owned National Social Security Fund (NSSF) or any other retirement benefit scheme, of which a minority (5%) of all MTRs responded to the affirmative.

The rest did not save in NSSF or any other retirement benefit scheme. With the understanding that savings are made from income, and that income of motorcycle taxi riders' varies depending on motorcycle taxi ownership status, cross tabulation of ownership status of motorcycle taxi by savings was done and results indicated in Table 4.5:

Table 4.5: Ownership Status of Motorcycle Taxi by Savings among MTRs

Ownership status of motorcycle taxi	I save some money every day		
	Agree	**Disagree**	**Total**
Self-owned	94 (80%)	23 (20%)	117 (100%)
Rented	137 (69%)	61 (31%)	198 (100%)
Total	231 (73%)	84 (27%)	315 (100%)

χ^2=6.62, df=2, p=0.036

Among motorcycle taxi riders' who participated in the survey, 117 (37%) ride self-owned motorcycle taxis whereas 198 (63%) ride rented motorcycle taxis. For motorcycle taxi riders'who ride self-owned motorcycle taxis, 80% (n=94) affirmed that they usually save a mean of Ksh. 340 (USD3.4) every day compared to 69% (n=137) of those riding rented motorcycle taxis who save approximately Ksh.100 (USD1) each day. The latter category indicated that they are usually compelled to work longer hours to be able to compensate for the daily target of Ksh. 300 (USD3) which they remit to motorcycle owners. It was also reported that 20% (n=24) of those riding self-owned motorcycle taxis did not save money every day compared to 31% (n=61) of those riding rented motorcycle taxis. Some of those riding self-owned motorcycles who did not save mentioned that they often spend a lot of their income on motorcycle repairs due to poor state of feeder roads; expenditure that those riding rented motorcycle do not incur. Some however revealed that they have the security of ownership of motorcycle taxi and so felt that they are assured of daily income, unlike

those renting who could have the motorcycle withdrawn by the owner anytime. Overall, those riding self-owned and rented motorcycle taxis that did not save cited a lot of financial obligations at home and fierce competition for customers at their pick-up stages occasioned by high numbers of MTRs.

4.5.5 Health of Motorcycle Taxi Riders

Among the 315 motorcycle taxi riders' who participated in the survey, just over a quarter (26%) admitted that they subscribed to a medical insurance scheme (MIS) at the time of the study. Among those who subscribe to a MIS (n=82), 98% revealed that they subscribe to National Hospital Insurance Fund (NHIF) as their medical insurance company of choice since they pay an affordable monthly premium of Ks. 500 (USD5). National Hospital Insurance Fund is owned and managed by the Kenyan government. The remaining 2% mentioned UAP-insurance, Madison insurance and Jawabu Micro-health as their current medical insurance providers. Of those who were subscribing to a MIS, 64% (n=52) agreed that they often use their medical card to access medical care compared to 36% (n=30) who did not use their medical card whenever they needed to access medical care. Those who did not use their medical card to access medical care cited failure to pay monthly premium to their medical insurance providers as the main reason (intentionally or by forgetting). However, some mentioned long queues, lack of medical facilities and drugs at the facilities that accept the use of NHIF card hence they opt for medical services at private institutions.

4.5.6 Safety of Motorcycle Taxi Riders

Safety of motorcycle taxi riders are largely influenced by their knowledge on road safety requirements, their attitudes towards those requirements and their practices or

behavior while on the road. Possession of a valid riding license is one of the requirements before a rider is legally allowed to transport passengers. In addition, a rider's behavior while on the road can have an influence on their safety and that of their passengers.

4.5.6.1 Riding License Possession Status

Whether a motorcycle taxi rider holds a riding license or not can have an effect on the safety of motorcycle taxi riders'. Out of the 315 motorcycle taxi riders' who participated in the survey, 28% (n=88) admitted that they had riding licenses compared to 72% (n=227) motorcycle taxi riders' who were riding without riding licenses. Holding a valid riding license is often perceived to mean that a motorcycle taxi rider is professionally trained and therefore competent enough to ride a motorcycle.

Findings of this study however revealed that 61% of motorcycle taxi riders' who had riding licenses had been involved in road accidents while riding compared to a lesser percentage (57%) of the motorcycle taxi riders' who rode motorcycle taxis without formal training on riding skills. This could mean that either the motorcycle taxi riding trainers are not qualified, those with riding licenses are over confident which could lead to laxity or that they are out- rightly ignoring traffic rules while on the road. It is also possible that the riding licenses are not genuinely acquired. See Table 4.6 on cross tabulation of possession of riding license by involvement in accidents among motorcycle taxi riders';

Table 4.6: Riding License Possession Status by Involvement in Accidents among Motorcycle taxi Riders'

I have a riding license	I have been involved in an accident while riding a motorcycle taxi		
	Agree	**Disagree**	**Total**
Yes	53 (61%)	35 (40%)	88 (100%)
No	129 (57%)	98 (43%)	227 (100%)
Total	182 (58%)	133 (42%)	315 (100%)

$\chi 2$=1.741, df=4, p=0.783

In addition, the study noted that safety among motorcycle taxi riders' in Homa Bay County was compromised in that 9% (n=28) of motorcycle taxi riders' put on helmets when riding with 21% (n=66) putting on reflector jackets while riding, especially at night or at dawn. The rest of the riders did not take precautionary measures against their safety while riding motorcycle taxis.

4.5.6.2 Behaviors of Motorcycle Taxi Riders and their Safety

Among all 315 motorcycle taxi rider who participated in the survey, only 9% (n=28) admitted that they occasionally put on helmets when riding (even though none was spotted wearing a helmet throughout the study). Many riders preferred to adorn fashionable hats and branded caps, citing the hot weather conditions in Homa Bay County as justification for not putting on the helmets. Participants at the FGD composed of Homa Bay boda boda SACCO leaders associated the dressing code of

motorcycle taxi riders' with youthfulness and the desire to appear attractive to attract more female clients who apparently offer tips to motorcycle taxi riders'. Focus group discussion corroborated the findings that motorcycle taxi riders' were ignorant about the motorcycle regulations and that many of the motorcycle taxi riders' did not comply with the requirements hence a gap in safety awareness or implementation of the road safety regulations among the riders.

From observation carried out at the pick-up stages, some of the riders within Homa Bay sub-county appeared drunk when they reported to work. A female respondent who had a riding license attributed most involvement in road accidents among motorcycle taxi riders' to drunkenness, citing her own way of life and experiences:

"*My other source of income is 'Achwaka' (local brew) which I sell and also drink every morning and since my bike is like my husband, I ride it myself…drunk or sober…I have been involved in a few accidents but escaped with minor injuries*"

Female rider, Suba sub-county

It was also observed that a number of riders did not use indicators to signal the direction which they intended to take when joining the main road, thereby putting themselves at risk of being knocked down by vehicles or other road users. Another possible cause of involvement in road accidents among motorcycle taxi riders' is consistent failure to put on helmets and reflector jackets whenever motorcycle taxi riders' are on the road. At certain pick-up stages in Homa Bay sub-county, motorcycle taxi riders' were observed to be putting on protective clothing only when a police man was spotted. It was also observed by a research assistant that some motorcycle taxi

riders' were openly smoking what smelled like marijuana during the interview. Upon inquiring, a male rider who was smoking remarked amid laughter from colleagues:

"*I spend a lot of energy riding and so I need to recharge frequently…the police are not found in this rural area*"

Male rider, Suba sub-county

Another motorcycle taxi rider added that hard drugs such as marijuana immunize them from the hot sun and rigors of work. Sustainable Development Goal (SDG) 3.5 focuses on the prevention and treatment of substance abuse, including narcotic drug abuse and harmful use of alcohol. The study acknowledges that drug and substance abuse among motorcycle taxi riders' in Homa Bay County was an emerging issue which could be contributing to traffic accidents that could otherwise be avoided. In Magunga stage in Suba sub-county however, it was observed that all riders were moving at reasonably low speed and observed traffic rules. This could be associated with the presence of a police post nearby. A traffic police officer working in Homa Bay sub-county mentioned that excitement and alcohol abuse among young riders has led to many youth and community members suffering partial and permanent disabilities due to accidents caused by over-speeding, careless riding and neglecting of traffic rules. A traffic police officer expressed his concerns that:

"Motorcycle taxi enterprise has resulted in early deaths among many youth in this community….through road accidents or HIV/AIDS"

Key informant, Suba sub-county

4.5.7 Security of Motorcycle Taxi Riders

Motorcycle taxi riders have lately been viewed as a security threat, allegedly as accomplices in run-away criminal activities (Achuka, 2015, May 10). On the other hand, some authors have observed that MTRs have become targets of criminal attacks (Daily Nation, 2011, November 27; Michuhie, 2016, February 22). This study found that 18% of male MTRs had been attacked by their passengers compared to 13% of the female riders. Among all the riders (N=315), who participated in the survey, 7% admitted that they have in the past transported criminals in their motorcycle taxis with 5% admitting to renting out their motorcycles to criminals knowingly or unknowingly. Some of the riders indicated that they unknowingly transported the criminals but only learnt of the truth on arriving at their passengers' destination.

This they noticed when in some instances, the criminals attacked their victims, stole property or harassed their targets, with some motorcycle taxi riders' reporting that they took off in fear while others were threatened by the criminals to either comply or lose their lives. However, some motorcycle taxi rider admitted to willingly renting out their motorcycle to criminals or transporting them to commit crime since they pay more but vehemently denied being criminals themselves. Among motorcycle taxi riders' who admitted that they have in the past transported criminals on their motorcycle taxis, 7% were quick to clarify that they only learnt that their passenger/s were criminals upon arrival at the destination or days later. A participant at the FGD opened up about his experience:

"I only leant that the two passengers I had carried were criminals when we arrived at a shopping center and they started shooting at an M-Pesa shop…I was scared and took off immediately"

Participant, FGD session

Regarding the motorcycle taxi riders' security, the study also identified ignorance as a possible risk factor which could be exposing motorcycle taxi riders' to attacks, considering the response from one rider:

"*I only carry those who are well dressed who cannot attack me since they are not criminals. Who cannot spot a criminal from his dressing style*?"

Male rider, Suba sub-county

4.6 Levels of Socio-economic Wellbeing of Motorcycle Taxi Riders in Homa Bay County

Measures of socio-economic wellbeing in this study comprised of seven items namely: access to social services, social status, income, health, savings, safety and security. In order to measure the levels of socio-economic wellbeing of motorcycle taxi riders' in Homa Bay County, responses of dichotomous questions on the seven measures of SEWB were first categorized as "positives" and "negatives". Positives represented responses that affirmed a "good situation" and were scored as No=1 and Yes=2 whereas negatives represented responses that affirmed a "bad situation" and were scored as Yes=1 and No=2. Therefore, for the "positives", No was computed as low SEWB whereas Yes was computed as high SEWB. On the other hand, for "negatives", No was computed as High SEWB whereas Yes was computed as low

SEWB. Subsequently, the mean of the raw scores of each of the seven measures of socio-economic wellbeing was calculated to establish the levels of socio-economic wellbeing of motorcycle taxi riders in Homa Bay County. Mean score was considered most accurate since every score of the data was used unlike median or mode that would have left out some scores. Income was measured by first calculating the average daily earnings of each motorcycle taxi rider and then calculating the mean score of all the riders' income which was Ksh. 705.

Therefore individual motorcycle taxi riders' who scored below Ksh. 705 were considered to be experiencing low SEWB whereas motorcycle taxi riders' who scored Ksh. 705 and above were considered to be experiencing high SEWB. As such, composite scores of all seven measures of socio-economic wellbeing were computed and two outcomes yielded (low SEWB and high SEWB). The minimum score expected was 7 (at least one response for each of the socio-economic wellbeing measures) and the expected maximum score was 19 (total score of all the computed responses on SEWB measures). The mean of all the raw scores of socio-economic wellbeing measures was 13. Low SEWB was therefore determined as scores ranging from (7-12) and high SEWB determined as scores ranging from (13-19). Low SEWB signify that motorcycle taxi riders' were not adequately prepared to cope with social and economic shocks and therefore vulnerable, whereas high SEWB signify that motorcycle taxi riders' are adequately prepared to cope with shocks that are socio-economic in nature. Levels of socio-economic wellbeing of motorcycle taxi riders' in Homa Bay County are as shown in Figure 4.2.

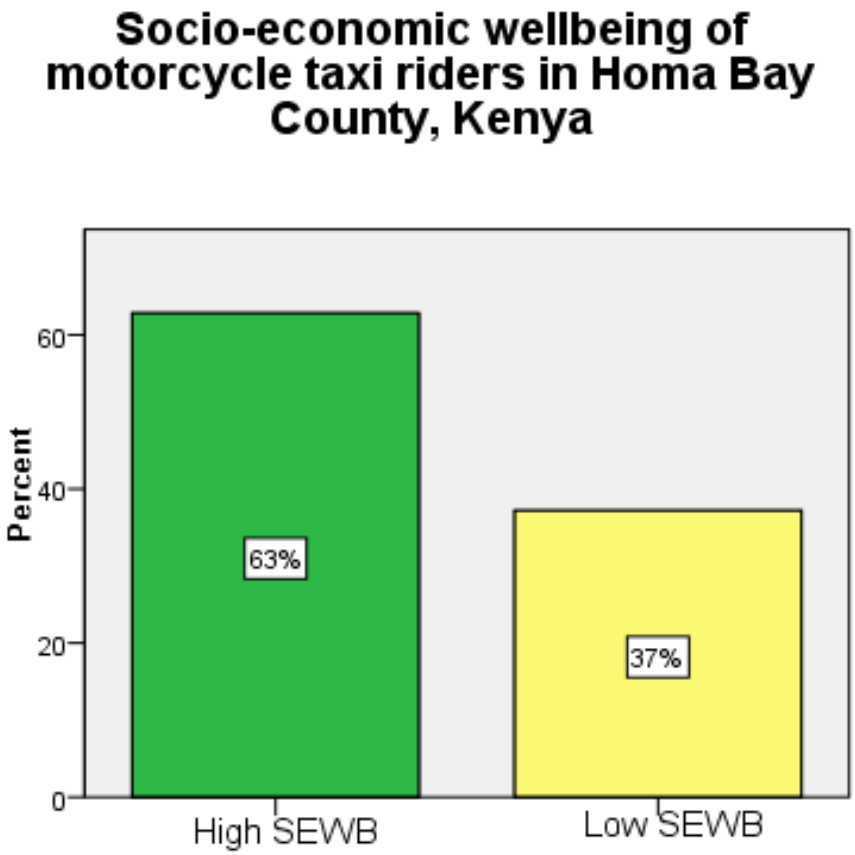

Figure 4.2: Levels of socio-economic wellbeing of motorcycle taxi riders in Homa Bay County

As shown in Figure 4.2, 63% of motorcycle taxi riders' in Homa Bay County experience high SEWB, implying that more than a half (n=198) of motorcycle taxi riders' were adequately prepared to cope with shocks which are socio-economic in nature. On the other hand, a lesser percentage at 37% (n=117) of motorcycle taxi riders' can be presumed to be vulnerable to social and economic shocks. The study acknowledges that socio-economic wellbeing is a dynamic variable which depends on an individual rider's situation with regards to their socio-demographic characteristics

at any given time. Key Informants (KI) holding different positions in Homa Bay County gave their opinions on socio-economic wellbeing of motorcycle taxi riders' within their localities. The KI consisted of clan elders, ward administrators and chiefs. In spite of the benefits associated with motorcycle taxi enterprise such as offering reliable and accessible transport services, some KI felt that motorcycle taxi enterprise has negatively affected the social status of some motorcycle taxi riders'. For instance, majority of KI believed that riders who work overnight are criminals who disguise themselves but in reality they abuse drugs and collude with thieves and murderers, in addition to aiding other people's wives to escape from their marriages as was alluded to by a KI in Suba Sub-county:

"We have handled cases where riders' aid thieves by transporting them and stolen goods to distant places…people's wives too. Many young riders have been caught and badly beaten… others even lynched by the public"

Key Informant, Suba sub-county

Riders are also perceived to be promoting prostitution among school girls thereby increasing the prevalence of teen pregnancies and school drop-out rates in the county, as well as contributing to family breakdowns. These anti-social behaviours continue to cause conflicts among families of motorcycle taxi riders' and the teenage girls or teenage mothers with some resulting to security threats or even death. A key informant shared his concerns:

"These young riders lure people's wives and school girls with money and get into romantic relationships with them…some riders have been maimed or killed as a result…are these riders cursed?!"

Key Informant, Homa Bay sub-county

And on the contrary, female riders were generally perceived to be disciplined and hard workers who raise their families well with the proceeds from motorcycle taxi riding.

4.7 Hypotheses Test Results

This section presents the results of Chi-square tests which were done to establish if there was a significant relationship between independent variables and the dependent variable with a probability error of 0.05. Chi-square tests were also done to draw inferences from the sample size. Hypotheses tested in this study were:

H_{01} There is no significant relationship between localities of motorcycle taxi operation and socio-economic wellbeing of motorcycle taxi riders' in Homa Bay County.

H_{02} There is no significant relationship between the gender of motorcycle taxi riders in Homa Bay County and their socio-economic wellbeing.

H_{03} There is no significant relationship between possession of a riding license and Socio-economic wellbeing of motorcycle taxi riders' in Homa Bay County.

H_{04} There is no significant relationship between social connectedness among motorcycle taxi riders' and their communities and the riders' socio-economic wellbeing.

H_{05} There is no significant relationship between involvement in groups and socio-economic wellbeing of motorcycle taxi riders' in Homa Bay County.

H_{06} There is no significant relationship between ownership status of motorcycle taxi and socio-economic wellbeing of motorcycle taxi riders' in Homa Bay County.

Chi-square test results were stated per hypothesis as presented in subsequent sub-sections:

4.7.1 Relationship between Localities of Motorcycle Taxi Operation and SEWB

Localities of motorcycle taxi operation included Suba sub-county (rural setting) and Homa Bay sub-county (urban setting). The results of the relationship between localities of motorcycle taxi operations and SEWB were as indicated in Table 4.7;

Table 4.7: Relationship between Localities of Motorcycle Taxi Operation and socio-economic wellbeing of motorcycle taxi riders

Locality	Low SEWB	High SEWB	Total
Rural	64 (30%)	150 (70%)	214 (100%)
Urban	20 (20%)	81 (80%)	101 (100%)
Total	84 (27%)	231 (73%)	315 (100%)

χ^2=12.606, df=1, p=0.013

Chi square test results revealed a significant relationship between locality of operating a motorcycle taxi and SEWB (p=0.013) at 0.05 probability error. Therefore the hypothesis that there was no significant relationship between localities of operating motorcycle taxis and riders' socio-economic wellbeing was **rejected**. This implies that the location where one operates a motorcycle taxi has an influence on their wellbeing. Based on the results as indicated in Table 4.7, motorcycle taxi riders who operate in

the urban setting experience higher SEWB (80%) compared to their counterparts in the rural areas (70%).

4.7.2 Relationship between Gender of Motorcycle Taxi Riders and their SEWB

The gender of MTRs in Homa Bay County included: 93% males (n=293) and 7% females (n=22). Chi square test results of the relationship between gender of motorcycle taxi riders' and their socio-economic wellbeing are presented in table 4.8:

Table 4.8: Relationship between Gender of MTRs and their SEWB

Gender	Low SEWB	High SEWB	Total
Male	53 (18%)	240 (82%)	293 (100%)
Female	3 (13%)	19 (87%)	22 (100%)
Total	56 (18%)	259 (82%)	315 (100%)

χ^2=0.209, df=1, p=0.622

The hypotheses stating that there was no significant relationship between gender of motorcycle taxi riders' and their socio-economic wellbeing was statistically **not rejected** (p=0.622). This implied that socio-economic wellbeing of motorcycle taxi riders' was influenced by factors other than the gender of the rider. However, the study also established that 87% of females experienced high levels of SEWB compared to 82% of their male counterparts (See Table 4.8).

4.7.3 Relationship between Riding License Possession Status and SEWB of MTRs in Homa Bay County

Results of statistical relationship between possession of a riding license and socio-economic wellbeing of motorcycle taxi riders' are presented in table 4.9:

Table 4.9: Relationship between Riding License Possession Status and Socio-economic Wellbeing of Motorcycle Taxi Riders

Riding license possession status	Low SEWB	High SEWB	Total
Yes	33 (38%)	55 (62%)	88 (100%)
No	95 (42%)	132 (58%)	227 (100%)
Total	128 (41%)	187 (59%)	315 (100%)

$\chi 2$=1.741, df=1, p=0.783

Possessing a valid riding license can be perceived to mean that a motorcycle taxi rider is trained on riding skills and is therefore competent. As indicated in Table 4.9, the difference in percentages among motorcycle taxi riders' who experience high SEWB irrespective of whether they hold riding licenses or not is minimal at 4% i.e (High SEWB among 62% of motorcycle taxi riders' with riding licenses against 58% of motorcycle taxi riders who ride motorcycle taxis without riding licenses). The hypothesis that there was no significant relationship between riding license possession

status and socio-economic wellbeing of motorcycle taxi riders' was **not rejected**. This implied that socio-economic wellbeing of motorcycle taxi riders' did not significantly relate to whether they possessed riding licenses or not.

4.7.4 Relationship between Social Connectedness and SEWB of MTRs

Results of statistical relationship between social connectedness and socio-economic wellbeing of motorcycle taxi riders' are presented in table 4.10:

Table 4.10: Relationship between Social Connectedness and SEWB of MTRs

Social connectedness	Low SEWB	High SEWB	Total
Improved	23 (10%)	209 (90%)	232 (100%)
Reduced	21 (25%)	62 (75%)	83 (100%)
Total	44 (14%)	271 (86%)	315 (100%)

$\chi 2$=5.659; df=1; p=0.226

The hypothesis that there was no significant relationship between social connectedness among motorcycle taxi riders' and their communities and the riders' SEWB was **not rejected** (p=0.226). Therefore, the fact that majority (90%) of motorcycle taxi riders' whose social connectedness with community members had improved were experiencing high SEWB can be associated with other factors such as: financial ability, financial security in form of savings, ability to access social services such as medical care among other factors which reduce vulnerability. The same explanation could apply to three quarter (n=62) of motorcycle taxi riders' whose

social connectedness had reduced yet they experienced high SEWB. Many of the motorcycle taxi riders' whose social connectedness had reduced reported that their busy schedules denied them time to socially interact and connect with community members.

4.7.5 Relationship between Involvement in Welfare Groups and SEWB

Results of statistical relationship between involvement in groups and socio-economic wellbeing of motorcycle taxi riders' are presented in table 4.11:

Table 4.11: Relationship between Involvement in Groups and SEWB of MTRs

Involvement in welfare groups	Low SEWB	High SEWB	Total
Ownership of group decisions	65 (64%)	37 (36%)	102 (100%)
Savings in groups	58 (27%)	155 (73%)	213 (100%)
Total	123 (36%)	192 (64%)	315 (100%)

χ^2=15.443, df=1, p=0.051

Among motorcycle taxi riders' (n=102) who feel that they own decisions made in their respective groups, more than half (64%) experience low SEWB compared to 36% who experience high SEWB. With reference to saving in groups however, a smaller percentage (27%) of motorcycle taxi riders who save experience low SEWB compared to a bigger percentage (73%) who experience high SEWB. The hypothesis that there was no significant relationship between involvement in groups among

motorcycle taxi riders' and their SEWB was **not rejected** (p=0.051). This implied that socio-economic wellbeing of motorcycle taxi riders' was not dependent on whether a motorcycle taxi rider was involved in a group or not.

4.7.6 Relationship between Ownership Status of Motorcycle Taxi and SEWB of Motorcycle Taxi Riders

Results of statistical relationship between ownership status of motorcycle taxi and socio-economic wellbeing of motorcycle taxi riders' are presented in table 4.12:

Table 4.12: Relationship between Ownership Status of Motorcycle Taxi and Socio-economic Wellbeing of Motorcycle Taxi Riders

Ownership status of motorcycle taxi	Low SEWB	High SEWB	Total
Self-owned	60 (51%)	57 (49%)	117 (100%)
Rented	131 (66%)	67 (34%)	198 (100%)
Total	191 (60%)	124 (40%)	315 (100%)

χ^2=6.62, df=1, p=0.036

This study categorized ownership status of motorcycle taxi into two: self-owned and rented. It was noted that those who ride self-owned motorcycle taxis keep all the income whereas those who ride rented motorcycles remit a daily target of Ksh. 300 (USD3) to the owners of the motorcycles. The hypothesis that there was no

relationship between ownership status of motorcycle taxi and socio-economic wellbeing of motorcycle taxi riders' was **rejected** (p=0.036). As indicated in Table 4.12, a higher percentage (66%) of motorcycle taxi riders who rode rented motorcycle taxis experienced low SEWB compared to 51% who rode self-owned motorcycle taxi. Ownership status of motorcycle taxi depended on whether a motorcycle taxi rider can afford to buy their own motorcycle and if not, rent from a motorcycle owner. The statistical confirmation that there was a significant relationship between ownership status of motorcycle taxi and socio-economic wellbeing of motorcycle taxi riders' implied that ownership status of motorcycle taxi influenced the socio-economic wellbeing of motorcycle taxi riders'.

CHAPTER FIVE: DISCUSSION OF FINDINGS

5.1 Introduction

This chapter focuses on interpreting and analyzing the study findings outlined in chapter four. Discussion of findings in this chapter is done per research objective, guided by previous studies, theory of social capital and social protection approach.

5.2 Relationship between Demographic Characteristics of Motorcycle Taxi Riders and their Socio-economic Wellbeing

Demographic characteristics of motorcycle taxi riders' whose relationship with the riders' socio-economic wellbeing were statistically tested in this study included; localities of operating motorcycle taxi operations, gender of motorcycle taxi riders' and riding license possession status of motorcycle taxi riders'.

5.2.1 Relationship between Localities of Motorcycle Taxi Operation and Riders Socio-economic Wellbeing

Studies conducted in Kenya have largely focused on motorcycle taxi operations in towns: Mbugua (2011) in Thika town, Chepchieng' (2011) in Kitui town, Kayi (2007) in Nairobi city, Nyachieo (2013) in Kitengela township, Alando and Scheiner (2016) in Kisumu town and Nyachieo (2015) in Kisumu town, with many focusing on economic growth and employment opportunities. This study was however carried out in an urban setting (Homa Bay sub-county) and rural setting (Suba Sub-county), with a focus on socio-economic wellbeing of motorcycle taxi riders'. The findings therefore contributed to new knowledge by giving some insights into the differences in lived experiences of motorcycle taxi riders' in both urban and rural settings. For instance, this study established that access to social services by motorcycle taxi riders'

varied based on the localities of motorcycle taxi operations. In Suba Sub-county, the population is sparsely populated and so are the administrative offices such as police stations, chief's camp and other government offices. This constrains motorcycle taxi riders' and their families from accessing public services. Motorcycle taxi riders in Suba sub-county also revealed that public health facilities are few and far apart thereby affecting accessibility. Observation by Mulley and Nelson (2009) that motorcycle taxi is a flexible and demand-responsive transport system which has been identified as one of the promising solutions for widespread public transport in rural areas was supported by findings of this study. This emphasizes on the importance of motorcycle taxi riders and the transport services they offer hence the need to establish their socio-economic wellbeing with the aim of enhancing it.

The findings also supported Cervero (2000) who argued that motorcycle taxis have inherent advantages such as door-to-door service capabilities, ability to access narrow footpaths that are inaccessible by other motorized modes, fast speeds and affordability compared to other modes of transport. Operations of motorcycle taxis by motorcycle taxi riders' are indeed able to provide demand-responsive transport services in both urban and rural Suba-sub-county. This has enabled people to reach places that cannot be accessed by vehicles due to rugged terrain, narrow paths and poor roads. Motorcycle taxi riders in Homa Bay sub-county are however at an advantage in that transport services are readily provided by motor vehicles and motorcycle taxis. This enables them to readily access social services such as schools, health facilities, banks, postal offices and administrative offices.

The Chi-square test showed a significant relationship (p=0.013) between localities of motorcycle taxi operation and riders' socio-economic wellbeing. This therefore implied that motorcycle taxi riders' in Homa Bay Sub-County were likely to experience a higher SEWB due to accessibility of social services in their locality than their counterparts in Suba Sub-county. The fact that a slightly lower percentage (70%) of motorcycle taxi riders' in the rural areas experienced high SEWB compared to 80% of motorcycle taxi riders' who were residing in urban areas could be attributed to the findings that motorcycle taxi riders' in urban areas conveniently accessed various social services compared to their counterparts in rural areas (See Table 4.2). In addition, higher socio-economic wellbeing among motorcycle taxi riders in Homa Bay sub-county (urban) compared to their counterparts in Suba sub-county (rural) can be supported by the finding that motorcycle taxi riders' in urban areas earned an average of Ksh. 760 as daily income compared to their counterparts in rural areas who earned a daily average income of Ksh. 650 (See Table 4.4).

5.2.2 Relationship between Gender of Motorcycle Riders and their Socio-economic Wellbeing

Motorcycle taxi riding is a physically straining work which is generally perceived to be a male domain. Appiagyei and Tuffour (2014) established that patronage of motorcycle taxi services in the Accra metropolis in Ghana is gender and age-biased as majority of the riders are male and young. This was in agreement with the findings of this study where majority (93%) of motorcycle taxi riders' was identified as males and 7% females. This disparity in gender ratio among the motorcycle taxi riders' could partly be attributed to the gender-biased perception among African communities that labour-intensive work such as motorcycle taxi riding can only be done by males.

Females therefore tend to shy away from it. The long hours that the job demands from riders also make it impractical for females to put in the time as they are also home makers, without ruling out security concerns for the females when transporting passengers at dawn or dusk.

It could also mean that males are traditionally raised to be providers and the females home makers, particularly in the rural areas where females start having children in their teenage years. This situation compels them to stay home and raise the children while their male counterparts engage in income generating activities outside the home; motorcycle taxi riding being one of them. Even though there were more males than females riding motorcycle taxis in Homa Bay County, the study established that among the females who participated in the study (n=22), more females (87%) experienced high levels of socio-economic wellbeing compared to 82% of their male counterparts.

These findings can be explained using qualitative data from FGD which revealed that female motorcycle taxi riders' are preferred by many customers due to what they called "proper hygiene", good bargaining skills and safe speed while transporting passengers. This results in more income and additional "tips" for female motorcycle taxi riders' from their clients. In order to stay secure when riding motorcycle taxis, the females mentioned the following as strategies for reducing the risk of attacks: carrying passengers from 8am and not earlier, stopping to transport passengers by 3 pm, dropping passengers only in open places, carrying only regular trusted customers after a background check as well as insisting on the customer paying the fare upfront to avoid a confrontation that could lead to an attack at the destination. By retiring

early each day, the female riders could be preventing attacks but they are also disadvantaged in that many customers live their work stations after 5 pm and require transport services to their homes.

Female riders however mentioned that the "loss" of working hours is often compensated by the tips they get from customers and by the many trips they make since the female riders are preferred by many customers. Among motorcycle taxi riders' of both genders, 5% admitted to renting out their motorcycles to criminals, citing more pay from the criminals as the motivation behind accepting to transport criminals. This claim can be supported by Achula (2015) who alleged that motorcycle taxi operators in Bungoma County are aiding cross-border robberies which is threatening security and diplomatic relations between Kenya and Uganda.

Report by Achula (2015) that criminal gangs and politicians are exploiting the boda boda industry with the former disguising themselves as riders and the later using riders for political gain is a topic that was avoided by many motorcycle taxi riders' hence scanty information. Majority of the riders simply responded that they work hard to earn a living and that they do not engage in criminal activities, contrary to the opinions of majority of the community leaders who were key informants in this study. The Chi-square test showed that there was no significant relationship ($p=0.622$) between gender of motorcycle taxi riders' and their socio-economic wellbeing. This implied that the socio-economic wellbeing outcomes of motorcycle taxi riders' in Homa Bay Sub-County was dependent on factors other than a rider's gender.

5.2.3 Relationship between Riding License Possession Status among Motorcycle Taxi Riders and their Socio-economic Wellbeing

Cities Development Initiative for Asia (2011) established that motorcycle taxi transportation, like other informal public transportation across the world is characterized by: operating without licenses, use of unregistered means of transport, picking up of passengers from undesignated places and operators not following traffic rules. In Kenya, a riding license is issued to a person aged 18 years and above since the law considers one an adult at this age. In spite of this, there are people who use motorcycles to transport passengers and goods without valid riding licenses, as was established by this study; as indicated in Table 4.1, out of the 315 motorcycle taxi riders' who participated in the survey, 28% (n=88) admitted that they had riding licenses whereas 72% (n=227) of motorcycle taxi riders' were riding without riding licenses.

Even though the study by Cities Development Initiative for Asia (2011) was conducted in Asia and this study was conducted in Africa, the finding of this study concur with the author that motorcycle taxi riders' operate without licenses which becomes a road safety risk. Ironically, this study established that 61% of motorcycle taxi riders' who had riding licenses had been involved in road accidents while riding compared to a lower percentage (57%) of motorcycle taxi riders' who did not have riding licenses (See Table 4.6). This disparity could partly be explained by the findings of Cervero (2000) that motorcycle taxis are commonly involved in accidents because of thrill of speed, carelessness, aggressiveness, tendencies to 'show off' in addition to involvement in drug use by youthful motorcycle taxi riders' among other

reasons such as the one mentioned by a participant at the FGD in Homa Bay sub-county:

"*Many of us here have not been to a riding school but we are very careful so as not to be involved in accidents…we do have lots of problems with the police over the issue*"

Participant, FGD session

Involvement in accidents among motorcycle taxi riders' with riding licenses could also mean that those with riding licenses are not putting into practice what was learnt in riding school or that they were not properly trained. The authenticity or validity of their riding licenses can also not be ruled out. Chi-square test revealed that there is no significant relationship (p=0.783) between possession status of a riding license and riders' socio-economic wellbeing of motorcycle taxi riders'. This implies that the safety of motorcycle taxi riders' in Homa Bay County is dependent on factors other than possession status of a riding license. Some of the factors contributing to socio-economic wellbeing of motorcycle taxi riders' with reference to safety could be observations made during the survey where a number of motorcycle taxi riders' were not observing traffic rules. For instance; failing to indicate when changing lanes or not giving priority to an oncoming vehicle while joining the highway from a feeder road. Of greater concern was that none of the motorcycle taxi riders' at the study area was spotted putting on a helmet.

Chi-square test results further revealed that slightly more (62%) of motorcycle taxi riders' who had riding licenses experienced high SEWB compared to 58% of those who rode motorcycle taxis without riding licenses (See Table 4.9). Based on the

study's qualitative information shared, motorcycle taxi riders' with riding licenses felt "safe" as far as harassment by the traffic police was concerned. Those without licenses cited constant extortion by the police who threatened them with arrest. Working under constant fear of arrest and having to regularly give bribes which then reduced their income could have contributed towards the low socio-economic wellbeing among motorcycle taxi riders' with no riding licenses.

5.3 Relationship between Social Characteristics of Motorcycle Taxi Riders and their Socio-economic Wellbeing

Social connectedness, involvement in groups and ownership status of motorcycle taxi are social characteristics whose relationship with socio-economic wellbeing of motorcycle taxi riders' were established and discussed in subsequent sub-sections:

5.3.1 Relationship between Social Connectedness among Motorcycle Taxi Riders and their Communities and the Riders' Socio-economic Wellbeing

Motorcycle taxi riders who felt that they are socially connected with colleagues and community members associated the connectedness with their invitation to community functions, participation in community activities and contributing to decision making within groups that they belong to. This study is in agreement that motorcycle taxi riders' need diversity of relationships to be able to experience high SEWB as was established; among motorcycle taxi riders' who responded that their social connectedness had improved, 90% (n=209) experienced high SEWB compared to a minority (n=62) whose social connectedness had reduced since they started riding motorcycle taxis (Table 4.10). Being able to participate in their communities or groups that they are members of is likely to raise self-esteem of motorcycle taxi

riders' which consequently enhances their socio-economic wellbeing through perceptions of being "useful" in the society.

Olvera, Plat, Poche and Sahabana (2012) in their study indicated that in West and Central African cities, motorbike taxis came to be demonized by the general public because of their competition with other operators, their power as a pressure group, their aggressive behaviour and riding skills and the negative externalities (accidents, air pollution, security) that they generate. Similar observation was made in Douala, Cameroon by (Konings, 2006) and Kampala (Goodfellow, Titeca, 2012) that motorcycle taxi riders' sometimes organize themselves and engage in protests to defend their common interests hence being viewed as unruly by the public. These attributes can contribute to negative perceptions about motorcycle taxi riders' which consequently have an effect on the riders' social connectedness hence possible lower levels of socio-economic wellbeing. In this study, some motorcycle taxi riders' indicated that the negative attitudes of community members towards them contributed towards their reduced social connectedness which they chose to react to by minding their own businesses.

Chi-square test showed that statistically, there was no significant relationship ($p=0.226$) between social connectedness of motorcycle taxi riders' and their communities and the riders' socio-economic wellbeing. This therefore implies that the socio-economic wellbeing of motorcycle taxi riders' in Homa Bay Sub-County was not dependent on social connectedness of motorcycle taxi riders' and their communities. However, social connectedness is an aspect that cannot be ignored since relationships allow motorcycle taxi riders' to give and receive information, get

emotional support and experience a sense of belonging and value, according to Full Frame Initiative (2013).

5.3.2 Relationship between Motorcycle Taxi Riders' Involvements in Welfare Groups and their Socio-economic Wellbeing

Groups that motorcycle taxi riders' involve themselves in were either SACCOs, local groups at their pick-up stages, youth groups within their communities or other welfare groups in their villages. Groups can act as sources of social capital as well as safety nets whenever motorcycle taxi riders' are faced with social and economic challenges. Njoroge (2015) reported that transport regulations in Kenya demand that motorcycle taxi riders must join SACCOs where they can save in addition to assisting authorities with controlling activities in the transport sector. The SACCOs also act as safety nets during economic shocks.

On the contrary, this study established that motorcycle taxi riders' in Homa Bay County are ignorant of this regulation and only join SACCOs as a personal choice and not a policy requirement. For instance, 27% of motorcycle taxi riders' in Homa Bay County were not members of any savings group at the time of the survey. Failure to be a member of a welfare group or a SACCO could be due to lack of appreciation or understanding that these groups could offer social protection whenever one faces financial insecurity during job loss, when made redundant due to physical injury, illness or financial difficulties in times of emergencies that result from sickness and even natural calamities that may hit the family.

In support of ILO (2006), this study established that some of the riders have no measures put in place to mitigate the impacts of income risks that could leave them vulnerable to economic shocks. For instance, eventualities such as ill health or accidents can prevent a motorcycle taxi rider from earning daily income. In order to mitigate vulnerability, motorcycle taxi riders' should be encouraged to set up and manage vibrant groups that can offer financial and moral support during challenges. The importance of involvement in groups can be supported by findings of this study which established that among motorcycle taxi riders' who were members of a group, 73% experienced high SEWB while 27% responded that they experienced low SEWB (See Table 4.10).

The population that experienced low SEWB could be explained by the focus group discussion finding that some motorcycle taxi riders' generally excluded themselves from participating in activities within their groups, citing the rush to make money from riding motorcycle taxis. Other than saving and investing, involvement in welfare groups can be a source of social capital where members can get solace or social security in times of social or economic challenges. The support can be in form of social welfare and social protection. Welfare programs can assist motorcycle taxi riders' to cope with shocks thereby reducing the riders' vulnerability and consequently, enhancing their socio-economic wellbeing. During meetings, group members can also share productive or positive ideas and best practices thereby uplifting the socio-economic wellbeing of colleagues. These ideas could be about relationships, health, personal growth, community service, investment and general wellbeing. The Chi-square test revealed that there was no significant relationship ($p=0.176$) between motorcycle taxi riders' involvement in groups and their socio-

economic wellbeing. This implied that the socio-economic wellbeing of motorcycle taxi riders' in Homa Bay Sub-County was not dependent on their involvement in groups in as much as involvement in groups offer social, emotional and financial support; factors that contribute to socio-economic wellbeing outcomes.

5.3.3 Relationship between Ownership Status of Motorcycle Taxi by the Riders and their Socio-economic Wellbeing

Ownership status of motorcycle taxi among the sample population was categorized into two: Self-owned and rented. The study observed that more than half (63%) of motorcycle taxi riders' were renting motorcycles and remitting daily targets to the owners of motorcycles compared to 37% who were riding self-owned motorcycle taxis. Non-ownership of motorcycle taxis could be associated with the young ages of motorcycle taxi riders' who probably may not have worked long enough to save and buy motorcycles, are probably ignorant of the benefits of owning property or come from poor families with many dependants hence no money to save for purchase of own motorcycle.

The findings of this study concur with Nyachieo (2013) who reiterated that majority of motorcycle taxis on Kenyan roads do not belong to the riders we see operating them, but to the "rich" who get daily remittances (targets) from renting. The reality that 63% of riders are renting motorcycles is a pointer to the fact that this category of motorcycle taxi riders' is not fully and productively employed since the motorcycles can be withdrawn by the owners anytime without notice. Analysis of the findings established that 66% of those who were riding rented motorcycle taxis experienced low SEWB compared to half (51%) of those who were riding self-owned motorcycle

taxis (See Table 4.11). Motorcycle taxi ownership in Homa Bay County is different from that in Vietnam where according to Mateo-Babiano and Tuan (2013), almost 100% of motorcycle taxis were operated by individuals who owned them at all times unlike in Homa Bay County, Kenya where merely 37% of the riders were riding self-owned motorcycle taxis. The disparity of socio-economic wellbeing outcomes of those who rode self-owned motorcycle taxis and those who rode rented motorcycle taxis could be due to the informal nature of the "employment" arrangement between those who rent motorcycles and the motorcycle owners. For instance, in a situation where a motorcycle is withdrawn by the owner without prior notice (reported as common practice), economic security of the renting motorcycle taxi rider can be affected. The situation can be worse in cases where the motorcycle taxi rider does not have social protection or social security.

According to the ILO (2006), social security includes all measures that are intended to provide income security and alleviate poverty during conditions such as sickness, old age and unemployment with measures designed to protect the income and wellbeing of workers and their families. Based on the findings of this study and ILO (2006) definition of social security, motorcycle taxi riders in Homa Bay County could be exposed to income insecurity and sickness that may be caused by traffic accidents and periodic lack of a motorcycle among other factors. This means therefore that social security interventions are fundamental if motorcycle taxi riders' are to mitigate and cope with shocks. Analysis of income differences between riders of self-owned and rented motorcycle taxis established that due to the daily target of Ksh.300 (USD3) remitted to motorcycle taxi owners by the renting motorcycle taxi riders', these riders' disposable income reduced considerably compared to those riding self-owned

motorcycle taxis. In addition, those riding rented motorcycle taxis experienced periodic unemployment when the motorcycles were withdrawn from them by motorcycle owners thereby affecting reliability of their income. This consequently led to inconsistency in saving and re-investment or wealth creation.

Ownership status of motorcycle taxi could also have contributed to road accidents among motorcycle taxi riders'. For instance, motorcycle taxi riders' who rented motorcycle taxis were often compelled to ride at dangerously high speed so as to transport more customers in order to surpass the daily target that owners of motorcycles expected them to remit. This study argues that in case a rider was assured of a regular salary as an employee, probably there would be no "mad rush" aimed at surpassing the target so as to keep additional income hence prevention of traffic accidents related to speed among motorcycle taxi riders'.

The Chi-square test showed a significant relationship ($p=0.036$) between ownership status of motorcycle taxi and riders' socio-economic wellbeing. This therefore implied that motorcycle taxi riders' who rode self-owned motorcycles in Homa Bay Sub-County were more likely to experience a higher SEWB because they kept all the income unlike their 'renting' counterparts who remitted a mandatory daily target of Ksh. 300 (USD3) to motorcycle owners. Some of the motorcycle taxi riders' in the latter category revealed that they are sometimes compelled to withdraw their savings to remit the target whenever daily earnings were not adequate. Stating that failure to do so could lead to the motorcycle being taken away by the owner, a situation that could plunge the rider into an economic shock.

Significance of the present results to the socio-economic wellbeing outcomes of motorcycle taxi riders emanates from the statistical confirmation that there is a significant relationship (p=0.036) between ownership status of motorcycle taxi and socio-economic wellbeing of motorcycle taxi riders' in Homa Bay County. Therefore, findings of this study can be used by motorcycle taxi riders', the government, Non-governmental organizations, private sector and other stakeholders to enhance socio-economic wellbeing of motorcycle taxi riders' by implementing evidence-based interventions that promote motorcycle taxi ownership among the riders so as to increase their disposable income as well as grow a sustainable enterprise that can address unemployment and promote county and national economic growth.

5.4 Levels of Socio-economic Wellbeing of Motorcycle Taxi Riders

Fitoussi, Sen and Stiglitz (2009) have described wellbeing as a multi-dimensional character. In this study, socio-economic wellbeing among motorcycle taxi riders' in Homa Bay County was measured using access to social services, social status, income, savings, health, safety and security. The study established that overall, 63% of motorcycle taxi riders'experience high SEWB compared to 37% who experienced low SEWB as shown in Figure 4.2. In addition, tests of the relationships between specific independent variables and SEWB yielded results as summarised in Table 4.13.

Table 4.13 Summary of Hypotheses Test Results from Pearson's Chi-Square Test for Independence

Variables	N	Chi-square	df	Sig.(2-sided)	Significance	H_0 hypotheses status
Localities of MT operation* SEWB	315	12.606	1	0.013	Highly significant	Rejected
Gender * SEWB	315	0.209	1	0.622	Not significant	Not rejected
Involvement in groups * SEWB	315	15.443	1	0.051	Not significant	Not rejected
Riding license possession * SEWB	315	1.741	1	0.783	Not significant	Not rejected
Social connectedness * SEWB	315	5.659	1	0.226	Not significant	Not rejected
Ownership status of MT * SEWB	315	6.62	1	0.036	Significant	Rejected

Probability error is 0.05

CHAPTER SIX: SUMMARY, CONCLUSION AND RECOMMENDATIONS

6.1 Introduction

This Chapter summarizes major findings of the study, draws conclusions, explains the contribution of study to knowledge then gives recommendations for policy, practice and further research.

6.2 Summary of Results per Objective

Objective (i) To establish the relationship between demographic characteristics of motorcycle taxi riders and the riders' socio-economic wellbeing.

The study established that motorcycle taxi riders' who operated motorcycle taxis in the urban setting (Homa Bay town) experienced higher SEWB (80%) compared to their counterparts in the rural setting (Suba sub-county) at 70%. In addition, higher percentage (87%) of female motorcycle taxi riders experienced high SEWB compared to 82% of the male riders. Ironically, 61% of motorcycle taxi riders' who possessed riding licenses among the study population reported that they had been involved in accidents while riding motorcycle taxis compared to a lesser percentage (57%) of those who did not possess riding licenses.

Objective (ii) To assess the relationship between social connectedness among motorcycle taxi riders and their communities and the riders' socio-economic wellbeing.

Among motorcycle taxi riders' (n=232) who reported that their social connectedness had improved since they started riding motorcycle taxis, 90% experienced high

SEWB compared to 75% who reported that their social connectedness with their community had reduced.

Objective (iii) To determine the relationship between involvement of motorcycle taxi riders in groups and their socio-economic wellbeing

Almost three quarters (73%) of motorcycle taxi riders' who involved themselves in groups experienced high SEWB, an indication that involvement in groups has positive outcomes on the riders' socio-economic wellbeing.

Objective (iv) To analyze the relationship between riders' ownership status of motorcycle taxi and their socio-economic wellbeing

This study confirmed that there was a significant relationship ($p=0.036$) between ownership status of motorcycle taxi and socio-economic wellbeing of motorcycle taxi riders'. This implied that the socio-economic wellbeing of motorcycle taxi riders' was dependent on whether a rider owned or rented the motorcycle that he used as a source of livelihood. For instance, 49% of those who were riding self-owned motorcycle taxis experienced high levels of SEWB compared to 34% of those who were riding rented motorcycle taxis.

Objective (v) To establish the levels of socio-economic wellbeing of motorcycle taxi riders in Homa Bay County

In this study, levels of socio-economic wellbeing were measured using the following indices: access to social services, social status, income, health, savings, safety and

security. Computation of scores of these indices revealed that more than half (63%) of motorcycle taxi riders' experienced high levels of SEWB while 37% experienced low levels of SEWB.

6.2.1 Hypotheses Test Results

Chi-square test statistically confirmed a highly significant relationship (p=0.013) between localities of motorcycle taxi operation (rural and urban) and socio-economic wellbeing and a significant relationship (p=0.036) between ownership status of motorcycle taxi and socio-economic wellbeing of motorcycle taxi riders'. Chi-square tests also revealed that there is no significant relationship (p=0.622) between genders of motorcycle taxi riders' and their socio-economic wellbeing, motorcycle taxi riders' riding license possession status and their socio-economic wellbeing (p=0.783), social connectedness among motorcycle taxi riders' and their communities and the riders' socio-economic wellbeing (p=0.226) as well as motorcycle taxi riders' involvement in groups and their socio-economic wellbeing (p=0.176).

6.3 Conclusion

Based on analysis of quantitative and qualitative findings, the study concluded that motorcycle taxi riders in Homa Bay County experienced high levels of SEWB at 63%. The socio-economic wellbeing experienced among motorcycle taxi riders' was with reference to access to social services, social status, income, savings, safety and security at 5% probability error. In addition, the study established that there is a highly significant relationship (p=0.013) between localities of motorcycle taxi operations (rural and urban) and the riders' socio-economic wellbeing, with those in the urban areas experiencing higher SEWB (80%) than those in the rural areas (70%).

This is a pointer to higher vulnerability to shocks among the latter category. Also the significant relationship (p=0.036) between ownership status of motorcycle taxi and socio-economic wellbeing of motorcycle taxi riders' implies that there is need to come up with strategies and opportunities that can promote self-ownership of motorcycle taxis so that motorcycle taxi riders' can own property, be independent, grow business enterprises and even create jobs within their communities.

6.3.1 Contribution to Knowledge

This study has bridged the knowledge gap on socio-economic wellbeing of motorcycle taxi riders' with reference to access to social services, social status, income, savings, health, safety and security. This is because the study acknowledged that riders' are a community resource since they make positive contribution by offering accessible and reliable transport services hence the need to enhance their socio-economic wellbeing. Researches that existed prior to this study focused on how motorcycle taxi riders' contribute to the increase in traffic accidents and other social "evils" such as robberies, abductions, kidnappings, murders and high prevalence of teen pregnancies within communities.

6.4 Recommendations

Recommendations for policy, practice and further research have been outlined in the following sub-sections:

6.4.1 Recommendations for Policy

i. Because of devolution, the study recommends that County governments should design policies that promote establishment of medical facilities and

public administrative offices within reach for motorcycle taxi riders' and their families. This will ensure access by all motorcycle taxi riders'.

ii. Banks and micro-finance institutions should strengthen their money lending policies by training motorcycle taxi riders' in entrepreneurial skills, with emphasis on savings, investment and wealth creation. This could promote self-ownership of motorcycle taxis hence more disposable income among motorcycle taxi riders'who are currently riding rented motorcycle taxis.

6.4.2 Recommendations for Practice

The study recommends the following for practice:

i. Medical insurance service providers should come up with products that are designed for motorcycle taxi riders' so as to promote uptake and reduce vulnerability caused by inability to afford professional medical care whenever needed by motorcycle taxi riders' and their families.

ii. The government should set up road safety training institutes with standardized training manuals targeting motorcycle taxi riders and other road users at every sub-county or administrative ward to reduce traffic accidents.

iii. Motorcycle taxi riders' should consider exploiting their social capital by involving themselves in vibrant groups which could act as safety nets whenever they are faced with financial and social challenges hence possibility of enhanced socio-economic wellbeing.

6.4.3 Recommendations for Further Research

The study recommends further study in the following areas:

i. Investigation on the practicalities of how social capital among motorcycle taxi riders' can be explored to enhance socio-economic wellbeing of motorcycle taxi riders' across Kenya.

ii. Investigation on how injuries resulting from road accidents among motorcycle taxi riders affect the socio-economic wellbeing of riders and their dependants across Kenya.

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Appendix A: Informed Consent Form

My name is **Irene Awuor Owuor**. I am a PhD student from Kenyatta University. I am conducting a study on "Selected Characteristics and their Effects on Socio-economic Wellbeing of Motorcycle Taxi Riders in Homa Bay County, Kenya". The information will be used for my studying purposes towards the attainment of a Doctorate degree.

Procedures to be followed

Participation in this study will require that I ask you some questions as indicated in a questionnaire and the information you give shall be recorded in that questionnaire.

Please remember the participation in this study is voluntarily. You may ask questions related to the study at any time.

You may refuse to respond to any questions and you may stop an interview at any time. You may also stop being in the study at any time without any consequences to you.

Discomforts

Some of the questions you will be asked are personal and may be embarrassing or make you uncomfortable. If this happens, you may refuse to answer these questions if you so choose. You may also stop the interview at any time. The interview may take approximately one hour of your time.

Benefits

If you participate in this study you will contribute to knowledge which might be used in future to inform policy that may improve the motorcycle taxi enterprise sector.

Confidentiality

The questionnaires will be administered at your working station but your name will not be recorded on the questionnaire. The questionnaires will be kept in a locked cabinet for safe keeping at Kenyatta University. Everything will be kept private.

Contact Information

If you have any questions you may contact (1) Dr. Lucy Kathuri-Ogola on kathuri.lucy@ku.ac.ke or (2) Dr. Calvine Kayi on kayi.calvine@ku.ac.ke or the Kenyatta University Ethical Review Committee Secretariat on chairman.kuerc@ku.ac.ke, secretary.kuerc@ku.ac.ke, secretariat.kuerc@ku.ac.ke

Participant's statement

The above information regarding my participation in the study is clear to me. I have been given a chance to ask questions and my questions have been answered to my satisfaction. My participation in this study is entirely voluntary. I understand that my records will be kept private and that I can leave the study at any time. I understand that there will be no consequence for failing to participate or withdrawing from the study.

Name of participant:

…….

Signature or Thumbprint Date

Investigators statement

I, the undersigned, have explained to the volunteer in a language s/he understands, the procedures to be followed in the study and the risks and benefits involved

Name of interviewer:

……

Signature or Thumbprint Date

Appendix B: RESEARCH APPROVAL

KENYATTA UNIVERSITY
GRADUATE SCHOOL

E-mail: dean-graduate@ku.ac.ke
Website: www.ku.ac.ke

P.O. Box 43844, 00100
NAIROBI, KENYA
Tel. 810901 Ext. 57530

Internal Memo

FROM: Dean, Graduate School

DATE: 4th November, 2015

TO: Irene Awour Owour
C/o Community Resource Management & Extension Dept.
Kenyatta University

REF: H87/27749/2013

SUBJECT: APPROVAL OF RESEARCH PROPOSAL

This is to inform you that Graduate School Board at its meeting of 4th November, 2015 approved your Research Proposal for the Ph.D. Degree Entitled, **"The Effects of Motorcycle Taxi Enterprise on Socio-Economic Well-Being of Riders in Homa Bay County, Kenya".**

You may now proceed with your Data Collection, subject to clearance with Director General, National Commission for Science, Technology and Innovation.

As you embark on your data collection, please note that you will be required to submit to Graduate School completed Supervision Tracking Forms per semester. The form has been developed to replace the Progress Report Forms. The Supervision Tracking Forms are available at the University's Website under Graduate School webpage downloads.

By copy of this letter, the registrar (Academic) is hereby requested to grant you Substantive registration for your Ph.D studies.

Thank you

KENYATTA UNIVERSITY OFFICE OF DEAN 04 NOV 2015 GRADUATE SCHOOL P.O. BOX 43844-00100 NAIROBI

JULIA GITU
FOR: DEAN, GRADUATE SCHOOL

c.c. Chairman, Community Resource Management and Extension Department.
Registrar Academic – Att: J. Likam

Supervisors:

1. Dr. Lucy-Kathuri Ogola
   Department of Community Resource Management and Extension
   Kenyatta University

2. Dr. Calvine Kayi
   Department of Geography
   Kenyatta University

JG/rwm

Appendix C: RESEARCH AUTHORIZATION

NACOSTI

NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION

Telephone: +254-20-2213471, 2241349, 310571, 2219420
Fax: +254-20-318245, 318249
Email: secretary@nacosti.go.ke
Website: www.nacosti.go.ke
When replying please quote

9th Floor, Utalii House
Uhuru Highway
P.O. Box 30623-00100
NAIROBI-KENYA

Ref: No. **NACOSTI/P/16/95110/9076**

Date: **15th February, 2016**

Irene Awuor Owuor
Kenyatta University
P.O. Box 43844-01000
NAIROBI.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on ***"The effects of motorcycle taxi enterprise on socio-economic well being of riders in Homa Bay County, Kenya"*** I am pleased to inform you that you have been authorized to undertake research in **Homa Bay County** for a period ending **2nd February, 2017.**

You are advised to report to **the County Commissioner and the County Director of Education, Homa Bay County** before embarking on the research project.

On completion of the research, you are expected to submit **two hard copies and one soft copy in pdf** of the research report/thesis to our office.

DR. M. K. RUGUTT, PhD, HSC.
DIRECTOR-GENERAL/CEO

Copy to:

The County Commissioner
Homa Bay County.

The County Director of Education
Homa Bay County.

Appendix D: Motorcycle Taxi Riders' Questionnaire

RELATIONSHIP BETWEEN SOCIO-DEMOGRAPHIC CHARACTERISTICS OF MOTORCYCLE TAXI RIDERS AND THEIR SOCIO-ECONOMIC WELLBEING OUTCOMES : CASE OF HOMA BAY COUNTY, KENYA

Dear rider,

I'm Irene Awuor Owuor, a PhD candidate at Kenyatta University. This questionnaire is meant to gather information about socio-economic wellbeing of motorcycle taxi riders in Homa Bay County. Your response will only be used for purposes of academic study. Thank you for your time.

INSTRUCTIONS

1. One questionnaire per RIDER. This questionnaire **must be completed by the interviewer** during the interview.

2. Introductions – The interviewer introduces herself/himself and outlines the purpose of the survey. Clarify that the time is convenient or arrange with the respondent an alternative time to return.

3. Verify that the respondent has worked **full time** as a **boda boda** rider for a minimum of one year

4. All sections must be completed. If the respondent does not respond, or cannot respond to a question, write NA *(NO ANSWER)* in the space provided.

5. At the end of the interview thank the respondents for their support and cooperation

Name of Interviewer:

Locality of operating motorcycle taxi:	{ } Rural { } Urban
Name of stage:	
Gender of respondent:	{ } Male { } Female
Date:	
Time Started:	**Time Completed:**

N°	QUESTIONS	ANSWERS	COMMENT
A: DEMOGRAPHIC CHARACTERISTICS OF RESPONDENTS			
1.	How old are you? **Record age in years**	Record number of years |___|___|	
2.	If age is indicated in **QUESTION 1**, ***tick*** appropriate age range	18-25 |___| 26-35 |___| 36-47 |___| 48 and above |___|	
3.	For how long have you been riding motorcycle taxi?	Less than one year |___| 1 year – 2 years |___| 3 years – 4 years |___| 5 years and above |___|	
4.	What is the highest level of schooling you have attained?	00 = None 01= Some primary education 02 = Completed Primary 03 = Secondary Incomplete |___||___| 04 = Secondary Complete 05 = University 06 =Other(specify)---------- 98 = No answer	
5.	What is your marital status?	01 = Married 02 = Single (never married) 03 = Divorced/Separated |___||___| 04 = Widow/ Widower 98 = No answer	

6.	How many people have been living in your house for the past three months? (**Ignore if living with parents**)	**RECORD EXACT NUMBER** |___||___|	
7.	If figure is indicated in **QUESTION 6**, ***tick*** appropriate household size range	Less than 5 ☐ Between 5–10 ☐ More than 10 ☐	
8.	When did you start the **boda boda** business?	**RECORD EXACT YEAR** |___||___|	
9.	Do you have a rider's licence?	01 = No 02 = Yes |___||___| 98 = No answer	
10.	If **Yes to Q 9**, in which year did you obtain your rider's licence?	|___||___||___||___|	
11.	Do you own the motorcycle you use for your **Boda boda** business?	01 = No 02 = Yes |___||___| 98 = No answer	
B. SOCIAL CONNECTEDNESS			
12.	Do you participate in making decisions within your **boda boda** group?	01 = No 02 = Yes |___||___| 98 = No answer	
13.	Give reasons for your **answer in Question 12.**	1._____ 2._____ 3_____	

14.	Do you receive invitations to community functions such as fund raisings?	01 = No 02 = Yes 98 = No answer |___||___|	
15.	If **Yes to Question 14**, do you participate in community functions since you joined **boda boda** business?	01 = No 02 = Yes 98 = No answer |___||___|	
C: INVOLVEMENT IN WELFARE GROUPS			
16.	Do you belong to any **boda boda** welfare group?	01 = No 02 = Yes 98 = No answer |___||___|	
17.	Who qualifies to join the group?	1._____ 2._____ 3_____	
18.	What are the activities of the group?	1._____ 2._____ 3_____	
19.	If **Yes to Question 16**, is this the only welfare group in which you are a member?	01 = No 02 = Yes 98 = No answer |___||___|	
20.	If **Yes to Question 16**, do you feel a sense of ownership of decisions made in your welfare group?	01 = No 02 = Yes 98 = No answer |___||___|	
21.	Have you ever received welfare support from fellow group member (s)	01 = No 02 = Yes 98 = No answer |___||___|	

22.	If **Yes to Question 21,** *specify* the kind of support	1._____ 2._____ 3_____	
D: OWNERSHIP STATUS OF MOTORCYCLE TAXI			
23.	What is the ownership status of the motorcycle which you ride?	Self-owned |___| Rented |___|	
24.	If self-owned, do you have the ownership documents?	01 = No 02 = Yes |___||___| 98 = No answer	
25.	If rented, for how long have you been renting the motorcycle?	**RECORD NUMBER IN MONTHS** |___||___|	
E: LEVELS OF SOCIO-ECONOMIC WELLBEING			
(i) ACCESS TO SOCIAL SERVICES			

26. Do you and your family conveniently access the following facilities? (Read out each of the facility)

If Yes, how far are the following facilities in km from your residence? (in case where the respondent can remember time transform the time to KM equivalent)

Facility	**Access** 01 = Yes 02 = No 98 = No answer	**Distance from rider' home (Actual Distance in Km)**	**Provider** 1=Public 2=Private 3=Other (*Specify*)
Health Centre			
Market			
Shopping facilities			
Postal offices			
Police station			
Chief's Camp			
Banking Services			

(ii) SOCIAL STATUS OF MOTORCYCLE TAXI RIDERS			
27.	Has your involvement in **boda boda** business changed the way the community view you?	01 = No 02 = Yes |___||___| 98 = No answer 99 = Don't know	
28.	Give reason (s) for your answer in **Question 27.**	1._____ 2._____ 3_____	
29.	What is your perception about the way the community view your social status since you joined ***Boda Boda*** *business*?	|___| Improved |___| Reduced |___| No change |___| Do not know	
30.	Do you hold leadership positions within your community?	01 = No 02 = Yes |___||___| 98 = No answer	
(iii) INCOME			
31.	Before starting the **boda boda** business, what did you do to earn a living?	|___| Small scale retail shop |___| Wholesale shop |___| Livestock business |___| Casual labourer |___| Was in school |___| Selling of clothing/Boutique |___| Farming |___| Other (*Specify*)	
32.	If you had been engaged in other occupation (s), why did you change to **boda boda?**	1._____ 2._____ 3_____	

33.	Reflecting on the past week, how much did you make on the following days? (**Start from the day prior to the interview, backwards**)	**Day**	Sun	Mon	Tue	Wed	Thur	Fri	Sat	
		Amount (Ksh)								
34.	How much money do you spending on fuel each day of the week?	**Day**	Sun	Mon	Tue	Wed	Thur	Fri	Sat	
		Amount (Ksh)								

(iv) HEALTH CARE ACCESS

35.	I subscribe to a medical insurance scheme	01 = No 02 = Yes |___||___| 98 = No answer	
36.	If **Yes to Question 35**, specify which medical scheme	|___|NHIF |___|Other (specify) |___|No answer ***If other, specify*** ……	
37.	If **Yes to Question 35**, do you use your medical card to access medical care?	01 = No 02 = Yes |___||___| 98 = No answer ***Give reasons for your response to question 37*** 1._____ 2._____ 3._____	
38.	If **No to Question 35**, how do you finance your medical care bills? (*Specify*)	1._____ 2._____ 3._____	

(v) SAVINGS			
39.	Are you a member of an investment group or SACCO?	01 = No 02 = Yes |___||___| 98 = No answer	
40.	If **No** to **Question 39**, give reasons	_____ _____ _____ _____	
41.	In an attempt to cope with economic shocks, do you save any money you earn from ***Boda Boda*** riding?	01 = Yes 02 = No |___||___| 98 = No answer	
42.	If **Yes** to **Question 41,** how much do you save per day?	**RECORD EXACT AMOUNT** |_____|	
43.	Where do you save your money?	[ ] In our ***Boda Boda Savings group*** [ ] In another group but not our ***Boda Boda*** *Group* [ ] In the Bank [ ] In my house, in a special container [ ] In my Mobile saving account (M-shwari) [ ] In my M-Pesa account [ ] Any other (Specify) _____	
44.	What are the main reasons for saving money from your ***Boda Boda*** business?	|___| To earn interest |___| To pay school fees for my children |___| Pay college fees for my children |___| Pay fees for my college education or training |___| Pay for medical bills |___| Buy household goods/assets |___| Buy food for my family |___| For eventualities e.g funeral expenses |___| Other *(Specify* _____	
45.	Have you borrowed any amount of money from the saving group or anywhere else?	01 = No 02 = Yes |___||___| 98 = No answer	

46.	Do you contribute to National Social Security Fund (NSSF)?	01 = No 02 = Yes 98 = No answer |___||___|	
47.	If **No to Question 46**, do you contribute to any retirement benefits scheme? (*Specify the scheme*)	_____ _____ _____ _____	
	(vi) SAFETY		
48.	Do you hold a valid riding license?	01 = No 02 = Yes 98 = No answer |___||___|	
49.	Do you put on a helmet whenever you are riding a motorcycle?	01 = No 02 = Yes 98 = No answer |___||___|	
50.	Do you put on a reflector jacket whenever you are riding a motorcycle in the dark/at night?	01 = No 02 = Yes 98 = No answer |___||___|	
51.	Have you ever been involved in a road accident while riding a motorcycle taxi?	01 = Yes 02 = No 98 = No answer |___||___|	
52.	If **Yes to Question 51**, did you suffer any physical injury?	01 = Yes 02 = No 98 = No answer |___||___|	
	(vii) SECURITY		
53.	Have you ever been attacked by your passenger/s?	01 = Yes 02 = No 98 = No answer |___||___|	

54.	Have you ever been robbed off your motorcycle taxi?	01 = Yes 02 = No 98 = No answer |___||___|	
55.	Have you ever carried criminals in your motorcycle taxi? (*Knowingly or unknowingly*)	01 = Yes 02 = No 98 = No answer 99 = Don't know |___||___|	
56.	Have you ever rented out your motorcycle taxi to criminals? (*Knowingly or unknowingly*)	01 = Yes 02 = No 98 = No answer 99 = Don't know |___||___|	

THANK YOU FOR YOUR CO-OPERATION

Appendix E: Traffic Police Interview Guide

Personal Details

1. How old are you? 21-30 ☐ 31-40 ☐ 41-50 ☐ Above 50 ☐
2. For how long have you worked in Homa Bay County as a police officer?

   Less than 1 year ☐ 1- 3 years ☐ Over 3 years ☐

Main issues

3. Is the traffic police department involved in testing cyclists before giving them riding licences? Yes ☐ No ☐
4. From your experience, where do you think most riders do their training before coming to you for tests?

   Registered driving school ☐ Informal arrangement ☐
5. What do you know as common causes of motorcycle accidents?

   .....
6. On average, how many cases of motorcycle accidents are reported to your desk each week? Less than five ☐ More than five ☐ None ☐
7. What do you think can be done to increase the safety of riders on Kenyan roads? .....
8. Do you think motorcycle taxi enterprise is improving the socio-economic well-being of motorcycle taxi riders? *Kindly give reasons*

   .....

Appendix F: Community Leaders Interview Guide

Personal Details

1. How old are you? 31-40 ☐ 41-50 ☐ 51-60 ☐ Above 60 ☐
2. What position do you hold in this community? .....
3. Do you own a motorcycle taxi? Yes ☐ No ☐
4. Is any of your children/ relative a motorcycle taxi rider? Yes ☐ No ☐

Main issues

5. Do you think motorcycle taxi enterprise is benefiting the riders?

   Yes ☐ No ☐

   Give reasons .....

   .....

6. Have there been any incapacitations or deaths in this community caused by motorcycle taxi accident/s?

   Yes ☐ No ☐

   If **yes**, *specify*.....

7. Kindly share how your community generally view motorcycle taxi riders

   .....

8. Kindly share your opinion on involvement of MTRs in communal activities

   .....

9. What do you think can be done to improve on safety among motorcycle taxi riders'?

   .....

Appendix G: Focus Group Discussion Guide

Respondents: SACCO Leadership who are also motorcycle taxi riders

Names of participant:

C**ontacts of participants:**

Guiding questions

1) Why did you choose to be a motorcycle taxi rider?

   (Keep probing if they know why other members chose to be riders)
2) Share members' experience on how they acquired and **owned** motorcycle taxis (positive, negative and challenges faced)
3) Share members' experience on **renting** motorcycle taxi (positive, negative and challenges faced)
4) Can you share your views on motorcycle taxi riding and income of riders in Homa Bay County? (Averagely how much per day, how it is spent, does it improve lives of riders or it does not?)
5) Which factors affect the income levels of motorcycle taxi riders? (Those riding self-owned and rented motorcycles)
6) Can you share what you think about motorcycle taxi riding and the health care access by MTRs in Homa Bay County?
7) Share your opinion on motorcycle taxi riding and their social connectedness within the community
8) How do MTRs benefit from welfare groups? (*If at all*).
9) Share your opinion on motorcycle taxi riding and crime in Homa Bay County (*No mentioning names but real stories encouraged*)
10) Share your opinion on inclusion of MTRs in communal activities

11) What do you think can be done to improve on social connectedness, social status, income, savings, health, safety and security among motorcycle taxi riders? (mention possible solutions under each item).

Appendix H: Observation Checklist

1) Observation of riding skills among motorcycle taxi riders with reference to: Overtaking, indicating when taking a turn and joining the main road from a feeder road or from a pickup stage
2) Observation of dressing codes among motorcycle taxi riders:
    - Reflector jackets
    - Helmets
3) Observation casual interactions between motorcycle taxi riders and the following categories of people:
    - Colleagues
    - Passengers
    - Community at large
4) Observation of interactions between motorcycle taxi riders and the police (*if any*)

Appendix I: Measurement of Variables

Variable	Variable Type	Measurement	Analysis Technique	Data Type
Locality of MT operation	Independent	Rural and Urban	Descriptive statistics	Categorical
Gender of MTR	Independent	Male and Female	Descriptive statistics	Categorical
Holder ship status of MT	Independent	Holds riding license, does not hold riding license	Descriptive statistics	Categorical
Involvement in groups	Independent	Group membership, decision making	Cross tabulation	Categorical
Ownership status of motorcycle taxi	Dependent	Self-owned, rented	Cross tabulation	Categorical
Socio-economic wellbeing of motorcycle taxi riders		Access to social services, social status, income, health, savings, safety and security	Composite score Chi-square	Categorical

Appendix J: Work Plan

ACTIVITY	May'14 - May'15	June-July' 15	Agst'15	Agst,15	Sept-Mar '16	Apr - Sept '16	Oct-16-Apr.' 17	May'-Oct '17	Dec. 2017	June-Nov' 18	Dec. 2018
Proposal Development											
Departmental Presentation &Correction of Proposal											
Submission to School BPS Substantive registration to Graduate School											
Pre Testing of Research Instruments											
Data Collection & Analysis											
Thesis write up Presentation of First Draft											
Preparation of Second Draft											
Write up of final draft											
Submission of thesis for examination											
Oral defence, corrections, binding and submission of Thesis											
Graduation											

Appendix K: Map of Homa Bay County, Kenya