

NATIONAL CRIME RESEARCH CENTRE

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BODA BODA MOTORCYCLE TRANSPORT AND SECURITY CHALLENGES IN KENYA









Vincent Odhiambo Opondo Geofrey Kiprop

NATIONAL CRIME RESEARCH CENTRE



BODA BODA MOTORCYCLE TRANSPORT AND SECURITY CHALLENGES IN KENYA

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FOREWORD

Ensuring public safety is one of the leading functions of the public service and successful performance in this role requires a strategic approach that involves the concerted effort of all stakeholders. Transport plays a significant role in the development of the economy and, the boda boda sub-sector is becoming entrenched as a major part of the Kenyan economy and a source of employment and livelihood for many.

Boda bodas are becoming a popular means of transport for many rural and urban dwellers and have evolved into an informal sector of the transport industry. With this rising popularity, there are worrying concerns that the sub-sector is becoming associated with crime, traffic accidents and impunity, with grave implications for public safety. This situation has largely been attributed to the boda boda sector operating with minimal regulation and control. Complaints of boda boda operators and criminals on motorcycles attacking people are common occurrences across Kenya and, boda bodas are gradually turning into the new face of crime. In addition, boda boda accident related deaths and injuries have become major public health concerns in Kenya.

The seemingly informal, unregulated nature and weak governance framework for the sector is a serious threat to national security as it provides incentives for risk taking, recklessness and impunity among operators. The sector is dominated by a fairly youthful population without requisite professionally motorcycle training, less educated and of lower socio-economic standing- operating in a context of weak regulation and oversight. Consequently, the sub-sector is evolving into an unregulated informal industry with greater risks to public safety.

Preventing crime is a priority for national security, with immediate implications for the public. The penal approach to the sector, that of arresting operators and banning boda boda operations will not be sustainable in the long run for Kenya's developing economy. There is an urgent need to develop and implement policies that will allow boda boda operators to participate in economic activities in a regulated and orderly manner, where operators can derive an income while contributing to our nation's development and prosperity. This study recommends the urgent need to put in place a policy framework to register, regulate, monitor and govern the boda boda industry in the country.

This research is among efforts initiated by the government to inform policy discourse in addressing conventional, new and emerging crime trends in the country. It is my sincere hope that this report will assist stakeholders in addressing public safety challenges by ensuring that boda bodas are safe, secure, orderly, reliable and can be converted into a sustainable sector of public transport in Kenya.

HON: JUSTICE (RTD) P. KIHARA KARIUKI

ATTORNEY GENERAL/CHAIRMAN OF THE GOVERNING COUNCIL - NATIONAL CRIME RESEARCH CENTRE

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The findings and recommendations of this study will go a long way in assisting stakeholders in the security

and transport sector to formulate sound policies in addressing public safety challenges in the boda boda

motorcycle transport in Kenya.

GERARD E. WANDERA

DIRECTOR/CEO

NATIONAL CRIME RESEARCH CENTRE

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EXPLANATORY NOTES TO TERMS USED IN THE STUDY

Boda boda – the concept is derived from the English word "border" thus "boda boda" or border-to-border. It originated in Eastern Uganda along towns near the Kenya-Uganda borders. It referred to men on bicycles who offered to smuggle goods and individuals across the border .While boda bodas initially existed solely in the form of bicycle transportation, the term later grew to encompass those who offered motorcycle transportation services.

Boda boda motorcycle –the two-wheeled (motorized) motorcycles used in public transport for the purpose of carrying or ferrying goods and passengers for reward or hire.

Boda boda rider/operator - a person who rides or operates the motorcycles to offer transportation services. For purposes of this study, riders and operators will be used interchangeably.

Chama –merry go rounds initiatives to raise money and share among members.

Jua kali –is Swahili word that refers to the informal economy/sector that include among others, outdoor manufacturing, artisanry and small scale roadside businesses.

Matatu – privately owned vans, mini-vans and buses used in public transport.

Mungiki –was largely a youthful criminal gang that ran extortion rackets in the lucrative matatu industry, racketeering and levying protection fees in the urban slums in Nairobi and parts of Central Kenya. It advocated swearing oaths, sniffing tobacco and wearing dreadlocks.

Owner - the person under whose name the motorcycle is legally registered.

Pillion - a passenger being transported on the motorcycle.

Squad rider- stand-by or temporary rider who seek out motorbikes whenever and when any is available for short time work engagement.

ABBREVIATIONS AND ACRONYMS

AMA American Motorcycle Association

CCTV Closed Circuit Television

DEPT Department

FBI Federal Bureau of Investigations

KNBS Kenya National Bureau of Statistics

KRA Kenya Revenue Authority

MAAK Motorcycle Assemblers Associations of Kenya

NCRC National Crime Research Centre

NPS National Police Service

NTSA National Transport and Safety Authority

OMC Outlaw Motorcycle Club

OMG Outlaw Motorcycle Gang

OC Officer in charge

OCPD Officer Commanding Police Division

OCS Officer Commanding Station

ODPP Office of Director of Public Prosecuions

OMC Outlaw Motorcycle Clubs

PSV Public Service Vehicle

SACCO Savings and Credit Cooperative Organization

SPSS Statistical Package for Social Sciences

TLB Transport Licensing Board

RAT Routine Activities Theory

ROK Republic of Kenya

UN United Nations

US United States

USD United States Dollar

USH Ugandan Shillings

WHO World Health Organization

EXECUTIVE SUMMARY

Transport plays a significant role in the development of the economy. The boda boda motorcycle transport is a major part of the Kenyan economy and a source of employment and livelihood for many, including thousands of unemployed youths. Despite the many benefits, boda bodas in transport sub-sector in Kenya is evolving into a potentially negative force that could get out of control with serious repercussions for the country if not well managed and regulated. The sector operates without proper regulation and control.

The explosion of boda boda in public transport in the country has taken a similar trajectory to the *matatus* industry - that operated illegally and thrived on lawlessness when they were first introduced in Kenya in the 1960 -70s. The rise of boda bodas is attributable to among other factors: the inability of the transport system to cater for transport needs of Kenyans, poor transport infrastructure, the 2008 government policy zero-rating motorcycles below 250cc leading to drop in motorcycle prices and wide spread youth unemployment that pushed youths to embrace boda bodas as a source of employment.

The National Transport and Safety Authority (NTSA) reported that there were **1,393,390** motorcycles registered in Kenya as at February, 2018. However, the exact numbers of these motorcycles operating as 'boda bodas' in the country is not known and documented. The lacuna in policy regarding the registration, regulation, monitoring and use of motorcycle in boda boda public service vehicle (PSV) transport is a cause for alarm.

Whereas boda boda motorcycle transport has expanded across urban and rural areas, there are worrying concerns as the sub-sector has been associated with increasing crimes, traffic accidents and impunity in the country. Despite the numerous benefits, boda bodas are increasingly becoming part of a new wave of street crime in urban and rural areas. Boda boda traffic accident-related deaths and injuries have become major public health epidemics in Kenya. Deaths from boda boda-related accidents have negative impacts on the economy. This is in addition to the serious and debilitating injuries suffered, the huge medical bills and financial costs to the riders, pillion passengers, pedestrians and other motorists involved in such accidents.

There is inherent policy oversight in the boda boda debacle. The 2008 government policy to zero-rate motorcycles of up to 250cc was an effort to create jobs and spur development. This policy led to a significant decrease in motorcycle prices with the net effect of explosion of motorcycles into the economy without anticipating and having in place an attendant counter policy framework regarding their registration, regulation, monitoring and designation as Public Service Vehicles (PSVs). Boda bodas have evolved as unregulated informal entities in the transport industry in Kenya. They are not legally recognized as public service vehicles but offer this crucial service that has critical implications for public safety.

Consequently, Kenya does not have a database of all motorcycles that operate as boda bodas. The subsector is therefore not effectively policed, regulated and monitored. This is partly the reason for the wanton recklessness, impunity, violence and siege mentality of boda boda operators. When the boda boda industry is dominated by a fairly youthful population of men who are not professionally trained, less educated and

of lower socio-economic standing - operating in a context of weak registration, policing, regulation and oversight, the end result is crime, impunity, deaths and injuries with grave implications for public safety. There is also a lacuna in the legal framework under which boda bodas operate in public transport as public service vehicles. Kenya does not have a policy framework in place to register boda bodas as PSV equivalent to what the Transport Licensing Board (TLB) does with the registration and designation of private vehicles or *matatus* into PSV's and their specific routes of operation. Moreover, TLB has a mandatory provision that *matatus* have to be registered with a company or Savings and Credit Cooperative Organization (SACCO) to operate in Kenya. For boda bodas, it is on acquisition of a PSV motorcycle insurance cover (that many don't have) they undertake commercial public transport services.

Whereas the Traffic Act CAP 403, 2009 endevours to regulate boda boda operations on the roads, it is not in consonance with the fact that regulation presupposes registration – a clear disconnect between registration and regulatory regimes in the boda boda sub-sector. The Traffic Act is trying to regulate but at the same time ignoring the fact that you cannot effectively regulate that which is not enabled through legal framework. Boda bodas are not registered as PSV's under law but undertake PSV responsibilities in the country.

Boda bodas are increasingly becoming entrenched in Kenya along the *matatu* industry trajectory - that operated illegally and thrived on lawlessness. Therefore, the informal, unregulated nature and the weak governance framework for the boda boda sub-sector provides powerful incentives for risk taking behaviours, recklessness and impunity among operators, with greater risks to the public. Addressing major challenges in the boda boda motorcycle transport is essential in ensuring a secure, orderly and reliable part of public transport in Kenya.

This study sought to address concerns around the boda boda transport and security challenges in Kenya. Major contentions with the boda boda sub-sector are that conventional crimes, new and emerging crime trends involving motorcycles have increased two fold.

The general objective of this study was to establish the relationship between boda boda transport and crime in Kenya. The specific objectives were to: establish the prevalence of boda boda motorcycle related crimes; identify the root causes of boda boda related crimes; identify the perpetrators and victims of boda boda related crimes; identify the mode of operation of perpetrators of boda boda related crimes; examine the consequences of boda boda related crimes; identify the existing control measures and their effectiveness in addressing boda boda related crimes; and identify challenges and make recommendations to address boda boda related crimes.

This study was informed by a conceptual model providing insights into the interaction of various factors: motorcycle factors, human factors, the physical environment and registration/regulatory factors within the socio-economic context of weak registration, regulation, oversight and the resultant boda boda-related impunity, crimes and accidents that characterize the boda boda sub-sector in Kenya.

The study was descriptive in nature and was carried out in 24 purposively selected counties: Mombasa, Kwale, Kilifi, Tana River, Lamu, Taita-Taveta, Garissa, Wajir, Mandera, Marsabit, Turkana, West Pokot, Trans Nzoia, Narok, Kajiado, Bungoma, Busia, Siaya, Homa Bay, Kisumu, Migori, Nairobi, Kiambu and Tharaka Nithi. Multi-stage cluster sampling was applied for the selection of constituencies and wards, while households were randomly selected for the study.

Primary data was collected using structured individual face-to-face interviews. A total of 5,515 sample respondents were interviewed in this study: 4,313 (78.2%) respondents were members of the public (households) and 1,202 (21.8%) were boda boda riders. Secondary data was collected through review of existing literature while key informants guide was used to collect information from key informants drawn from selected agencies who had vast knowledge on security, boda boda, public health and transport sectors. Quantitative data was analyzed through descriptive statistics using the Statistical Package for Social Science (SPSS). The information is presented in frequencies, percentage tables, bar graphs and piecharts. Qualitative data from the key informants was analyzed thematically and reinforced the riders' and households' quantitative data.

Key Findings

i. The outlook and nature of boda boda riders

The study found out that the boda boda transport sub-sector is dominated by a majority of youthful population of male gender with family obligations and responsibilities. Majority of those dominating the trade have lower levels of primary and secondary schooling. Most boda bodas are operated by young people in the lower end of the socio-economic strata. Boda bodas also employ minors with serious implications for child development trajectory and safety. Further, the sub-sector also employs people with university level qualifications – speaking to the realities and pervasiveness of unemployment in Kenya.

In terms of ownership of boda boda motorbikes, increasing majority of riders own the motorcycles, many more are employed as casuals or on commission basis; others hire motorcycles, while some are stand-by or temporary riders (squad riders).

ii. Positive contributions of boda bodas

Positive contributions of boda bodas include: employment creation and a source of income; hastening transportation; enabling access to interior and remote areas; facilitating rapid growth of businesses; lessening the cost of doing business; and being a source of revenue to county governments.

iii. Negative contribution of boda bodas

The main negative contributions of boda bodas were: increased traffic accidents, death and injuries; increased insecurity; proliferation of a culture of impunity among riders; sickness and ill health; increased school dropouts; increase in teenage pregnancies, increased divorce cases and family breakdowns due to infidelity of riders.

iv. Prevalence of boda boda related crimes

The most prevalent boda boda related crimes committed by riders were: causing death by dangerous riding; creating disturbance; general stealing; theft of motorcycles and motorcycle parts; assault; robbery and robbery with violence; riding under the influence of alcohol; possession and usage of dangerous drugs; handling and trafficking of dangerous drugs; murder; kidnapping and abduction; bribery; defilement; rape; smuggling of goods; theft of motor vehicle and motor vehicle parts; among others.

The most prevalent crimes committed against boda boda riders were: theft of Motorcycle and motorcycle parts; robbery and robbery with violence; murder; general stealing; motorist causing death of riders by dangerous driving; assault; kidnapping and abduction; mob justice; fraud and forgery; fighting; handling stolen property; indecent assault: malicious damage to property; burglary; rape among others.

v. Root causes of boda boda related crimes

The main root causes of boda boda motorcycle related crimes were: pervasive unemployment and idleness; poverty; drug and substance abuse; lack of/weak regulation of the boda boda sub-sector; greed and desire for quick money; weak law enforcement by the police and other law enforcement agencies; peer pressure factors; high levels of illiteracy; criminal mindset and tendencies; insecurity across the country due to absence of adequate security personnel; poor transport infrastructure; high cost of living; corruption among law enforcers; ease of access to firearms through porous Kenyan borders.

vi. Perpetrators and victims of boda boda related crimes

The main perpetrators of boda boda motorcycle related crimes were: boda boda riders hired as casuals or on commission basis; riders who hire motorcycles from owners; passengers; members of the public; boda boda motorcycle owners; some/sections of traffic police officers; County government inspectorate and enforcement officers; National Transport and Safety Authority officers and matatu drivers.

The main victims of boda boda crimes were: boda boda pillion passengers; riders employed by Motorcycle owners as casuals or on commission; riders who hire motorcycles from owners; boda boda motorcycle owners; general members of the public and police officers.

vii. Consequences of boda boda related crimes

The consequences of boda boda related crimes were: crimes and accident-related deaths; loss of property; ill-health and related problems; increased insecurity in the country; increased motorcycle related-accidents; increased teenage pregnancies and school drop outs; increase in poverty levels; loss of jobs; loss of public confidence and trust in boda boda means of transport; smuggling of contrabands and illegal goods into Kenya's economy; family disintegration; increase in drug and substance abuse; and increasing incidences of mob justice.

viii. Measures put in place to address boda boda related crimes

The measures put in place to address boda boda motorcycle related crimes included: police road blocks, checks and patrols; regulation by boda boda Savings and Credit Cooperative Organizations (SACCOs)

and Associations; community policing and Nyumba Kumi initiatives; sensitization of riders on safety by stakeholders; raft of measures, rules and regulations put in place to govern boda bodas; limiting hours of boda boda operations at night; increased security personnel presence; inspections by NTSA; street lighting; crackdown on boda boda's violating laws; issuance of safety gears and building of boda boda sheds among others.

ix. Challenges faced in addressing boda boda related crimes

The challenges faced in addressing boda boda crimes were: weak law enforcement and regulation of the boda boda sub-sector; corruption among sections of security and enforcement agencies; culture of impunity among boda boda operators; untrained boda boda riders; anonymity of the boda boda industry making it difficult to trace criminals; widespread unemployment challenges; fear of victimization from boda boda operators, insecurity concerns; poor road infrastructure; drug and substance abuse; unregistered motorcycles; inadequate security officers to handle the boda boda sub sector and related crimes; harassment of boda boda operators by security and other law enforcement apparatus and other road users.

Key Recommendations

The study makes the following key policy recommendations:

- Government to establish a data base of all boda boda operators in Kenya through mandatory registration, refresher training, testing, regulation and effective oversight of the boda boda sub-sector.
- Address government policy oversight by facilitating a shift of the boda boda industry from the
 current 'informal sector to the formal economy', specifically the effects of the 2008 government
 policy to zero-rate motorcycles of up to 250cc that resulted into the explosion of motorcycles in
 Kenya, without clear foresight to put in place a counter policy framework on motorcycle registration,
 regulation, monitoring and designation as public service vehicles.
- Subsidize the cost of motorcycle riders training that is considered costly by many riders and jobless
 youth who dominate the trade and establish motor-cycle specific riding/driving schools across the
 country.
- Effectively implement the National Transport and Safety Authority (NTSA) Regulations (Operation of Motorcycles) 2014. There is also the need for strict enforcement of traffic laws and regulations to boda bodas industry that operates with wanton impunity.
- Undertake concerted sensitization and awareness education to boda boda operators and the general public towards road safety and crime free boda boda sub-sector in Kenya.
- Address unemployment and poverty especially for young people who dominate the boda boda industry found to be the major root causes of boda boda related crimes.
- The National Police Service and other security agencies should undertake intelligence led policing in gathering information and profiling criminals within the trade or those masquerading as boda boda operators to commit crimes.
- Security agencies and NTSA should carry out compliance and inspections crack downs on riders

- who violate traffic rules, and partner with other agencies in undertaking civic education and public awareness campaigns on road safety and crime prevention to boda boda operators.
- The County governments should formulate relevant by-laws and policies to sustainably govern and regulate operations of the boda boda sector in the counties rather than adopting the penal approach of arrests and enforcing bans on boda boda operations. This could include among others, designating zones of operation for boda bodas.
- Motorcycle dealers and sellers should ensure buyers of new motorcycles units undertake statutory registration with Kenya Revenue Authority/National Transport and Safety Authority to help address the challenge of unregistered motorcycle use in commission of crimes.
- Boda boda motorcycle owners should undertake insurance policy cover for motorbikes before hiring
 or leasing them out; employ professionally trained and certified riders; vet and undertake criminal
 background checks on riders they employ.
- Boda boda Riders' Associations should encourage voluntary registration of their members and undertake sensitization campaigns on road safety and crime affecting the industry.
- Boda boda Motorcycle riders should acquire requisite Motorcycle rider training, licenses, and safety gears before venturing on the roads; collaborate with security agencies in reporting crimes, violations and ensure strict compliance with traffic rules and regulations while on the roads.
- Passengers and members of the general public take precautions when patronizing boda bodas given the various levels of crime and accident risks this study found. They must ensure they use safety gears of helmets and reflector jackets when patronizing boda bodas. They should also collaborate with law enforcement agencies in reporting crimes and other violations by boda boda operators.

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

1.1.1 Global Perspective

Motorcycle use for personal and public transport is increasingly becoming a global phenomenon. The use of motorcycles in transportation is due to the global increase in motorization particularly in low and middle income countries, the disorganized and inefficient transport systems in many developing countries (Kumar & Barret, 2008).

Globally, it is estimated that there are over 200 million motorcycles in operations or about 33 motorcycles per 1,000 people. Motorcycles as a means of personalized transport are common in South and East Asia (Krishnan & Smith, 1994). Vietnam has had the highest percentage (95%) of all the motorcycles in South and East Asia. Laos has approximately 80% of motorcycles in the transport sector. Taiwan has 67% and China 63% of motorcycles for personalized transport respectively (Tung, Wong, law, and Umar, 2008). Motorcycles make up 69% of the total number of vehicles in India (Mohad, 2002). Malaysia has 60 % of motorcycle users, while Brunei has approximately 31% of motorcycle used in transportation (Zhang, Norton, & Tang, 2004). Generally in some developed countries, personal motorcycle use is more of a recreational pursuit than a primary mode of transport for many people (Krige, 1995).

In 2002, China had an average of 34 million motorcycles (Broughton, 2005). India had 23 million motorcycles in 1997 (Pendakur, 1999). Thailand, Indonesia, Cambodia, Nigeria, Uganda, Ghana, Cameroon are among countries well known for use of motorcycle as a mode of transport (Odera, 2015). In 2014, it was estimated that there were over eight million motorcycles registered in the United States by private citizens and commercial organizations (Bureau of transport statistics: www.bts.gov)

The majority of users of motorcycle in public transport are low income earners, but people of all income levels are potential users because motorcycles present a regular and affordable means of transport (Zhang, Norton, & Tang, 2004). The use of motorcycles for personal and in public transport the world over has had advantages but has also brought along with it security challenges and compounded road safety concerns. In Australia, motorcycles are used widely but of concern are the Outlaw Motorcycle Gangs (OMG's) disguised as simple social clubs or associations. Such OMGs have engaged in organized criminal gang activities or in other circumstances supported criminality, for example the 1984 Milperra Massacre in Sydney's western suburbs. The Milperra Massacre ended up with deaths of six gang members and a teenage passerby. However, statistics on the nature and number of crimes committed by OMGs remain limited (Australian Crime Commission, 2011). In comparison, Netherlands has twenty OMCGs who engage in significant organized crimes ranging from gang fights, drive by-shootings and farming cannabis sativa (Spapens, 2012).

In the United States, outlaw motorcycle clubs (OMCs) are considered 'outlaw' not necessarily because they engage in criminal activity, but because they are not sanctioned by the American Motorcyclist Association (AMA) and do not adhere to the AMA's rules. Instead the clubs have their own set of by-laws reflecting the outlaw biker culture. The U.S Department of Justice defines 'outlaw motorcycle gangs' as organizations whose members use their motorcycle clubs as conduits for criminal enterprises. The U.S. Federal Bureau of Investigations (FBI) has designated four outlaw motorcycle gangs: the Hells Angels, the Pagan, the Outlaws and the Bandidos. The FBI asserts that OMCs support themselves primarily through drug dealing, trafficking in stolen goods and extortion. They also fight over territory and illegal drug trade and collect an estimated one (1) billion U.S dollars in illegal income annually (U.S. Dept. of Justice, 2009).

From the global perspective of road safety and public health, motorcycle users make up a large proportion of those injured or killed on the roads in many middle and low-income countries, as motorcycles are increasingly becoming common means of transport. In many countries there is notable increase in accidents from motorcycles apart from vehicles. This has shifted focus on road traffic crashes involving motorcyclists (WHO, 2013). According to WHO (2011), at least 1.2 million people died out of road accidents where motorcycles were involved. In 2002, it was estimated that 20 - 50 million people were injured in Motorcycle related accidents globally. In Malaysia, over 50% of all road accidents involve motorcycles. In Thailand, the number of injuries as a result of motorcycle accidents was 70%-80% of all accidents between 2008-2010 (Malaysian Institute of Road Safety Research, 2010).

Halving the global number of deaths and injuries from road traffic crashes by 2020 has been adopted under the United Nations General Assembly Resolution 64/255 (2010) on 'The Decade of Action for Road Safety (2011–2020)'. This comes against the backdrop of the United Nations Sustainable Development Goals Agenda 2030.

1.1.2 African Perspective

In African countries, the provision of public transport had been dominated by state owned companies. However, state transport companies stopped their operations in the mid-1980s and 1990s due to the effects of poor management, the absence of coherent transport policy and the impact of the Structural Adjustment Programmes (Olvera Diaz, Plat & Maidadi, 2012). The decline in state provisioning of social services like public transport led to the emergence of informal transport services. The degeneration in organized public transport system led to rapid growth in non-conventional means of public transportation initially provided by minibuses and shared taxis or vans and more recently by public motorcycles (Kumar, 2011). The last three decades have seen a significant growth of motorcycles in public transport sector in Asia, Latin America and Sub-Saharan Africa.

Boda boda - more often motorcycle taxi is a common mode of transport across African countries under different names. In Benin and Togo, they are known as *zemidjan*; in Cameroon, *bendskin*; in Niger *kabu-kabu*; in Nigeria *okada* or *alalok* and *oleyia* in Togo (Nyachieo, 2015). Boda bodas provide public transport services in both rural and urban areas. They are a preferred means of transport as they can easily navigate through traffic and are very fast and sometimes considered affordable to many.

The evolution of motorcycle taxis in Africa can be linked to inadequate and poorly developed public transport systems, market liberalization and urbanization factors. In urban areas, the inability of transport systems to meet the demand for urban commuters led to the acceptance of motorcycles in many African cities as an alternative means of transport to resolve commuting problems (Adesanya, 1998). Consequently, the two-wheelers are becoming a key mode of transport in urban and rural areas. South Africa, Nigeria and Tanzania are among the largest motorcycle markets, followed by Kenya, Algeria, Uganda, Egypt, Morocco, Angola and Ethiopia. With more than 45 per cent of Africa's population living in urban areas, the demand for two-wheelers is predicted to grow over the next five years ((https://www.techsciresearch.com).

In Nigeria, the introduction of motorcycle as an alternative mode of transport in urban centres was prompted by the high cost and unenviable transport service provision which impacted negatively on economic activities and mobility of the urban populace. It is estimated that there are over 200,000 commercial motorcycles in Nigeria, employing a substantial portion of the population (Kumar, 2011). There are over 300,000 motorcycles in Uganda basically used in the public transport sector (Bryceson, Mbara, & Maunder, 2003), (Raynor, 2014). The explosion of motorcycles in Africa is projected to escalate to new levels as two-wheelers become the main means of transport for majority of the continent's population (Africa Two-Wheeler Market 2011-2021 report).

However, as the two-wheeler industry grows, there are concerns about motorcycles in the public transport becoming a crime and security menace in many African Countries. Uganda's capital city, Kampala, which has more than 300,000 motor bikes, is witnessing increasing motorbike-related crimes. Some riders have also turned into vigilantes and boda bodas appear to thrive on lawlessness (The East African, 2017).

The number of motorbike accidents have increased exponentially in Uganda (Uganda Bureau of statistics, 2015). Motorbike taxis have been dubbed 'Uganda's silent killers'. According to a report by Makerere University College of Health Sciences and the Department of Orthopedics at Mulago Hospital Kampala, about 40% of trauma cases at the hospital are from boda boda accidents arising from violation of the sector's laws.

In 2009, various Nigerian states banned commercial motorbikes operations in the state capitals of Calabar, Abia, Lagos, Borno, Yobe, Rivers, Adamawa, Gombe and Abuja because of the negative consequences of commercial motorbikes. However, commercial motorbikes use in public transport continued in the villages (Chioma, 2010).

It is predicted that commercial motorcycle services growth will continue increasing globally because majority of the population needs a flexible means of transport. Motorcycle offers advantages such as affordability, availability, flexibility and even ability to travel on poor roads (Nyachieo, 2015).

Howe & Davis (2004) notes that despite the numerous benefits of boda bodas, they have major disadvantages ranging from poor road safety, environmental degradation and of great concern, the accompanying crimes perpetuated through motorcycles.

1.1.3 Kenyan Perspective

The system for transport service to the public in Kenya is by means of privately owned vehicles of various types including conventional buses, minibuses, pickup trucks, midibuses (matatus). The private means of transport include saloon cars, bicycles, motorcycles, while freight is carried by trucks and trailers (Nantulya & Muli-Musiime, 2001). The other form of public transport, private conventional buses (privately owned public service vehicle), is better regulated. Privately owned cars are the main means of transport for the affluent. The less affluent segment of the population uses bicycles, walks or patronizes matatus and boda bodas.

In the 1960s when matatus were first introduced in Kenya, they operated illegally as a means of public transport until 1973 as a result of intense lobbying by owners that they were authorized by a presidential decree to operate legally. Originally, matatus were operated by relatively low income earners to carry fare-paying passengers as a means of livelihood for the owners. By 1970s, therefore, the government provided certain incentives to the owners as an encouragement to a less privileged segment of the population. These incentives included exemption from control and regulation by the Transport Licensing Board and from income tax. The matatus were licensed by the Registrar of Motor Vehicles, while other public service vehicles were licensed by the Transport Licensing Board. This allowed matatus to avoid adherence to stringent TLB regulations. This brought into sharp focus concerns around public safety as matatus became dangerous form of public transportation (Nantulya & Muli-Musiime, 2001). Matatu industry is now a major employment sector and business investment and a source of supplemental income in Kenya.

Consequently over the years, the trajectory of inefficiencies in public transport in Kenya has led to the emergence of other informal forms of transport, including boda boda motorcycles (Gitonga, 2014). The explosion of boda bodas in public transport in the country has taken a similar trajectory to the matatus industry - that operated illegally and thrived on lawlessness when they were first introduced in Kenya in the 1960 -70s. The term 'boda-boda' (border-to-border) originated in Eastern Uganda along towns near the Kenya-Uganda borders. This gave rise to the innovation "boda-boda" operation between Kenya-Uganda borders. It referred to men on bicycles who offered to smuggle goods and individuals across the border on bicycles (Howe, 2003). The name still carries its outlawed origin. While boda bodas initially existed solely in the form of bicycle transportation, the term later grew to encompass those who offered motorcycle transportation services. Over the years, Kenya, like other parts of the world has experienced a tremendous growth of motorcycles in the public transport sector.

Boda bodas in public transport business is a major part of the Kenyan economy and a source of employment and livelihoods for many, including the ever-growing population of unemployed youth. Important benefits include the ability to traverse areas with poor road networks and unplanned settlements in many urban and rural areas. Boda bodas can easily maneuver through heavy traffic, have low fuel consumption and low

maintenance costs (Nyachieo, 2013). They are considered cheap, reliable and preferred mode of transport in some parts of the country.

Kenya has witnessed a steady growth in the number of motorcycles in the last fifteen years. The National Transport and Safety Authority indicate that there were a total of 1,393,390 registered motorcycles in the country as at February, 2018. The growth is attributed to among others, the 2008 government policy that zero-rated motorcycles below 250cc that led to a significant decrease in motorcycle prices (Nyachieo, 2015). Odera (2015) observes that the exact number of boda-bodas operating in Kenya has not been well documented. This is due to the fact that some of them are not registered as required by the law and further, the sector is not well regulated. The Kenya National Bureau of Statistics (2010) noted that there had been increase in the number of motor and auto cycles registered accounting for 56.3% of the total registered vehicle units. It is estimated that 4.8 million people depend on commercial motorcycles directly or indirectly according to the Motorcycle Assemblers Associations of Kenya (MAAK). The economic contribution of boda boda motorcycle and transport sub-sector is estimated at Ksh.600 million which translates to approximately Ksh.219 billion annually (Standard Newspaper, 13th February, 2018).

Despite the many benefits attributed to the boda bodas in public transport, the sector has been associated with increasing boda boda motorcycle related-crimes and accidents in the country (Manyara, 2013). A study on 'Boda boda Economy' by Odera in 2015 noted the growing crime trends involving boda boda motorcycles in Kenya. The National Police Service has singled out boda bodas as an evolving threat to security. The National Police Service and the National Transport and Safety Authority (NTSA) admit that the high number of unregistered boda bodas in operation could be a contributing factor to the run-away crime. It has also been noted with great concern that boda boda operators act with impunity and display 'siege' mentality.

Media reports in Kenya have variously documented numerous cases of boda bodas related crimes. The following are some media highlights of boda boda related-crimes:

Kilifi County: A 40-year-old man believed to be drug user was killed on Monday, 23/11/2015, and more than 10 injured in a fight between them and bodaboda riders in Mtwapa. The boda boda riders had launched a hunt for the suspected drug users, accusing them of attacking and stealing from them (*Daily Nation, Tuesday November 24, 2015.Page 8*).

Nakuru County: There is a new trend of crime in Nakuru town associated with the 'bodaboda' where people are robbed of their valuables by men racing on the motorbikes. Robbers/muggers conspire with bodaboda operators who, amid the thrilling speed, the well prepared muggers snatch bags from innocent pedestrians, mostly ladies (*The Standard online, Thursday June 26, 2014*).

Makuei County: A boda boda operator in Kamulani had been reported missing. Later, his body was found in a maize farm in Kamulalani village at Kambu location, Kibwezi East and taken to Makindu mortuary while the motor bike went missing. He was last seen carrying two passengers to Mwakila area near Athi (*Nation online news, Thursday 30/1/2014*).

Narok County: A beheaded "Boda boda" operator was found by residents as they went to work on 8/1/2014 morning at Limanet Village in Narok County. The 25-year-old motorcyclist was believed to have been beheaded the previous night, by people who posed as customers and who dumped his body in a thicket four kilometers from Narok town (*Daily Nation, Thursday 9/1/2014. Page11*).

Kirinyaga County: A motorcyclist was on 7/1/2014 killed and his body dumped on a foot path at Sagana. The man was approached by two men at Kagio town who asked him to take them to Kwavii. On their way, the men overpowered the rider and strangled him to death before they took off on his motorcycle (*Daily Nation, Wednesday 8/1/2014. Page 11*).

Homa Bay County: Boda boda riders who have torched a passenger (Otange) bus in Homa Bay Town after a boda rider rammed into it from behind. It was then that other riders attacked the bus driver, forcing him to flee before they poured petrol on the vehicle and set it ablaze (*Daily Nation, Thursday 10/12/2017*).

Nairobi County: Six suspected gangsters were shot and killed in Dandora, Nairobi County, early Sunday morning in connection to an attack on a boda boda rider whose passenger was raped several times. The rider and passenger were ambushed on their way from Riverside to Lucky Summer at about 2.30am (*Daily Nation, Wednesday 28/10/2018*).

1.2 Problem Statement

Although boda bodas have contributed positively to Kenya's public transport and socio-economic development, there are growing concerns of increasing boda boda Motorcycle related crimes. Boda bodas have been linked with crime in many areas. Major concerns with the boda bodas are that conventional crimes, emerging and new crime trends involving motorcycles have increased in the recent past in Kenya. Increasing numbers of criminals use boda bodas or boda boda like motorcycles to access and escape from crime scenes and boda bodas are used to monitor the situation to prepare for crimes. They are often used in smuggling drugs, illegal arms and other contrabands. Boda boda riders have also been linked to teen pregnancies among school girls they transport. Equally, boda boda operators have also been victims of murderous attacks and brutal killings and thefts of their motorcycles. Motorcycles are stolen and some are dismantled and sold as spare parts in the black-market.

The thriving boda boda sub-sector sector has also been blamed for increasing road traffic accidents as a result of impunity and violation of laws. Traffic laws provide instances when motorcyclist's accident constitutes crimes. These include: careless riding, riding without due care and attention, dangerous riding, changing lanes when it is not clear to do so, pulling out when it's unsafe to do so, not taking precautions in line with road and weather conditions, riding through a red light, entering a roundabout when it is not clear to do so, riding too close to the car in front, among others. Boda boda accidents are frequent owing to risky riding behaviours such as riding while under the influence of alcohol and drugs, poor upkeep of motorcycles and low levels of professional training. In fact, boda boda accidents are reportedly among the top ten surgical cases in many Kenyan public hospitals, which is costly both for the patients and the nation

in terms of hospital stay, operative costs and rehabilitation. Thus, the boda boda transport sub-sector is rapidly evolving into a potentially negative force that could get out of control with serious implications for the country if not well managed and regulated.

With the extent of boda boda motorcycle related crimes in the country remaining unascertained, this study therefore seeks to explore the dynamics, processes and relationship between boda boda motorcycle transport and crimes in Kenya.

The study was guided by the following research questions:

- 1. What are the boda boda motorcycle related crimes in Kenya?
 - a. What are the crimes perpetrated against boda boda motorcycle riders?
 - b. What are the crimes perpetrated by boda boda motorcycle riders?
- 2. What are the root causes of boda boda related crimes?
- 3. Who are the perpetrators and victims of boda boda motorcycle related crimes?
- 4. What is the mode of operation of boda boda motorcycle crime perpetrators?
 - a. How are boda boda motorcycle rider criminals organized?
 - b. How do boda boda motorcycle rider criminals operate?
 - c. At what time of the day or night are boda boda motorcycle related crimes mostly committed?
 - d. How do boda boda motorcycle rider criminals execute crimes against their victims?
 - e. How do boda boda rider criminals relate with law and order enforcers?
- 5. What are the consequences of boda boda motorcycle related crimes?
- 6. What measures have been put in place to address boda boda motorcycle related crimes?
- 7. What are the challenges in addressing concerns bedeviling boda boda motorcycle transport sector (including boda boda related crimes) and what are the possible solutions?

1.3 Objectives of the Study

The main objective of the study was to establish the relationship between boda boda transport and crime in Kenya. The study will be guided by the following specific objectives.

- 1. To establish the prevalence of boda boda motorcycle related crimes.
- 2. To establish the root causes of boda boda motorcycle related crimes.
- 3. To establish the perpetrators and victims of boda boda motorcycle related crimes.
- 4. To establish the mode of operation of perpetrators of boda boda motorcycle related crimes.
- 5. To examine the consequences of boda boda motorcycle related crimes.
- 6. To identify the existing control measures and their effectiveness in addressing boda boda motorcycle related crimes.
- 7. To establish challenges and make recommendations to address boda boda motorcycle related crimes.

1.4 Justification of the Study

This study is justified on the basis of the fact that mobility plays an important role in a developing economy like Kenya where boda boda revolution portends significant challenges to public safety. With the extent of

boda boda motorcycle related crimes in the country remaining unascertained, effective response informed by empirical research becomes critical.

The study is important to the National Government agencies in the security and transport sector in coming up with requisite regulatory and policy framework to establish a data base of all boda boda operators, regulate, manage and oversight their operations to address the growing crime and road traffic accident risks in the sub-sector.

Importantly, the National Police Service, County Governments, NTSA and other law enforcement agencies may also find this study useful in devising appropriate strategies and interventions to address crimes and road carnage involving boda boda motorcycles.

Additionally, this study will act as an important information reference point to members of the general public in making informed decisions on the risks involved in using boda bodas as a mode of transport.

Finally, this study contributes to the growing body of literature to inform policy interventions on new, emerging and contemporary crime risks and dynamics in Kenya. This research provides critical information that will help to generate programmes, strategies, and policies to address public safety challenges in the rapidly evolving boda boda sub-sector.

1.5 Scope of the Study

This study focused on motorcycle boda bodas in public transport sector and crime in twenty four counties in Kenya. It looked at the prevalence and types of boda boda crimes; perpetrators of boda boda crimes, the *modus operandi* applied by perpetrators of boda boda related crimes; the root cause of boda boda crimes; control mechanisms and challenges in addressing boda boda crimes; and policy recommendations.

1.6 Conceptual Framework of the Study

1.6.1 Introduction

This study is informed by the conceptual framework in Figure 1 below. The conceptual framework illustrates the analysis of interaction of various factors in the broader socio-economic environment in the context of boda boda motorcycle transport and the accompanying insecurity and traffic accidents outcomes. It provides an in-depth understanding of the processes that result in prevalence of boda boda motorcycle related crimes and road safety concerns in Kenya. The conceptual framework provides insights into the interplay among *motorcycle factors, human factors, the physical environment and the registration/regulatory factors* and the resultant boda boda related crimes and accidents that characterize the boda boda sub-sector in Kenya.

Motorcycle factors include mechanical conditions of the motorcycles, safety gears like helmets and reflector jackets; Human factors entail riders' behaviour, attitudes, practices, level of riders' professional trainings, pillion passenger behaviours and family setup; Physical environment factors includes among

others, road infrastructure and neighbourhoods in rural and urban areas, weather conditions, time of the day of boda boda operations; Registration and regulatory factors entail government policy, on registration, regulation, monitoring, policing, oversight and governance framework, the levels of formalization of boda bodas, licensing, legal status of ownership of the motorbikes; Socio-economic environment includes means of livelihoods, population density, transport demand and supply, employment and literacy levels.

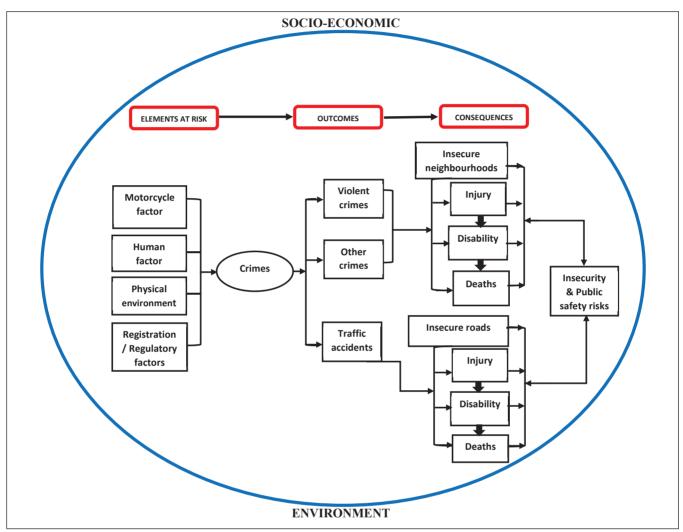


Figure 1: Conceptual framework (author's conceptualization)

The interaction of motorcycle factors, human factors and the physical environment within the socioeconomic context of weak policing and regulatory regime leads to crimes and accidents. Elements at risk are human life, motorbikes and people's property. People are at the risk of suffering boda boda related crimes, accidents, deaths and injuries. Motorcycles and people's properties are also at risk of being stolen. Consequently, insecurity, traffic accidents are major negative outcomes of boda boda transport subsector. The net result of crimes and accidents are deaths, injuries, disability, loss of family incomes which negatively impact upon households and livelihoods. The long term impact of these processes is insecurity and public safety risks manifested through insecure roads and neighbourhoods, increased household poverty. Other consequence of boda boda related-crimes includes loss of property, loss of jobs, increased teenage pregnancies, school dropouts and loss of trust in boda boda means of transport.

Indeed this study found out that rogue boda boda operators have become main perpetrators of petty and major violent crimes and motorcycles have become a key facilitator in commission of crimes. Some of the serious crimes include: murder, robbery with violence, causing death by dangerous riding, carjacking, kidnapping and abductions, mob justice, human trafficking, rape, defilement, cattle rustling, smuggling weapons and firearms. Others crimes committed by operators include: malicious damage to property, fraud and forgeries, siege mentality and disruption of public order, handling stolen property, burglary, petty thefts among others.

The Traffic Act CAP 403 of 2009 provide instances when motorcyclist's accident constitutes crimes. These include: careless riding, riding without due care and attention, dangerous riding, changing lanes when it is not clear to do so, pulling out when it's unsafe to do so, not taking precautions in line with road and weather conditions, riding through a red light, entering a roundabout when it is not clear to do so, riding too close to the car in front, among others.

Further, the Traffic Act has various requirements for motorcyclists including making it an offence to ride a motorcycle without a helmet and jacket that has reflectors. The Act provides for the provision of a jacket and helmet with reflectors to be worn by a motorcycle passenger. The act requires the motorcycle to be insured against third party risks in accordance with the Motor Vehicle (Third Party) Insurance Act. It also requires a rider to have a valid driving licence. Many boda boda operators disregard or do not meet these requirements.

The inefficiencies in public transport provisioning and policy sometimes lead to non-conventional actors coming up to fill the gap - boda bodas boon in Kenya has filled this void. The weak system of boda boda registration, regulation, oversight and ineffective governance of a sector increase the chances of actors operating with impunity. The impunity and siege mentality in the popular boda boda transport is largely the result of minimal regulation and control. Socio-economic factors such as livelihood needs, daily income targets influences the likelihood of involvement in accidents and crimes. Non-owners of motorcycles or contractual riders have increased propensity of engaging in crimes or involvement in accidents owing to the pressures to meet daily targets (economic factors). Low levels of professional motorcycle-rider trainings increase the likelihood of involvement in traffic accidents.

Pointedly, the concomitant drift of populations between urban and rural economies in the context of youth bulge, poverty, widespread unemployment and the lack of social amenities and supportive public services imply that non-conventional (boda bodas) means of mobility will in the long run, continue to play a major role in public transport sector in Kenya. However, the current weak regulatory environment means boda bodas connotes greater risks to public safety in Kenya.

CHAPTER TWO: STUDY METHODOLOGY

2.1 Introduction

This chapter deals with the research design, methods and tools of data collection and management, data analysis and ethical considerations.

2.2 Research Design

This study employed descriptive research design as an effective paradigm for collecting data in describing a population that is large and diverse and cannot be observed directly. The descriptive research design was adopted because of its strength in obtaining in-depth information for both the quantitative and qualitative characteristics on the various aspects of boda boda transport and security challenges in Kenya. These included: prevalence of boda boda motorcycle related crimes; root causes of boda boda related crimes; perpetrators and victims of boda boda motorcycle related crimes; mode of operation of perpetrators of boda boda related crimes; consequences of boda boda motorcycle related crimes; existing control measure and their effectiveness in addressing boda boda motorcycle related crimes and the challenges faced in addressing boda boda crimes and how the challenges could be addressed.

The population for the study consisted of members of the public (households) and boda boda motorcycle riders/operators as the sample respondents. The study also involved interviews with Key Informants drawn from Ministry of Interior, County Governments, National Transport and Safety Authority (NTSA), Kenya Revenue Authority (KRA), National Police Service, Public Hospitals, Boda boda Associations and Savings and Credit Cooperative Organizations who were purposively selected because of their technical expertise on issues around security and the transport sector in Kenya.

2.2.1 Sampling of Counties for the Study

The survey utilized both probability and non probability sampling techniques. The study was conducted in twenty four (24) counties. Purposive sampling technique was used to select counties for the study. Twenty one (21) border counties¹ in Kenya had purposively been selected because of the crime dynamics across Kenyan territorial borders. Three (3) counties of Nairobi, Kiambu and Tharaka Nithi (not border counties) were purposively selected for inclusion in this study because they had reported high incidents of boda boda related crimes from previous NCRC's research studies.

From the 24 purposively selected counties, cluster sampling was applied in the selection of constituencies and then a simple random sampling was applied to select fifty percent (50%) of wards in the constituencies that formed the study sites. Both urban and rural areas/dynamics were covered in the selected counties of the study. The sample size was proportional to the total number of household based on the 2009 population census (KNBS, 2009). Table 1 below is the sample distribution of the study counties.

¹ Mombasa, Kwale, Kilifi, Tana River, Lamu, Taita-Taveta, Garissa, Wajir, Mandera, Marsabit, Turkana, West Pokot, Trans Nzoia, Narok, Kajiado, Bungoma, Busia, Siaya, Homa Bay, Kisumu, Migori.

Table 1: Sampling distribution for counties

Dogion	County	No. of County Households	C	
Region	County	(2009 Census)	Sample size	
	1. Mombasa	268700	437	
	2. Kwale	122047	256	
Coast	3. Kilifi	199764	210	
Coast	4. Tana River	47414	22	
	5. Lamu	22184	87	
	6. Taita-Taveta	71090	57	
	7. Garissa	98590	246	
North Eastern	8. Wajir	88574	93	
	9. Mandera	125497	256	
Eastern	10. Tharaka-Nithi	88803	217	
	11. Marsabit	56941	72	
	12. Turkana	123191	154	
Rift Valley	13. West Pokot	93777	90	
	14. Trans Nzoia	170117	43	
	15. Narok	169220	183	
	16. Kajiado	173464	79	
***	17. Bungoma	321628	63	
Western	18. Busia	103421	227	
	19. Siaya	199034	133	
N.I.	20. Kisumu	226719	180	
Nyanza	21. Homa Bay	160935	204	
	22. Migori	41800	184	
Nairobi	23. Nairobi	985016	1492	
Central	24. Kiambu	469244	826	
Total	24	4,427,170	5,811	

2.2.2 Sample Respondents Selection

In this study, 5,515 sample respondents were interviewed, representing 95% of the targeted sample population of 5,811. This was as a result of the challenges encountered during the actual data collection, including security challenges in parts of Turkana and Marsabit Counties.

4,313 (78.2%) of the sampled respondents were members of the pubic (households) and 1,202 (21.8%) were boda boda riders in the twenty four counties under study. Table 2 below shows the sample selection

of respondents from the twenty four counties. Only one adult (18 years and above) household members were randomly picked for interviews. Boda boda riders were selected using convenience sampling technique because of the dynamic nature of boda boda operations. This process entailed research teams paying courtesy call to the county commissioner/deputy/assistant county commissioners for directions to the sampled wards. Once at the sampling point, the interviewers are accompanied by a chief/assistant chief/village headman to identify boundaries of wards, locations and sub-locations. The researcher then identifies a landmark and randomly selects the first household for interview.

Table 2: Sample respondents selection

Commerc	Type of respondent		Total
County	Household	Riders	Total
1. Bungoma	55(1.0%)	14(0.3%)	69(1.3%)
2. Busia	186(3.4%)	66(1.2%)	252(4.6%)
3. Garissa	189(3.4%)	46(0.8%)	235(4.3%)
4. Homa Bay	131(2.4%)	44(0.8%)	175(3.2%)
5. Kajiado	80(1.5%)	18(0.3%)	98(1.8%)
6. Kiambu	482(8.7%)	128(2.3%)	610(11.1%)
7. Kilifi	192(3.5%)	38(0.7%)	230(4.2%)
8. Kisumu	158(2.9%)	39(0.7%)	197(3.6%)
9. Kwale	216(3.9%)	57(1.0%)	273(5.0%)
10. Lamu	50(0.9%)	28(0.5%)	78(1.4%)
11. Mandera	225(4.1%)	54(1.0%)	279(5.1%)
12. Marsabit	49(0.9%)	21(0.4%)	70(1.3%)
13. Migori	115(2.1%)	47(0.9%)	162(2.9%)
14. Mombasa	398(7.2%)	95(1.7%)	493(8.9%)
15. Nairobi	1043(18.9%)	243(4.4%)	1286(23.3%)
16. Narok	106(1.9%)	28(0.5%)	134(2.4%)
17. Siaya	109(2.0%)	41(0.7%)	150(2.7%)
18. Taita-Taveta	46(0.8%)	18(0.3%)	64(1.2%)
19. Tana River	18(0.3%)	6(0.1%)	24(0.4%)
20. Tharaka-Nithi	169(3.1%)	56(1.0%)	225(4.1%)
21. Trans Nzoia	40(0.7%)	7(0.1%)	47(0.9%)
22. Turkana	132(2.4%)	33(0.6%)	165(3.0%)
23. Wajir	57(1.0%)	65(1.2%)	122(2.2%)
24. West Pokot	67(1.2%)	10(0.2%)	77(1.4%)
Total	4,313(78.2%)	1,202(21.8%)	5,515(100.0%)

2.3 Methods and Tools for Data Collection

2.3.1 Data Collection Methods

The study utilized both primary and secondary data collection methods. Primary data was collected from sample respondents through face to face interviews using closed and open ended questionnaire. A Key Informant Guide was used to collect information from selected key informants from various agencies and institutions with relevant information on the subject matter of the study of boda boda motorcycle transport and security challenges in Kenya. Secondary data was collected through review of existing literature. These included journals, reports from regulatory agencies, books and other publications, professional association reports, economic survey reports, medical reports, digital libraries and newspapers. Observation method was also employed particularly around boda boda operations and riders behaviour in this study.

2.3.2 Data Collection Tools

This study utilized a comprehensive closed and open-ended questionnaire and Key Informant Guide in gathering relevant information for the study.

2.4 Data Collection and Management

The data collection instruments for this study were pre-tested before the actual data collection. A pilot study was undertaken in Nakuru, Kisumu, Baringo, Bungoma, Kilifi and Kwale Counties. The purpose of the pilot was to establish validity and reliability of the instruments.

Competent research assistants were identified and trained before commencement of actual data collection. They were then distributed to the study areas and facilitated with requisite resources for the field work data collection exercise. Close supervision of the research assistants and quality control of the exercise was undertaken.

2.5 Methods of Data Analysis

Primary data was subjected to quality assurance. The data was thereafter cleaned, coded, then entered and analyzed using Statistical Package for Social Sciences (SPSS) analysis software. This was then presented thematically as per the research objectives that were: prevalence; root causes; perpetrators and victims; mode of operation of perpetrators; consequences; existing control measure and their effectiveness and the challenges faced and how to address them. Quantitative data was analyzed through descriptive statistics and presented in frequencies. Qualitative data from the key informants was analyzed thematically and reinforced the riders' and households' quantitative data. The findings and recommendations of this study are presented in this report to inform policy on addressing security challenges around boda boda transport sub-sector in Kenya.

2.6 Ethical Considerations

This study took into account ethics in the conduct of research. It was guided by among others:

- i. Informed consent was sought from the respondents and sampled institutions before the commencement of data collection exercise.
- ii. Data for this study was collected anonymously and treated with utmost confidentiality.
- iii. Respect for diversity in regard to socio-cultural, economic and political opinions was upheld in the course of data collection exercise.
- iv. Sufficient training and briefing of the research supervisors and assistants was undertaken to equip them with adequate knowledge on the entire process of data collection.

CHAPTER THREE: RESULTS AND DISCUSSION

3.1 Introduction

This chapter presents the results and discussion of the study findings. It outlines the socio-demographic characteristics of sample respondents and then discusses the key findings thematically.

3.2 Socio-Demographic Characteristics of Respondents

Table 3 below presents the socio-demographic characteristics of the respondents. In terms of gender, (66.2%) of the study respondents were male, while (33.8%) were female. In terms of age, (28.4%) were in the youthful age cohorts of 26 – 33 years. Majority of the respondents were married (73.0%), implying that majority of the respondents had family responsibilities, while (21.5%) were single/never married. Further, (39.4%) of the respondents had secondary education, (35.4%) had primary level education, while (10.8%) had middle level college educational qualifications. This implies that a fair majority of the study respondents were literate enough to give informed views on the subject matter of boda boda transport and security challenges in Kenya. On religion, (75.9%) of the respondents were Christians, (22.7%) were Muslims and (1.4%) professed other religious faiths. On occupations, (50.1%) of respondents were in business, (14.1%) were in the private sector temporary employment, (10.1%) were engaged in farming, (5.6%) were in private sector permanent jobs, (4.0%) were in permanent formal employment in the public sector.

Table 3: Socio-Demographic Characteristics of Respondents

Variable	Category	Male	Female	Total
Age	10-17	26(0.5%)	30(0.5)	56(1.0%)
	18-25	816(14.8%)	377(6.8%)	1193(21.6%)
	26-33	1067(19.3%)	498(9.1%)	1565(28.4%)
	34-41	809(14.7%)	445(8.0%)	1254(22.7%)
	42-49	434(7.9%)	266(4.8%)	700(12.7%)
	50-57	240(4.4%)	155(2.8%)	395(7.2%)
	58-65	146(2.6%)	57(1.0%)	203(3.7%)
	66-73	83(1.5%)	25(0.5%)	108(2.0%)
	74+	29(0.5%)	12(0.2%)	41(0.7%)
Total		3650(66.2%)	1865(33.8%)	5515(100%)
M: 4-1 C4-4	Single/Never	0.45(1.5.20())	242((20/)	1187(21.5%)
Marital Status	Married	845(15.3%)	342(6.2%)	
	Married	2689(48.8%)	1332(24.2%)	4021(73.0%)
	Divorced	41(0.7%)	47(0.9%)	88(1.6%)
	Separated	54(1.0%)	50(0.9%)	104(1.9%)
	Widowed	21(0.4%)	94(1.7%)	115(2.1%)
Total	·	3650(66.2%)	1865(33.8%)	5515(100%)

Variable	Category	Male	Female	Total
Level of Education	None	283(5.1%)	232(4.2%)	515(9.3%)
	Primary	1253(22.7%)	698(12.7%)	1951(35.4%)
	Secondary	1506(27.3%)	664(12.1%)	2170(39.4%)
	Middle Level College	386(7.0%)	210(3.8%)	596(10.8%)
	University	202(3.7%)	52(0.9%)	254(4.6%)
	Adult Literacy	16(0.3%)	7(0.1%)	23(0.4%)
	Other (Specify)	4(0.1%)	2(0.0%)	6(0.1%)
Total		3650(66.2%)	1865(33.8%)	5515(100.0%)
Religion	Traditional	33(0.6%)	14(0.3%)	47(0.9%)
	Christian	2743(49.7%)	1444(26.2%)	4187(75.9%)
	Islam	851(15.4%)	401(7.3%)	1252(22.7%)
	Atheist/pagan	23(0.4%)	6(0.1%)	29(0.5%)
Total		3650(66.2%)	1865(33.8%)	5515(100.0%)
Main Occupation	Farmer	368(6.7%)	190(3.4%)	558(10.1%)
	Business	1820(33.0%)	942(17.1%)	2762(50.1%)
	Formal Employment Public Sector (a) Permanent	161(2.9%)	59(1.1%)	220(4.0%)
	Formal Employment Public Sector (b) (Casual/Contract)	70(1.3%)	32(0.6%)	102(1.9%)
	Private Sector (a) Permanent	251(4.6%)	57(1.0%)	308(5.6%)
	Private Sector (b) Temporary (Casual/ Contract)	636(11.5%)	140(2.5%)	776(14.1%)
	Housewife	7(0.1%)	253(4.6%)	260(4.7%)
	Student/pupil	105(1.9%)	66(1.2%)	171(3.1%)
	Unemployed	176(3.2%)	102(1.8%)	278(5.0%)
	Retiree	47(0.9%)	11(0.2%)	58(1.1%)
	Volunteer	8(0.2%)	6(0.1%)	14(0.3%)
	Intern	1(0.0%)	7(0.1%)	8(0.1%)
Total		3650(66.2%)	1865(33.8%)	5515(100.0%)

3.3 Understanding Boda boda Operators/Riders

In this study, 1,202 boda boda riders were interviewed. Analysis of their socio-demographic characteristics revealed the following. Majority (97.4%) of the riders were males, while female riders constituted (2.6%). On age variable, (38.2%) of the riders were in the age ranges of 26-33 years, with (30.0%) falling within the 18-25 years age cohort. Notably (1.1%) of riders were aged 10-17 years. On marital status, (71.1%) of the riders were married, with (25.5%) being single/never married. While (43.7%) had primary, (42.5%)

had secondary level education while (1.7%) had university level education. On religion, (75.0%) were Christians while (23.7%) were Muslims.

These findings point out that boda boda sub-sector in Kenya is dominated by a fairly youthful population of men with family obligations. It is instructive to note that the sector also employs minors as (1.1%) of the riders were below 18 years. Additionally, majority in the sub-sector have primary and secondary levels of schooling. The sub-sector also employs people with university level education – speaking to the realities of unemployment in Kenya. Some of the graduate riders said they operate boda bodas as they could not find jobs after university.

Understanding the social stratification of players in the industry is critical in devising appropriate policy interventions. Empirical studies on household poverty differentials based on age and educational achievement found out that youths have low socio-economic status, limited access to positions of influence and power and unequal access to and control of productive resources (chronic poverty report, 2008). The less educated are most vulnerable to poverty as they are also highly vulnerable to unemployment. Education is a key contributor to the development of human capital. Table 4 below highlights key socio-demographics characteristics of boda boda riders.

Table 4: Socio-Demographic Characteristics of Boda boda Riders

Variable	Category	Frequency	Percent
Gender	Male	1171	97.4%
	Female	31	2.6%
Total		1202	100.0%
Age	10-17	13	1.0%
	18-25	361	30.0%
	26-33	459	38.2%
	34-41	240	20.0%
	42-49	88	7.3%
	50-57	29	2.4%
	58-65	8	0.7%
	66-73	2	0.2%
	74+	2	0.2%
Total		1202	100.0%
Marital Status	Single/Never Married	307	25.5%
	Married	854	71.1%
	Divorced	19	1.6%
	Separated	21	1.7%
	Widowed	1	0.1%
Total		1202	100.0%
Level of Education	None	76	6.3%
	Primary	525	43.7%
	Secondary	511	42.5%

Variable	Category	Frequency	Percent
	Middle Level College	69	5.7%
	University	20	1.7%
	Adult Literacy	1	0.1%
Total		1202	100.0%
Religion	Traditional	10	0.8%
	Christian	901	75.0%
	Islam	285	23.7%
	Atheist/pagan	6	0.5%
Total		1202	100.0%

The World Bank (2008) estimates that nearly one in every five Kenyan youth of working age has no job and Kenya's informal sector has been largely ignored over the years. The informal sector now spans new innovations like the boda boda sub-sector where increasing number of young Kenyans are investing and finding employment. There is need for a deliberate policy and targeted support to the boda boda sub-sector dominated by a majority of young people with families. Many youths in the trade have lower levels of primary and secondary schooling; whereas few have university degrees. The boda boda industry has immense potential to change the face of Kenya's employment landscape in the long run.

3.4 Contributions of Boda Bodas in Commercial Public Transport

3.4.1 Boda boda motorcycle ownership status by riders

In terms of ownership of boda boda motorcycles by rider respondents, this study found out that 55.0% of the riders were owners of motorcycles they operated; 35.8% of the riders were employed as casuals or on commission basis; 5.3% of the riders had hired the motorcycles they operated; while 3.3% were standby or temporary riders (squad riders); whereas 0.6% of the riders operated motorcycles owned by their relatives. Figure 2 below shows motorcycles ownership status by riders.

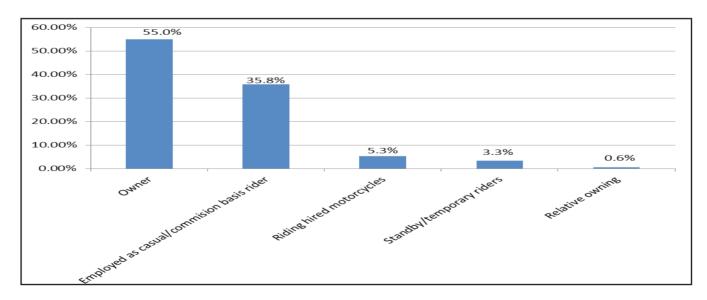


Figure 2: Ownership of Boda boda motorcycles by riders

The implication is that increasingly many riders are investing in and owning the motorcycles they use in the public transport business. This study also found out that the proportion of riders employed as casuals or on commission basis committed most boda boda-related crimes, hence the policy imperative to establish motorcycle ownership and its plausible implications for commission of crimes.

3.4.2 Utilization and advantages of boda boda in commercial public transport

In terms of utilization of boda boda motorcycles in public transport in the last six months, (93.8%) of the study respondents indicated having used boda bodas and related services, whereas 6.2% had not used boda boda in the last six months. Majority (73.9%) of those who had patronized boda boda services were passengers, while (26.6%) utilized boda bodas as commercial riders, and (23.6%) used boda boda to transport goods, (13.9%) had motorcycles for personal/private use. This finding is indicative of the fact that boda boda motorcycles are increasingly being used as a preferred means of transportation by Kenyans. The 2012 Economic Survey report pointed out that motorcycle registration was the highest at (68.1%) of all the total new motor vehicles registered in the country. From the foregoing, commercial motorcycle transport business is becoming dominant in Kenya. Many households rely directly or indirectly on this enterprise for livelihoods and survival.

The fact that majority of respondents who patronize boda bodas use it mostly as passengers has important implications on the need to ensure stringent public road safety in the sub-sector as demonstrated in table 5 below.

Table 5: Use of boda boda motorcycle transport services

Use of boda boda motorcycle	Frequency	Percent of Cases
As a passenger	3798	73.9%
As a commercial rider	1366	26.6%
Transportation of goods	1213	23.6%
As a personal/private rider	713	13.9%
Other	16	0.3%

Similarly, the respondents pointed out that boda boda had various advantages over other forms of transport like matatus. Table 6 below outlines advantages of boda boda as advanced by respondents:

Table 6: Advantages of commercial boda boda motorcycles

Advantages of boda bodas	Frequency	Percent of Cases
It is faster and time efficient	2836	56.7%
It is a flexible mode of transport	1482	29.6%

Advantages of boda bodas	Frequency	Percent of Cases
It is affordable	931	18.6%
Facilitates transportation even in impassable roads	925	18.5%
Easy to acquire, maintain and fuel efficient	483	9.7%
Available in remote villages and towns unlike vehicles/can access remote areas	482	9.6%
It is a source of employment and livelihoods	387	7.7%
Ability to drop off passengers/commuters at exact destination points	339	6.8%
The only means of transport in the absence of public service vehicles	74	1.5%
Safer and comfortable	48	1.0%
The spare parts are readily available	33	0.7%

From the findings above, 56.7% of Kenyans prefer boda bodas mainly because it is a faster and time efficient means of transport; 29.6% prefer it because it is a flexible mode of transport; 18.6% prefer boda because it is affordable; 18.5% prefer boda bodas because it can traverse impassable roads and 9.7% of respondents maintain that boda bodas are easy to acquire, maintain and fuel. Additional advantage of boda bodas over other means of transport given is their availability deep in remote rural villages and towns according to 9.6% of the respondents; 7.7% cherish boda bodas because they are a major source of employment and livelihoods for many rural and urban dwellers. Boda boda also drop off passengers at exact destination points 6.8% as compared to buses or matatu's. From these findings, boda boda motorcycles seem to be a growing and most patronized vehicular means of transport across Kenya. These findings are in tandem with studies conducted by (Nyachieo, 2012) showing commercial boda boda is a popular means of transport in the country.

Commercial boda boda transport is a preferred means of transport in Kenyan due to its availability, accessibility to remote rural areas, capacity to maneuver poor road terrains, narrow paths, beat traffic snarl ups and drop off passengers at their door steps that other means of transport are incapable of doing.

3.4.3 Factors accounting for the rapid increase in boda boda motorcycles in public transport

Respondents highlighted various factors that have led to the rapid increase and proliferation of boda boda motorcycles in their localities. Key among the factors cited was unemployment (39.2%); demands for alternative means of transport (28.4%); affordability in terms of purchase, maintenance and ease of operation (23.5%); being a source of income and livelihoods to many (21.8%); growing demands for transportation services (15.3%); highly preferred means of transport/only means of transport (13.1%); accessibility to areas with tough terrains and poor road infrastructure (8.6%); demand due to increase in population (5.1%) and school drop outs and low levels of academic achievements (3.4%).

Studies done in the sector by Nyachieo (2012) attributed the increase in the number of boda boda motorcycles to the soaring rates of unemployment among the youths, the inability of the transport system to cater for transport needs of Kenyans and the 2008 government policy that zero-rated motorcycles below 250cc, leading to a significant decrease in motorcycle prices. Many Kenyans consider the sector as an alternative means of securing employment as boda boda motorcycle riders or owners. The evolution of motorcycle taxis in other African countries is also linked to inadequate and poorly developed public transport systems, market liberalization and urbanization factors (Adesanya, 1998). In many Africa cities, public transport had been dominated by state owned companies. However, state transport companies stopped their operations in the mid-1980s and 1990s due to the effects of poor management, the absence of coherent transport policy and the impacts of the structural adjustment programs (Olvera Diaz, Plat & Maidadi, 2012). The decline in state provisioning of public transport led to the rapid growth in nonconventional means of public transportation initially provided by minibuses and shared taxis or vans and more recently by public motorcycles (Kumar, 2011).

Additionally, key informants in this study cited unemployment as the main factor that led to the rapid increase of boda bodas in the country. A key informant in Busia County had this to say:

"Boda boda is the last resort and only hope for employment to our youths and adults. We sell land and other family assets to buy them boda boda motorbikes. It at least keeps them occupied and a viable source of livelihoods for their families"

Kumar (2011) adds that with high unemployment rates in many countries, no entry requirements and no technical expertise required, the incentives to get into the motorcycle market are high. This is especially made more attractive because of high returns. A boda boda operator had this to say about the ease of venturing into the boda boda business:

"Many people find it easy to become a rider since there are no strict formal requirements to venture into the boda boda business unlike the matatus. All you need is to purchase a motorcycle or rent one. Thereafter, you need a day's training in some backyard field and the following day you are in good business ferrying passengers and goods for reward. This has made it more enticing and easy for many people to join the sub-sector"

The public transport systems in the country faces various challenges due to poor road infrastructural networks and traffic jams in cities and urban areas. It is for this reason that many Kenyans find boda bodas as a convenient alternative means of transport. A key informant from Turkana County had this to say about boda boda:

"Boda boda is the best thing that happened to us in the interior and remote rural areas. Before the advent of boda bodas, it would take us a week to access far flung markets by walking on foot or being cramped up in some old lorry that broke down every often during the journey. Today, it takes just a few hours on boda boda to cover distances that I would never have imagined"

Other factors cited for the rapid increase in boda boda motorcycles in public transport were availability of financing institutions for boda boda (3.4%); low maintenance cost (2.1%); peer influence (0.9%); lackluster enforcement of laws governing acquisition of motorcycles (0.4%) and the capability of motorcycles to be used in all seasons throughout the year/all-weather (0.3%). Table 7 below highlight factors accounting for the rapid increase of boda bodas in the country.

Table 7: Factors accounting for the rapid increase of boda boda motorcycles

Factors accounting for the rapid increase in boda boda motorcycles	Frequency	Percent of Cases
Youth unemployment	2069	39.2%
Demands for alternative means of transport	1497	28.4%
Affordability in terms of purchase costs, maintenance and ease of operating	1242	23.5%
Source of income and livelihoods to many families	1153	21.8%
Growing demands for transportation services	793	15.3%
highly preferred means of transport/only means of transport	690	13.1%
Accessibility to tough terrains/poor road infrastructure	453	8.6%
Population growth has created the need/demand	270	5.1%
School drop outs and low levels of academic achievements	180	3.4%
Availability of financing institutions for boda boda motorcycles	177	3.4%
Low maintenance cost	111	2.1%
Peer influence	50	0.9%
Lackluster enforcement of laws governing acquisition of motorcycles	19	0.4%
All-weather as can be used in all seasons of the year (rainy and dry)	14	0.3%
Political factors	14	0.3%
Porous Kenyan borders	2	0.0%

According to the NTSA, there were a total of 1,393,390 motorcycles registered in Kenya as at February 2018. The annual registration of motorcycles in Kenya between 2010 and 2017 is outlined in table 8 below.

Table 8: Number of registered motorcycles in Kenya

Year	Number of Registered Motorcycles
2010	117,266
2011	140,216
2012	93,970
2013	125,058
2014	111,124
2015	133,870
2016	119,716
2017	186,730

Source: NTSA data, 2018

From the NTSA statistics, it is plausible that the growth in motorcycles in Kenya will only go up further. Therefore the projected increase in the numbers of motorcycles in the foreseeable future without attendant policy regarding their registration, regulation and use in boda boda public service transport is a cause for alarm.

3.4.4 Positive contributions of boda bodas

Commercial boda bodas have had both positive and negative contributions in Kenya. On the positive side, majority of the respondents ranked creation of employment and being a source of income (53.7%) as the most positive contribution boda boda had made. They also said boda bodas have made transport easier and faster (49.2%); enabled access to interior and remote areas (9.4%); facilitated rapid growth of businesses (5.4%); and lessened the cost of doing business (2.9%); source of revenue to county governments (1.0%) as the main positive contributions of commercial boda boda motorcycles. These findings are in line with studies done in Kenya pointing out that the sector has created a number of job opportunities to the riders, boda boda motorcycle mechanics and gave rise to dealer shops selling spare parts and motorcycles.

Indeed, boda boda is becoming a major part of the Kenyan public transport and a source of employment and livelihood for many. The use of boda bodas in public transport is considered a blessing by many people due to its availability, accessibility, flexibility and relative cost. Figure 3 below shows the positive contributions of commercial boda bodas as reported by the respondents.

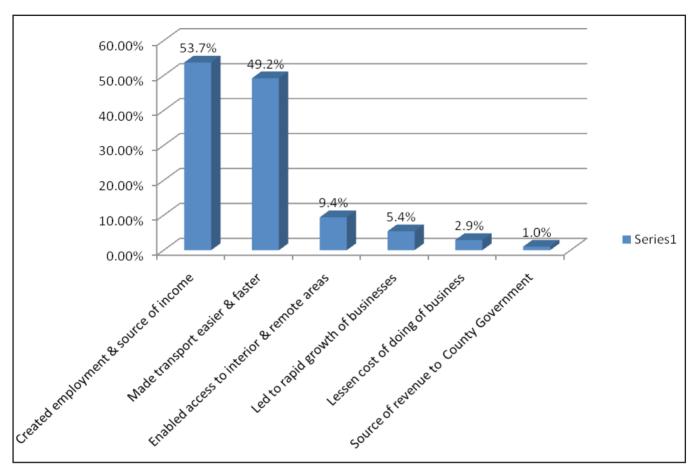


Figure 3: Positive contributions of commercial boda boda motorcycle

The Kwale and Bungoma Baseline Survey (2016) estimates the daily contribution of boda boda motorcycles to the economy to be 15.6 million Kenya Shillings (around 156,000 USD) per day, and 5.7 Billon Kshs annually, (57 million USD). This sector canot be ignored given its rapid growth, contributions to the economy and what it portends to the public safety.

3.4.5 Negative contributions of boda bodas

In spite of the many positive contributions of boda bodas in the public transport sector, this research found out that boda bodas have not only compounded road safety concerns in Kenya, but also brought along with it serious security challenges in terms of crimes. Road accidents and crime were flagged out by respondents as the major issues of concern with boda bodas. The main negative contribution of boda boda motorcycle transport cited by respondents were increased accidents due to reckless riders (65.1%); followed by increased insecurity (31.7%); sickness and ill heath from exposure to cold and other vagaries of weather (8.1%); increase in school dropout rates (5.3%); proliferation of a culture of impunity and siege mentality by riders (3.7%); increase in divorce cases and family breakdowns due to infidelity attributed to some riders (2.0%) and teenage pregnancies (1.5%); used to smuggle illegal goods and firearms (1.1%) Key informants in this study also pointed out that a high degree of primary school drop outs for boys joining the trade and teenage pregnancies for the girl-child is attributed to the boda boda industry.

Boda-boda accidents are frequent on the Kenyan roads owing to risky riding behaviours, riding while under the influence of alcohol and drugs, poor upkeep of motorcycles, and low levels of professional training (Kwale and Bungoma Baseline Survey, 2016). Most boda boda riders in Kenya do not have the requisite formal motorcycle-rider training certification; many operate without licenses; an equally bigger proportion of riders are unaware and disregard safety measures such as road signs, use of reflector jackets and helmets thereby occasioning the ever growing cases of motorcycle-related accidents and mortality.



Figure 4: Scene of a boda boda accident along Jogoo road, Nairobi

From a public health point of view, deaths from boda boda related accidents have negative impacts on the economy. This is in addition to the serious and debilitating injuries suffered, the huge medical bills and financial costs to the riders, pillion passengers, pedestrians and other motorists involved in such accidents. Table 9 highlights the negative contributions of boda bodas in public transport.

Table 9: Negative contributions of boda boda Motorcycle in public transport

Negative contribution of Boda boda Motorcycles	Frequency	Percent of Cases
Increased accidents due to reckless riders	2791	65.1%
Increased level of insecurity/enable criminals to escape	1358	31.7%
Sickness and ill heath from exposure to cold	347	8.1%
Led to increase in school dropout rates	226	5.3%
Proliferation of a culture of impunity and siege mentality by riders	157	3.7%

Negative contribution of Boda boda Motorcycles	Frequency	Percent of Cases
Increase divorce cases and family breakdowns due to infidelity by riders	85	2.0%
Has affected the rates of returns to other players in the transport sector like matatu's and buses	82	1.9%
Led to teenage pregnancies	65	1.5%
Noise pollution	53	1.2%
Used to smuggle illegal goods and firearms	47	1.1%

According to the National Transport and Safety Authority, an estimated 3,000 deaths from road crashes occur annually in Kenya. NTSA says motorcycle operators contribute to 20% of fatal accidents. Majority of the fatalities are pedestrians, passengers and motorcyclists as shown in table 10 below on the trends of road traffic fatalities in Kenya.

Table 10: Trends of road traffic fatalities in Kenya 2010-2016

Road user type	2010	2011	2012	2013	2014	2015	2016
Pedestrian	1442(47%)	1545(47%)	1549(47%)	1487(47%)	1340(46%)	1344(44%)	1097(37%)
Drivers	307(10%)	289(9%)	290(9%)	285(9%)	268(9%)	339(11%)	350(12%)
Passengers	740(24%)	824(25%)	745(24%)	824(26%)	642(22%)	668(22%)	729(25%)
Pillion Passengers	126(4%)	156(5%)	124(4%)	157(5%)	-	-	-
Pedal Cyclist	240(8%)	173(5%)	127(4%)	137(4%)	104(4%)	69(2%)	71(2%)
Motorcyclist	200(7%)	315(10%)	306(10%)	328(19%)	553(19%)	637(21%)	718(24%)
Total	3055	3302	3141	3218	2907	3057	2965
Fatalities per	8.25	7.97	6.82	7.22	6.34	6.4	6.53
100,000 popn.							
Fatalities per	21.3	19.7	18.4	16.4	13.2	12.4	-
100,000 vehicles							

Source – Kenya National Violence and Injury Prevention and Control Action Plan 2018-2022, - Data from NTSA, Traffic Police and Kenya National Bureau of Statistic Project/World Bank Report.

The economic cost of road crashes is 5.6% of the GDP~300 billion Kenya shillings annually. Road crashes are sudden and violent, often leading to disabilities and long term psychological effects. It strains both the government and the victim's family in terms of provision of healthcare. NTSA points out that the most affected age groups in terms of road traffic accident fatalities were between 20-44 years with the peak age being 30-34 years, overwhelmingly a youthful cohort with serious implications for the future of the country (www.ntsa.go.ke).



Figure 5: Scene of a boda boda and private car accident in Nairobi

Boda boda accidents have deleterious effects on the riders and other road users. Most victims are poor and in many instances have no accident insurance covers or health insurance cover. A doctor at Ten Wek Hospital in Bomet County said:

"Ten Wek is one of the hospitals that receive the highest number of boda boda accident victims in Kenya. We receive an average of eight (8) cases daily of boda boda related accident casualties and the most common orthopaedic condition in the wards arising from motorcycle accidents are multiple fractures"

Most public hospitals in Kenya have wards specifically designated for boda boda accident victims.

3.5 Types and Prevalence of Boda boda Related Crimes

When asked whether in the last twelve (12) months themselves or members of their household had experienced or witnessed a negative incident related to boda bodas, majority (65.1%) of the respondents affirmed having witnessed or experienced negative incidents with boda bodas, whereas (34.9%) had not experienced negative incidences with boda bodas. The responses for those who had experienced negative boda boda related incidences are displayed in table 11 below.

Table 11: Negative boda boda incidents witnessed or experienced in the last twelve months

Negative boda boda incidents witnessed or experienced in the	Frequency	Percent of
last twelve months	Frequency	Cases
Boda boda motorcycle accidents	2359	67.5%
Boda boda motorcycle related robberies and stealing	1187	34.1%
Boda boda mob justice/lynch mobs	83	2.4%
Fights and breach of public order amongst boda boda riders	49	1.4%
Playing of loud music near a school compound	18	0.5%
Transportation of weapons using boda boda	8	0.2%
Incidence of passenger/commuters raped by riders	17	0.5%
Drug trafficking	24	0.7%
Corruption/bribery	16	0.5%
Political interference/incitement	11	0.3%
Defilement	27	0.8%
Trafficking of illegal goods	12	0.3%
Harassment by the police	16	0.5%
Kidnappings	28	0.8%

From the findings above, 67.5% of the respondents mentioned boda boda motorcycle related accidents as one of the most negative incidents they had experienced or witnessed in the last one year. This was followed by boda boda motorcycle related robberies and stealing 34.1%; boda boda mob justice/lynch mobs 2.4%; fights and breach of public order amongst boda boda riders 1.4%. These findings are consistent with misgivings about boda bodas as the leading cause of road traffic accidents and increasing crimes in Kenya. The National Transport and Safety Authority say that motorcycle operators contribute to 20 % of fatal accidents. Many accident and emergency wards across the country are full of patients injured in boda boda-related road crashes. The growth of motorcycles operations in Kenya has undoubtedly cost lives through motorcycle accidents.

Kenya currently has one of the world's highest rates of deaths related to road accidents. The country is losing an average of 3,000 lives through road traffic crashes annually, thus placing it among countries with the highest number of deaths on the road globally (www.ntsa.go.ke). Motorbike accidents account for a large proportion of these deaths and as the popularity of boda boda motorcycles increases, this trend will definitely increase. According to the World Health Organization (2009), majority of road crash victims (injuries and fatalities) in developing countries are not the motorized vehicle occupants, but motorcyclists, pedestrians, bicyclists and non-motorized vehicles occupants.

3.5.1 Crimes committed by boda boda operators

When asked to confirm from either experience or knowledge whether boda boda riders commit crimes, majority of the respondents (88.0%) affirmed that boda boda riders committed crimes, while (12.0%) did not associate any crimes to the boda boda riders in their localities. Figure 6 below shows status of boda boda riders' commission of crimes.

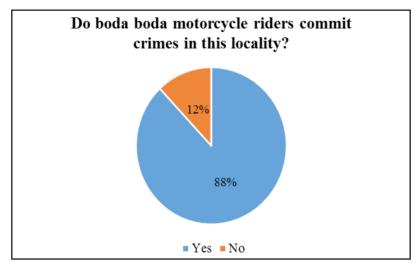


Figure 6: Crimes commission by boda boda riders

The following are the major crimes committed by the boda boda motorcycle riders as reported by respondents: causing death by dangerous riding (79.5%); general stealing (76.7%); breach of public order and creating disturbance (66.2%); theft of Motorcycle and motorcycle parts (62.9%); assault (57.0%); robbery and robbery with violence (52.9%); riding under the influence of alcohol (52.7%); possession and usage of dangerous drugs (49.5%); handling and trafficking of dangerous drugs (42.1%); murder (38.7%); kidnapping and abduction (26.2%); bribery (23.1%); defilement (17.8%); rape (17.2%); smuggling of goods across borders (15.9%); theft of motor vehicle and motor vehicle parts (14.2%); fraud and forgery offences (13.0%); handling stolen property (12.8%); burglary (11.3%); motorcycle hijacking (10.4%). These are presented in table 12 below.

Table 12: Crimes committed by boda boda motorcycle riders

Crime	Response	Percent of Cases
Causing death by dangerous riding	3877	79.5%
General stealing	3734	76.7%
Breach of public order and creating disturbance	3228	66.2%
Theft of motorcycle and Motorcycle parts	3327	62.9%
Assault	2778	57.0%
Robbery and robbery with violence	2578	52.9%
Riding under influence of alcohol	2570	52.7%
Possession and usage of dangerous drugs	2415	49.5%
Handling and trafficking of dangerous drugs	2053	42.1%
Murder	1884	38.7%

Crime	Response	Percent of Cases
Kidnapping and abduction	1279	26.2%
Bribery	1128	23.1%
Defilement	868	17.8%
Rape	839	17.2%
Smuggling of goods across borders	775	15.9%
Theft of motor vehicle and motor vehicle parts	687	14.2%
Fraud and Forgery	638	13.0%
Handling stolen property	624	12.8%
Burglary	554	11.3%
Motorcycle hijacking	506	10.4%
Tax evasion	493	10.1%
Indecent Assault	482	9.9%
Illegal possession and smuggling of firearms and weapons	483	9.9%
Malicious Damage to property	577	9.8%
Cattle Rustling	363	7.4%
Procuring of abortion	198	4.1%
Illegal possession and smuggling of forest and wildlife products	203	4.1%
Illegal possession of contrabands and counterfeits	193	4.0%
Carjacking	173	3.5%
Human Trafficking	148	3.0%
Incest	99	2.0%
Poaching	94	1.9%
Offences against tourists	56	1.2%
Bestiality	41	0.8%
Sodomy	22	0.5%

These finding corroborates studies done by (Bassey, 2011; Michael, 2010; Sule, 2007)) that commercial motorbike operators capitalized on the flexibility of motorbikes to indulge in criminal activities such as robbery, kidnapping, rape and snatching of handbags and other valuables from their passengers.

Many Key Informants in this study say boda boda riders are a law unto themselves. They also contend that criminals have also infiltrated the boda boda sub-sector and are using it to perpetrate petty and major crimes in the country. Rogue boda boda riders have been accused of killing 'suspected' criminals, some of whom could be innocent. Some riders have also turned into vigilantes and boda bodas appear to thrive on lawlessness. Some operators conduct raids in some estates and villages, waylay and lynch people 'suspected' to be criminals. They rarely obey traffic rules, including traffic lights and zebra crossings; have

little regard to other road users' right of way; ride on pavements and footpaths designated for pedestrians. Figure 7 below shows a bus burnt by errant boda boda operators after one of the riders is said to have been hurt after he hit the bus from behind in Homa Bay town in 2017.



Figure 7: Burnt out shell of (Otange) company bus in Homa Bay town

Source: Daily Nation, Sunday 10th December, 2017

Boda boda operators are also frequently mobilized in political campaigns and can become actors in political violence. The siege and lynch mob mentality trend of boda boda operators has given rise to situations where motorists involved in accidents with boda bodas flee accident scenes, for fear of lynching or having their vehicles torched. A respondent in this study narrated his ordeal with boda bodas:

"In accidents involving boda bodas and motorists; fellow boda boda riders will always adopt the siege mentality of taking the law into their hands to accost you, beat you, lynch you and even burn the car involved in accidents. It does not matter even if the boda boda operator was at fault in such accidents- I have been a victim of a boda boda lynch mob after I was involved in an accident. My car was vandalized by a gang of riders and in all honesty, I count myself lucky to be alive today"

Another respondent who witnessed her neighbour killed by a gang on motorcycle said:

"My neighbour's wife who ran an Mpesa shop in the estate was last December (2017) trailed and waylaid at the gate of our apartment by thugs on a boda boda-like motorcycle.

She screamed for help and was shot dead in broad day light. The thugs took off with her day's Mpesa collection"

Yet another key informant who had a nasty encounter with criminals on two wheels intimated that:

"I was walking along the estate street to board a bus at 6am in the morning when a boda boda-like motorbike slowed down near me and within seconds, the man in the passenger seat snatched my handbag pointing a gun to my face and fled. I lost everything from my cellphone, cash and bank cards to crucial identification documents"

From these narrations it is not in doubt that criminal using boda bodas or boda boda-like motorcycle are an evolving threat to security. Whereas boda bodas have revolutionized transport, they are also a time bomb introduced without a proper legal and policy framework. Like the matatu industry that at one time was infiltrated by lethal gangs like *Mungiki*. There is fear that boda bodas could be heading the matatu route if adequate policy interventions are not implemented in good time.



Figure 8: Photo from a CCTV video footage of a gang on a motorcycle attacking a motorist at a gate Source: (Crime Watch Nairobi)

Kenya has recently been grappling with challenges of insecurity involving armed robbers posing as boda boda operators or using boda boda-like motorcycle to commit crimes. The challenge for security agencies is the difficulties in distinguishing between genuine boda boda operators from criminals who have infiltrated the trade. Robberies at Mpesa shops, shopping malls and at estates are now carried out by gangs on boda boda-like motorbikes.

Motorcycle mode of transport provides quick getaways for criminals from crime scenes. Boda bodas are increasingly posing significant risks to law enforcement, the general public, the riders/operators and other road users.

3.5.2 Crimes committed against boda boda operators

Conversely, the study respondents reported that boda boda riders were also victims of the following crimes: theft of motorcycle and motorcycle parts (86.5%); robbery and robbery with violence (85.2%); murder (62.2%); general stealing (49.2%); motorist causing death of riders by dangerous driving (29.3%); assault (28.9%); kidnapping and abduction (28.0%); mob justice (21.5%); fraud and forgery (16.9%); fighting (16.1%); handling stolen property (7.1%); indecent assault (7.1%); malicious damage to property (6.2%); burglary (5.5%); rape (2.1%); sodomy (1.0%). These crimes are highlighted in table 13 below.

Table 13: Crimes committed against boda boda riders

Crimes committed against boda boda riders	Response	Percent of Cases
Theft of Motorcycle and motorcycle parts	3947	86.5%
Robbery and robbery with violence	3889	85.2%
Murder	2858	62.2%
General Stealing	2248	49.2%
Motorist causing death of riders by dangerous driving	1337	29.3%
Assault	1320	28.9%
Kidnapping and abduction	1277	28.0%
Mob justice	980	21.5%
Fraud and forgery Offences	773	16.9%
Fighting	734	16.1%
Handling Stolen Property	325	7.1%
Indecent Assault	323	7.1%
Malicious Damage to property	282	6.2%
Burglary	254	5.5%
Rape	97	2.1%
Sodomy	47	1.0%
Bribery	35	0.8%
Intimidation and harassment by the security agencies	13	0.3%

There have been reported cases in the Kenyan media of brutal attacks where boda boda riders have been killed and their motorcycles stolen. During this study, boda boda riders intimated that they are mostly attacked at night by criminals posing as customers. Operating boda boda at night is becoming one of the riskiest ventures in Kenya today.

Table 14: Crimes committed by boda boda riders by County(%)

Handbern Han												County	Á										
ring of aboution 1 9 6 6 9 5 1 1 2 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Crimes	Bungoma	Busia	sssinsD	Нота Вау	obsiţsA	udmsiX	Kilif	-							Siaya		Tana River	Tharaka-Nithi	riozV snriT	Lurkana	ıijsW	West Pokot
ng ordaportion	Murder	3.9	9.9	3.9	5.2	3.1	2.5											0.0	2.5		8.4	0.0	1.8
Departise proposed sirilly and solutions. Tells of the solution of the solutio	Procuring of abortion	0.4	0.3	0.0	9.0	1.1	0.2											0.0		0.3	0.7	0.0	0.0
nent the properties of the pro	Causing Death by Dangerous riding	8.8	8.0	10.4	5.5			6:		w	∞.	5 5.			9		16.	25.		7.4	8.6	14.9	14.7
norrithmental Same Same Same Same Same Same Same Same	Rape	2.0	3.5	0.5	2.1	9.0	1.7		7	4			2,				2	0.0	2.3	1.9	2.9	0.0	2.0
 unal offences (Sodomyy) 0.1 0.2 0.2 0.3 0.4 0.5 0.5 0.7 0.	Defilement	3.6	2.8	0.2	3.2	0.3	1.2			5						3	3	11.0	2,	3.4	2.0	0.0	8.0
ses (Sodomy)	Incest	9.0	0.2	0.0	0.7	0.0	0.0											0.0	0.3	0.3	0.1	0.0	0.4
Abduction 3.8 3.3 1.07 3.7 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	Un-natural offences (Sodomy)	0.1	0.1	0.0	0.4	0.0	0.0												0.0	0.0	0.1	0.0	0.0
96 14. 32 28 0.0 6.5 1. 1 3. 2 8 0.0 10. 1 0.1 1	Bestiality	0.1	0.4	0.2	0.3	0.0	0.0											0.0	0.2	0.2	0.3	0.0	0.0
149bduction 3.8 3.3 10.7 3.7 1.1 0.7 1.0 2.8 8.8 0.0 10.8 0.0 4.1 38 2.7 1.7 0.0 72 70 70 70 70 70 70 70 70 70 70 70 70 70	Indecent Assault	9.0	1.1	3.2	2.8	0.0	0.5			5	4	3		0				0.0	2.9		1.2	0.2	0.4
89	Kidnapping and abduction	3.8	3.3	10.7	3.7	1.1	0.7				∞							0.0	9.0	2.2	1.4	0.2	3.0
g) 4. 4. 4. 4. 4. 4. 4. 4. 4. 4. 4. 4. 4.	Assault	3.2	2.0	13.7	3.9	8.0	2.2											0.0	4.2	2.7	3.5	11.4	2.2
followed 3.5 0.8 2.4 0.8 4.4 1.3 1.4 1.1 0.4 2.1 4.9 5.9 4.9 5.9 4.3 4.5 4.9 5.9 4.3 4.5 4.9 5.0 4.2 1.1 0.4 1.1 0.4 1.1 0.4 1.1 0.4 1.1 0.4 1.1 0.4 1.1 0.4 1.1 0.4 0.2 0.4 1.1 0.4 1.1 0.4 0.2 0.4 1.1 0.4 0.2 0.4 0.4 0.5 0.4 0.5 0.4 0.4 0.5 0.4 0.4 0.5 0.4 0.4 0.5 0.4 0.4 0.5 0.4 0.5 0.6 0.5 0.6 0.	Affray (Fighting)	3.6	4.0	4.3	3.3	8.0	8.0										2	6.1	3.7	3.1	4.9	9.6	2.8
follonee 1.3 1.8 0.6 2.4 0.9 2.1 0.6 2.1 0.2 0.1 0.2 0.1 0.2 0.1 0.2 0.1 0.2 0.1 0.2 0.1 0.2 0.1 0.2 0.	Robbery	2.8	3.5	8.0	2.4	8.0	4.4						4					0.0	3.7	1.5	3.4	0.2	1.2
tecking by the control of the contro	Robbery with Violence	1.3	1.8	9.0	2.4	9.0	2.4			3		2.				3.		0.0	3.2	2.4	2.3	0.0	8.0
torcycle 4.2 3.2 1.5 2.3 0.8 1.3 2.2 3.1 3.3 1.4 0.6 0.8 0.8 1.8 1.0 1.5 1.5 0.0 0.8 1.3 1.4 0.6 1.7 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5	Carjacking	9.0	0.4	0.4	0.2	0.0	0.5											0.0	0.0	0.3	0.1	0.0	0.4
torcycle 4.2 3.2 1.5 2.3 0.8 1.3 2.2 3.1 3.3 1.4 0.6 1.7 1.5 3.6 1.6 1.4 2.2 3.4 0.0 3.4 0.0 3.2 2.4 0.8 0.0 0.4 0.5 0.4 0.0 0.4 0.0 0.4 0.0 0.4 0.0 0.4 0.0 0.4 0.0 0.4 0.0 0.1 0.0 0.4 0.0 0.1 0.0 0.4 0.0 0.1 0.0 0.1 0.0 0.1 0.1 0.1 0.1 0.1	Motorcycle hijacking	2.0	2.3	1.6	1.2	2.0	1.1										2	0.0	1.0	1.7	6.0	0.0	1.4
3 1.2 0.0 1.6 0.0 0.4 0.0 0.4 0.0 0.4 0.0 0.4 0.0 0.4 0.0 0.4 0.0 0.4 0.0 0.1 0.0 0.1 0.0 0.1 0.0 0.1 0.0 0.1 0.0 0.1 0.0 0.1 0.0 0.1 0.0 0.1 0.0	Robbery of Motorcycle	4.2	3.2	1.5	2.3	8.0	1.3	7										0.0	3.2	2.4	8.0	0.0	9.0
9.7 1.1 0.1 1.1 0.0 0.4 0.6 0.2 0.1 0.0 0.1 0.0 0.1 0.0 0.1 0.0 0	House Breaking	0.8	1.2	0.0	1.6	0.0	0.4											0.0	1.0	0.5	0.3	1.0	0.0
9.3 0.4 0.0 1.0 0.0 0.1 0.0 0	Burglary	0.7	1.1	0.1	1.1	0.0	0.4	9	7									0.0	0.3	0.2	0.5	0.2	0.0
	Other Breaking	0.3	0.4	0.0	1.0	0.0	0.1	7										0.0	0.3	0.2	0.3	0.0	0.0
	Cattle Rustling	1.0	6.0	2.6	6.0	9.0	0.2		-	5								1.2	2.2	1.7	3.1	0.0	9.0

											C	County											
Crimes	Bungoma	sizuA	saziraĐ	Нота Вау	obsiţsA	udmsiA	Kilifi	Krista	Kwale Lamu	Mandera	tidasraM	irogiM	ssadmoM	idorisM	Narok	Siaya	Taita Taveta	Tana River	Tharaka Nithi	riozV enriT	Turkana	ıi ja W	West Pokot
General Stealing	7.3	7.1	4.6	8.9	13.3	7.6	5.5	9 6.01	6.9 2.2	2 11.3	3 7.7	7.4	8.8	15.5	10.7	8.5	8.9	0.0	12.6	9.7	6.5	9.0	5.0
Theft of motorcycle and motorcycle parts	4.3	4.4	8.2	5.2	7.1	3.8	8.4 6	6.2 5	5.0 2.2	2 3.6	3.8	3 5.6	4.6	4.4	7.8	4.8	7.7	0.0	6.2	4.3	5.1	2.2	3.8
Possession and usage of dangerous drugs	2.9	2.7	2.4	8.9	5.7	10.8	7.7	7.5 1	1.7 11.5	.5 7.8	11.1	1 7.6	5.7	5.4	3.5	8.4	0.0	3.7	7.4	4.6	4.1	0.2	7.3
Handling and trafficking dangerous drugs	4.8	4.6	2.1	4.9	3.1	8.5	3.3 6	6.6 2.	.4 8.6	6 4.0	0.6	7.4	4.9	4.9	3.3	5.6	1.0	8.5	6.3	6.5	2.7	1.0	4.8
Driving/Riding under influence of Alcohol	5.9	4.4	3.7	4.6	9.3	8 8.01	8.5 6	6.1 6	6.0 7.9	9 0.5	5.1	5.0	6.5	7.0	9.8	8.2	4.3	15.9	7.1	5.0	9.5	0.3	11.5
Malicious Damage to property	1.7	1.0	0.5	2.6	0.3	1.2	3.5 1	1.2 1	1.0 0.0	0 2.8	0.4	1.2	1.2	1.4	0.0	0.8	0.0	0.0	2.1	1.2	8.0	9.0	0.2
Creating Disturbance	7.0	8.9	13.3	7.8	15.0 1	14.3	7.0 7	7.5 5	5.2 4.3	3 9.3	0.6	7.1	4.5	7.5	12.9	6.3	8.9	7.3	5.1	5.1	14.6	13.9	5.4
Fraud / Forgery offences	2.1	1.5	0.1	2.5	1.1	1.9	4.8	1.7	1.2 1.4	4 0.4	0.0) 2.3	6.0	1.8	0.3	0.9	1.0	0.0	1.0	1.7	1.1	0.0	1.0
Offences against tourists	0.4	0.2	0.0	0.4	0.0	0.0	0.2 0	0.0	0.0 0.0	0 0.1	0.0	0.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0
Human Trafficking	1.3	1.5	0.0	0.3	0.0	0.0	0.1 0	0.2 0	0.4 0.0	9.0 0	3.4	1 0.3	0.1	0.1	0.0	0.4	0.0	0.0	0.0	2.1	0.1	2.9	0.2
Illegal Possession and Smuggling of Firearms	1.8	2.5	8.0	8.0	0.0	0.2	0.9	1.0 0	0.4 0.0	0.9	2.6	9.0	0.5	1.5	2.0	1.5	0.0	1.2	0.0	3.1	2.9	5.4	3.4
Poaching	0.1	0.1	1.8	0.3	0.3	0.0	0.1 0	0.2 0	0.2 0.0	0 0.4	0.0	0.2	0.0	0.0	0.1	0.3	0.0	0.0	0.0	0.7	6.0	2.1	0.4
Illegal Possession and Smuggling forest and wildlife products	1.0	1.4	0.2	0.3	0.3	0.0	0.3 0	0.1 0	0.0	7 1.3	0.0	0.2	0.0	0.0	1.6	0.2	0.5	3.7	0.4	0.7	0.4	7.0	2.0
Smuggling of goods across borders	6.7	9.9	4.2	1.0	6.2	0.1	0.5 0	0.2	1.4 2.2	2 2.3	8.5	3.7	0.2	0.1	3.5	0.4	1.0	2.4	0.1	6.7	2.4	13.4	10.7
Tax evasion	1:1	1.6	8.0	1.3	4.0	4.0	2.1 1	1.6 0	0.2 0.7	7 0.1	0.0	1.8	0.5	0.7	3.9	2.7	0.0	0.0	8.0	1.9	1.3	9.4	1.6
Illegal possession of contrabands/counterfeits	0.4	1.2	0.0	1.0	8.0	0.1	0.1 0	0.1 0	0.3 0.0	0 0.8	0.0	6.0	0.2	0.2	1.3	0.4	0.0	0.0	0.1	1.9	1.2	2.7	1.0
Bribery	8.8	2.5	0.1	2.7	4.5	2.8	4.4	2.1 0	0.7 12.	2 0.5	3.8	3.6	2.6	3.2	4.6	4.2	1.0	12.2	3.3	5.3	1.3	0.3	5.0

A boda boda key informant from Migori County narrated his ordeal at the hands of a killer gang posing as a customer at night:

"I picked up a customer at 9 pm within Migori town. Along the way to the suburbs, he said he had dropped his phone and requested I stop so that he could get it. Upon stopping, three men emerged from the nearby bushes and pounced on me with crude weapons. I struggled and managed to escape from the killer gang with deep machete wounds to my head and arms. I lost the motorbike too"

On top of murderous attacks from criminal gangs, the riders also accuse sections of the police and county government inspectorate and enforcement officials of harassment, intimidation and extortion.

Table 15: Crimes committed against boda boda riders by County(%)

												Cou	ınty											
Crimes	Bungoma	Busia	Garissa	Homa Bay	Kajiado	Kiambu	Kilifi	Kisumu	Kwale	Lamu	Mandera	Marsabit	Migori	Mombasa	Nairobi	Narok	Siaya	Taita-Taveta	Tana River	Tharaka-Nithi	Trans Nzoia	Turkana	Wajir	West Pokot
Murder	18.0	20.7	1.2	14.4	9.1	12.5	13.6	9.9	15.0	6.1	10.6	3.4	16.1	22.3	11.6	11.9	10.9	15.3	4.5	7.3	20.3	13.6	0.4	5.8
Causing Death by Dangerous Driving	7.4	3.9	4.6	7.0	4.1	5.8	5.8	2.9	9.0	13.3	6.7	9.7	3.3	6.3	7.9	3.8	3.0	6.4	6.0	3.7	6.5	3.3	12.5	10.9
Rape	0.6	0.8	0.0	0.6	0.0	0.4	0.3	0.0	0.6	0.0	3.0	0.0	0.1	0.2	0.1	0.0	0.5	0.0	0.0	0.7	1.5	0.5	0.0	0.0
Un-natural offences (Sodomy)	0.9	0.1	0.0	0.5	0.0	0.2	0.7	0.0	0.1	0.0	0.2	1.4	0.0	0.1	0.2	0.0	0.2	0.5	0.0	0.1	1.1	0.0	0.0	0.0
Indecent Assault	1.4	1.5	2.0	2.3	0.0	0.4	0.4	1.5	2.9	0.0	0.7	9.7	2.3	1.6	0.5	0.4	0.5	2.5	0.0	3.2	0.0	3.7	0.4	1.6
Kidnapping and Abduc- tion	4.0	7.3	10.2	4.5	2.1	3.9	7.9	6.7	10.7	5.1	16.8	0.7	6.3	5.2	4.7	3.4	5.5	8.9	7.5	1.5	4.6	3.0	1.7	2.7
Assault	3.1	3.7	19.3	4.9	1.2	5.4	4.9	7.1	4.8	16.3	6.9	6.9	4.0	5.1	6.4	1.3	4.9	4.0	11.9	7.4	4.6	7.3	24.6	3.5
Creating Disturbance	4.9	3.1	5.9	7.2	14.0	7.7	1.6	3.8	3.2	3.1	9.9	9.0	4.3	1.2	2.2	12.5	3.0	5.0	1.5	3.7	5.7	11.0	21.7	5.8
Affray (Fighting)	2.6	2.8	5.9	2.6	2.5	1.1	0.6	3.3	5.4	0.0	4.1	4.1	2.8	3.1	2.1	1.6	5.2	6.9	0.0	6.2	0.4	6.8	25.8	3.5
Robbery and robbery with violence	5.4	6.8	3.4	7.4	7.9	9.1	9.3	11.9	5.2	5.1	2.4	6.9	8.1	10.5	14.4	7.8	12.0	7.4	11.9	9.6	3.8	6.8	1.7	9.3
Carjacking	1.1	0.4	0.7	0.6	1.2	1.0	0.2	0.4	0.5	0.0	0.9	0.7	0.6	0.7	0.4	1.1	0.5	2.5	0.0	0.1	1.5	0.5	0.0	0.4
Burglary	2.6	2.4	0.0	2.6	1.7	1.4	0.4	1.4	0.9	1.0	1.1	0.0	1.4	1.8	0.2	0.0	1.4	2.5	0.0	1.3	4.6	0.7	0.8	0.0
General Stealing	12.0	11.8	2.2	10.4	9.5	8.6	9.1	5.7	5.4	6.1	16.1	11.0	8.1	6.2	8.0	11.6	6.2	5.0	3.0	17.2	10.7	9.6	2.1	15.1
Theft of mo- torcycle and motorcycle parts	14.0	13.0	36.3	14.5	16.9	18.5	24.1	21.7	14.0	22.4	8.2	17.2	20.4	14.8	20.1	23.5	23.1	15.3	29.9	15.9	13.8	12.9	5.4	15.5
Robbery of motorcycle	13.1	14.5	7.6	12.7	21.1	15.3	14.5	18.5	14.2	10.2	3.3	16.6	15.4	14.9	15.5	17.9	15.8	13.4	11.9	14.7	11.5	9.1	0.4	8.1
Malicious Damage to property	0.3	1.0	0.2	2.9	0.4	0.6	2.4	1.4	0.8	1.0	3.7	0.0	2.4	0.6	0.7	0.4	1.4	1.5	0.0	1.3	0.4	0.9	1.3	1.9
Handling Stolen Property	2.0	2.2	0.0	2.1	0.0	1.5	0.2	0.2	1.5	0.0	3.4	2.1	1.5	1.2	1.0	0.4	1.5	0.5	0.0	3.0	2.7	1.4	0.0	7.8
Fraud/Forg- ery Offences	2.9	3.2	0.2	0.6	4.5	4.0	2.9	0.6	3.3	5.1	1.1	0.0	0.7	2.7	3.2	0.9	1.7	1.0	6.0	2.1	2.7	0.2	0.0	1.2
other offenc- es against tourists riders	0.3	0.1	0.0	0.1	0.0	0.1	0.0	0.0	0.5	0.0	0.0	0.0	0.3	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.8	0.5	0.0	0.4
Intimida- tion and harassment by security agencies	0.0	0.0	0.0	0.0	0.8	0.1	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	1.3	0.0

3.6 Perpetrators of Boda boda Related Crimes

This study sought to establish persons who commit boda boda related crimes. In terms of perpetration of boda boda related crimes, the study respondents pointed out that boda boda riders hired as casuals or on commission basis committed most boda boda related crimes (71.9%), followed by riders who hired motorcycles from owners (66.5%); passengers (61.6%); general members of the public (33.7%); boda boda motorcycle owners (33.6%); and traffic police officers (15.8%). Other perpetrators mentioned to a lesser percentage include County government inspectorate officers (2.6%), NTSA officers (1.1%) and matatu drivers (1.1%) among others.

Riders hired as casuals or on commission basis could be committing most crimes because of the insecure nature of their contractual obligations and the pressure to comply. Currently in some areas, there is a daily set target that must be delivered to the owners of the motorbikes before the rider can keep any revenues generated after meeting fuel costs and other incidentals. Uncertainties in the sub-sector can be a push factor to commission of crimes by some operators. A boda boda rider key informant said:

"There is a culture of pressure and fear in this trade for casual riders - driving some of them to rip off or steal from their customers and other members of the public"

A study by Nantulya & Muli-Musiime (2001) in the matatu industry observed lack of labour protection. This situation is similar within the boda boda trade. The system provides a powerful incentive for reckless driving, overspeeding, and overloading as drivers try to maximize their daily earnings. As the matatu industry evolved, worker protection for the new group of drivers and "turn boys" fell between the cracks of an unregulated informal industry.

These findings as indicated in table 16 below, affirm that the explosion of boda bodas in the commercial transport sector has been accompanied by increasing crime levels in Kenya. Boda bodas are increasingly becoming part of a new crime trends. Reports of robberies at the hands of boda boda gangs are becoming more and more common.

Residents of several towns and rural areas across Kenya decry increased robberies from criminals masquerading as commercial boda boda operators or using boda boda-like motorcycles. Table 16 displays perpetrators of boda boda related crimes.

Table 16: Perpetrators of boda boda related crimes

Perpetrators of boda boda motorcycle crimes	Frequency	Percent of Cases
Riders employed by Motorcycle owners as casuals or on commission basis	3835	71.9%
Riders who have hired motorcycles from owners	3545	66.5%
Boda boda passengers/commuters	3286	61.6%

Perpetrators of boda boda motorcycle crimes	Frequency	Percent of Cases
General members of the public	1796	33.7%
Boda boda Motorcycle owners	1790	33.6%
Traffic police officers	841	15.8%
County Government Inspectorate and Enforcement Officers	137	2.6%
National Transport and Safety Authority Officers	59	1.1%
Matatu drivers	57	1.1%
Kenya Revenue Authority Officers	23	0.4%
Politicians	12	0.2%
Prominent businessmen/women	7	0.1%
Ministry of Interior and Coordination of National Government line Officers	4	0.1%
Kenya Defense Forces Officers	3	0.1%

From the research findings, boda boda's are undoubtedly becoming a facilitator of urban and rural crimes. It is also not in doubt that the boda boda business has been infiltrated by criminals. A key informant in this study opined that:

"the reality of the day is that some motorcycle riders are involved in criminal activities by colluding with criminals, ferrying criminals, using boda boda to transport stolen properties or are themselves criminals"

It is important to observe that not all those who engage in crime using motorcycles are commercial boda boda operators or riders. However, police crime statistics and a careful observation of criminal activities reveals that a significant number of boda boda operators are in actual fact involved in crimes in one way or the other. It is also worth noting that not only are some boda boda riders' perpetrators of crimes, but they are also prone to brutal and murderous attacks from criminals. Table 17 below gives a breakdown of likely perpetrators of boda boda related crimes in different counties.

Table 17: Perpetrators of boda boda crimes by County (%)

					Perp	etrator	'S							
County	Boda boda Motorcycle owners	Riders hired by Motorcycle owners as casuals or on commission	Riders who have hired motorcycles from owners	Passengers	General members of public	Traffic Police Officers	NTSA Officers	KRA Officers	County Government Inspectorate Officers	Matatu Drivers	Politicians	Prominent businessmen/ women	Interior and line offices -personnel	Kenya Defence Forces (KDF) officers
Bungoma	11.6	72.5	84.1	78.3	49.3	14.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Busia	24.0	61.2	71.6	74.0	34.4	10.4	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0
Garissa	84.3	72.2	54.2	44.0	19.0	26.9	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0
Homa Bay	8.3	63.1	56.0	61.9	30.4	6.0	0.6	0.0	0.6	0.6	0.0	0.0	0.0	0.0
Kajiado	32.9	44.3	43.0	58.2	53.2	22.8	0.0	1.3	1.3	0.0	0.0	0.0	0.0	0.0
Kilifi	9.3	45.6	43.8	72.1	53.5	14.6	0.9	0.0	0.0	1.3	0.0	0.0	0.0	0.0
Kisumu	31.5	76.1	80.2	49.7	37.1	12.7	0.5	0.0	5.1	0.0	0.0	0.0	0.0	0.0
Kwale	11.2	51.5	39.2	69.8	21.6	5.2	0.4	0.0	1.1	0.7	0.0	0.0	0.0	0.0
Mandera	45.4	90.8	75.7	62.5	37.5	9.6	0.0	0.4	1.2	0.0	0.0	0.0	0.0	0.0
Migori	5.8	44.8	38.3	64.9	29.9	7.8	1.3	1.3	1.9	0.6	0.0	0.0	0.0	0.0
Mombasa	32.0	69.3	60.9	86.7	24.2	5.9	0.0	0.2	0.2	1.6	0.2	0.0	0.0	0.0
Nairobi	38.5	78.2	81.6	66.1	51.5	19.2	1.7	0.3	6.6	1.0	0.7	0.2	0.0	0.0
Narok	23.3	51.9	55.0	57.4	30.2	24.0	0.0	0.0	3.9	0.0	0.0	0.0	0.0	0.0
Siaya	34.7	89.3	73.3	60.0	26.7	15.3	4.7	1.3	4.0	0.7	0.0	0.0	0.0	0.0
Taita-Taveta	25.0	57.8	26.6	70.3	17.2	12.5	6.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Tana River	4.3	43.5	43.5	21.7	39.1	34.8	0.0	0.0	4.3	4.3	0.0	0.0	0.0	0.0
Tharaka-Nithi	41.3	78.5	78.5	61.4	29.1	28.7	2.7	0.9	5.8	0.4	0.0	0.9	0.0	0.0
Trans Nzoia	6.5	84.8	91.3	89.1	47.8	4.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turkana	42.2	81.4	84.5	41.0	11.8	3.1	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0
Wajir	86.1	60.7	32.0	40.2	18.9	56.6	9.0	6.6	0.0	0.0	0.0	0.0	0.0	0.0
West Pokot	52.6	93.4	73.7	39.5	42.1	40.8	1.3	2.6	1.3	0.0	1.3	2.6	5.3	0.0



Figure 9: Impounded boda boda motorcycles at Kondele police station, Kisumu County

3.7 Victims of Boda boda Related Crimes

From the study findings on victimization in terms of boda boda related crimes, 75.3% of respondents said boda boda pillion passengers are the most likely to be victims of boda boda crimes; 71.0% are riders employed by motorcycle owners as casuals or on commission; 57.5% are riders who have hired motorcycles from owners; 47.5% are boda boda motorcycle owners; 45.3% are members of the general public; 2.5% indicated police officers as likely victims of boda boda related crimes. These findings call for need to put in place measures that would help to protect vulnerable members of the public who commute using boda bodas and who are also at the highest risk of falling victims to boda boda related crimes. The reasons given for boda riders employed as casuals or on commission basis as being likely targets of criminals is because of their risk-taking behaviour to try and make as much money since their contractual obligations are short term and not guaranteed. They are therefore more likely to be out late in the night operating boda boda related crimes.

Table 18: Victims of boda boda related crimes

Victims of boda boda motorcycle related crimes	Frequency	Percent of Cases
Boda boda passengers	4027	75.3%
Riders employed by Motorcycle owners as casuals or on commission	3794	71.0%
Riders who have hired motorcycles from owners	3077	57.5%
Boda boda Motorcycle owners	2542	47.5%
General members of public	2423	45.3%
Police officers	135	2.5%
KRA officers	31	0.6%
Motorists	31	0.6%
NTSA Officers	13	0.2%
County government inspectorate officers	11	0.2%

In terms of gender victimization with regards to boda boda related crimes, 80.0% of males/men are likely to fall victims of boda boda crimes, while 20.0% of female/women are likely to fall victims of boda boda crimes according to the study respondents. Men are anecdotally, thought to have an abnormally high incidence of crime committed against them. Victim facilitation school of thought is based upon lifestyle risks for example, the type of employment and location at the time of crime commission. The implication of this is that men are more likely to fall victims of boda boda-related crimes than women in some circumstances. High victimization rates of certain social categories can be explained by the choice of routine activities that people engage in like going out at night, thus placing people in relatively unguarded environments (Cohen and Felson, 2016).

This research also delved into victimization in terms of age. From the study findings, the youth have a higher victimization risk than older persons with regards to boda boda related crimes. The study respondents pointed out that the youth (76.5%) are the most likely victims of boda boda crimes. This is followed by persons above youth age (14.9%); children (5.2%); and the elderly (3.3%). Youth are therefore more likely to fall victims to boda boda crimes than other age cohorts because the youth-life-stage is a very active age. Young people are likely to venture out late at nights and likely to patronize commercial boda boda services when other modes of transport are not operational. Young people are also the dominant group in the boda boda enterprise. Siegel (2005) found out that young people face a much greater risk of victimization due to their lifestyles, such as going out in public places at night, drinking and socializing. Table 19 below gives the county breaks down of likely victimization in terms of boda boda related crimes in the country.

Table 19: Victims of boda bodarelated crimes by County (%)

			Vic	tims				,		
County	Boda boda motorcycle owners	Riders hired by Motor- cycle owners as casuals or on commission	Riders who have hired motorcycles from owners	Passengers	General members of public	Police Officers	NTSA Officers	KRA Officers	County Government Inspectorate Officers	Motorists
Bungoma	7.2	47.8	55.1	89.9	62.3	4.3	0.0	0.0	0.0	0.0
Busia	18.0	51.6	57.2	86.4	48.4	2.8	0.0	0.0	0.0	0.0
Garissa	71.8	59.1	49.5	71.8	30.9	8.6	0.0	0.0	0.0	0.0
Homa Bay	39.6	77.5	70.4	68.0	34.9	2.4	0.6	0.6	0.0	0.6
Kajiado	81.5	70.4	64.2	53.1	33.3	2.5	0.0	0.0	0.0	0.0
Kiambu	28.4	73.1	52.5	83.2	41.5	0.7	0.0	0.0	0.0	3.0
Kilifi	45.6	89.8	88.9	52.2	19.0	1.8	0.0	0.0	0.0	0.0
Kisumu	60.9	75.1	64.5	78.2	48.7	2.5	0.0	0.0	0.0	0.0
Kwale	24.2	68.4	33.5	61.7	17.8	1.5	0.0	0.0	0.4	0.0
Lamu	37.3	86.3	86.3	49.0	29.4	0.0	0.0	0.0	0.0	0.0

County	Boda boda motorcycle owners	Riders hired by Motor- cycle owners as casuals or on commission	Riders who have hired motorcycles from own- ers	Passengers	General members of public	Police Officers	NTSA Officers	KRA Officers	County Government Inspectorate Officers	Motorists
Mandera	47.8	85.0	72.9	83.4	60.3	1.2	0.0	0.0	0.0	0.0
Marsabit	68.6	65.7	70.0	78.6	47.1	2.9	0.0	0.0	0.0	0.0
Migori	40.6	64.5	44.5	52.9	16.1	1.3	0.0	0.0	0.0	0.0
Mombasa	44.7	78.9	55.9	69.9	30.7	0.8	0.0	0.2	0.2	0.0
Nairobi	58.8	72.5	57.9	82.2	72.8	2.7	0.5	0.1	0.3	0.8
Narok	68.2	70.5	62.9	55.3	38.6	0.8	0.0	0.0	0.0	0.0
Siaya	32.7	84.0	64.0	84.0	37.3	7.3	3.3	0.7	2.7	0.0
Taita-Taveta	37.5	53.1	28.1	76.6	18.8	0.0	0.0	0.0	0.0	0.0
Tana River	47.8	82.6	82.6	52.2	47.8	0.0	0.0	0.0	0.0	0.0
TharakaNithi	61.0	65.5	62.3	73.1	30.0	3.1	0.0	0.0	0.0	0.0
Trans Nzoia	10.9	58.7	63.0	95.7	67.4	4.3	0.0	0.0	0.0	0.0
Turkana	53.4	65.8	64.0	82.6	26.7	1.2	0.0	0.0	0.0	0.0
Wajir	73.0	36.9	8.2	67.2	42.6	11.5	0.8	22.1	0.8	1.6
West Pokot	57.9	63.2	56.6	92.1	73.7	1.3	0.0	0.0	0.0	0.0

3.8 Mode of Operation of Boda boda Criminals

3.8.1 Time of occurrence of boda boda crimes

According to criminologists, crime happens at all times of the day and night, though particular crimes exhibit different patterns. In mapping out the time of the day when boda boda related crimes mostly occur, (41.0%) of the respondent indicated that most boda boda related crimes are committed at night between 7PM to about midnight. (25.5%) of the respondents indicated that boda boda crimes happen at all times. They hold the view that boda boda crimes are not time-bound and can occur any time of the day or night. (18.7%) of the respondents said boda boda related crimes occur late in the night between (12:00AM to about 4:00AM). Those who indicated that boda crimes mostly occur at night attributed this to the cover of darkness that criminals take advantage of and the fact that few people would be out on the roads late in the night as deterrence.

The Routine Activities Theory (RAT) postulates that crime can be committed by anyone who has the opportunity (Cohen & Felson, 1979). The occurrence of crime by errant boda boda motorcyclists is as a result of the availability of a target who is likely be a pillion passenger, members of the public and/or materials that are attractive to the potential offender (boda boda motorcyclist and or accomplice, criminals) in the absence of protective factor such as the police or other crime deterrent measures in time and space.

Pointedly, a police officer key informant said:

"the odds of getting into a boda boda related crime or accident for instance, increases during rush hours, late night, on Fridays and weekends or early in the mornings when those using boda bodas and the number of drunk-drivers increase on the roads. This makes them likely offenders and targets of crimes as well"

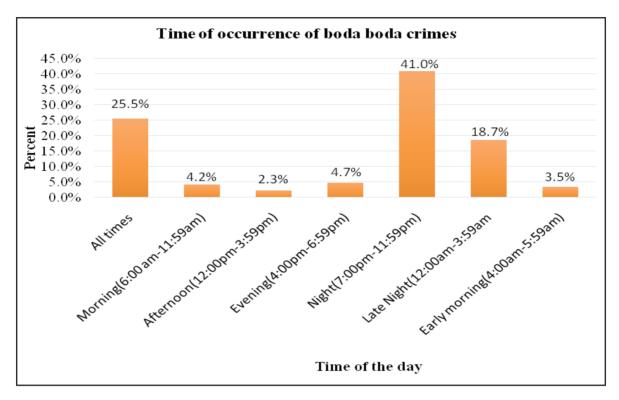


Figure 10: Time of likely occurrence of boda boda related crimes

From these findings, modalities should therefore be put in place to address boda boda crime occurrences at night, but not forgetting the complexity of establishing with precision the exactness of time trends as crimes are very dynamic in time and space. Crime Opportunity Theory suggests that offenders make rational choices and thus choose targets that offer a high reward with little effort and risks regardless of the time (Gottfredson & Hirschi, 1990). The finding on likely time (indicators) of this study can assist law enforcement agencies in predicting time trends of likelihood of occurrences of boda boda related crimes and therefore devise appropriate response and mitigation measures.

Similarly, in terms of days of the week occurrence of boda boda crimes, (53.7%) of the respondents said boda boda crimes were likely to occur any day of the week /all the days because crime is not day-bound; (30.1%) of respondents said boda boda crimes were most likely to occur on Saturdays; (25.2%) said Sundays; while (21.3%) indicated Fridays. Fridays, Saturdays and Sundays are specific days of the week likely to register the highest incidences of boda boda motorcycle related crimes because of the perception that there is money out in circulation as people are out at social gatherings and recreational events. Over the weekends, equally many people stay out late at social places like clubs, bars and patronize boda bodas as a means of transport back home. Respondents also pointed out that other parts of Kenya register higher rates of boda boda crimes over the weekends because market days fall on Fridays, Saturdays and Sundays,

with disproportionately higher traffic of traders and perceived circulation of hard cash during such market days. As a consequence, these days become very opportune and attractive time for perpetrators of boda boda related crimes to strike as highlighted in figure 11 below.

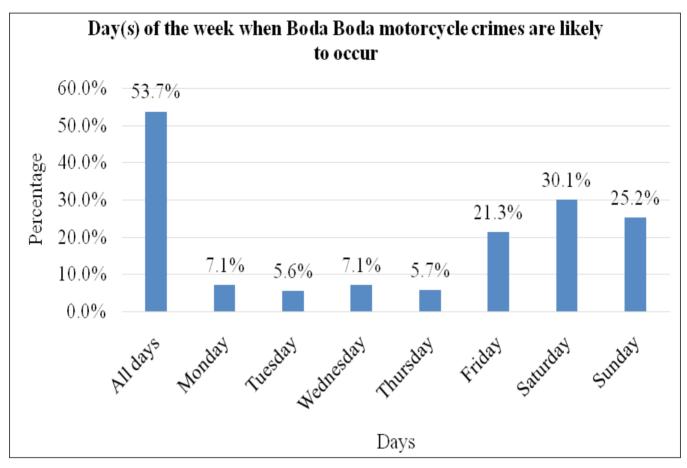


Figure 11: Days of the week when boda boda related crimes are likely to occur

A comparative analysis of disaggregated responses from households and boda boda riders' revealed that most boda boda related crimes take place at the end of the month according to 50.9% and 44.4% of the households and riders respectively. Furthermore, 39.5% of households and 44.1% of riders said boda boda crimes occur any time of the month. Another 8.4% of households and 10.7% of riders said these crimes occur mid-month, whereas 5.7% of the households and 5.0% of riders indicated that boda boda crimes occur at the beginning of the month. Both household and rider respondents concurred that boda boda crimes were pervasive at the end of the month when most people in formal and waged employment gets paid a salary and as such it is perceived people have money. Those who perceived boda boda crimes to occur any time of the month said crimes are unpredictable and criminals are opportunists and therefore crimes will occur at all times. They add that boda boda commercial transport is omni-present and a perpetually active sub-sector. Figure 12 below indicates time of the month boda boda related crimes occur.

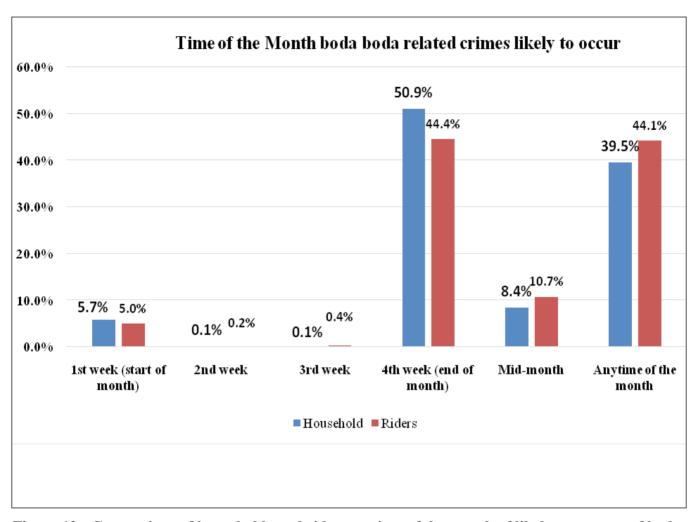


Figure 12: Comparison of households and riders on time of the month of likely occurance of boda boda crimes

In terms of boda boda related crimes occurrences during the year, the month of December was marked out as the red flag month by (58.5%) of the study respondents. Public holidays (8.8%) were also pointed out as periods of boda boda related crime occurrence during the year.

Some of the reasons advanced for the likely spike in boda boda crimes in December include: perceptions about a lot of money to be spent during the festivities being in circulation; the drive to make money for the Christmas festive season; large movements of people in towns and villages using boda boda motorcycle means of transport. The months of August (8.6%) and April (7.8%) were pointed out as school holiday period that also register high instances of boda boda related crimes. Figure 13 below contains this finding.

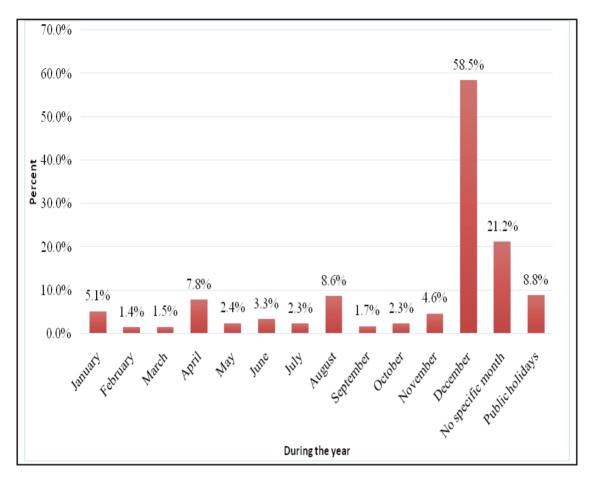


Figure 13: Months of likely occurrence of boda boda related crimes

3.8.2 How crimes against boda boda riders are committed/carried out

The study found out that crimes against boda boda riders are committed through various ways. These include robberies of the motorcycles and money (41.4%); through organized criminal gangs (27.2%); assaults with crude weapons (13.3%); murder/murdering of riders (12.2%); hijacking/kidnapping (8.6%); passengers' refusal to pay for services offered and starting off fights with riders (8.0%); harassment by other road users/customers (6.2%); false charges preferred on riders by police and other law enforcement officers for purposes of extorting bribes (3.9%); being hit by vehicles on the roads (2.7%); through mob justice attacks (2.7%) and drugging of riders (2.3%). Table 20 highlights how crimes are perpetrated against boda boda riders.

Table 20: How crimes against boda boda riders are committed/carried out.

How crimes against boda boda riders are committed	Frequency	Percent of Cases
Robbery of motorcycle and money	1835	41.4%
Through organized criminal gangs	1205	27.2%
Assaults with crude weapons	592	13.3%
Murdering/murders	543	12.2%
Hijacking/ kidnappings	381	8.6%

How crimes against boda boda riders are committed	Frequency	Percent of Cases
Passengers refusing pay and getting into fights with riders	353	8.0%
Harassment by other road users/customers e.g motorists	276	6.2%
False charges by police and other law enforcement officers to extort bribes	172	3.9%
Hit by vehicles on the roads	121	2.7%
Through mob justice attacks	118	2.7%
Drugging	100	2.3%
Laying of traps on riders	46	1.0%

Motorcycle riders have also not been spared the wave of insecurity in the country. Boda boda operators are prone to attacks by criminals, whose motive is to harm, kill and steal from the riders. Thefts of motorcycles have been flagged out as a growing security concern in Kenya by police officers. The findings from table 20 above, indeed confirm that boda boda riders are also at the receiving end of serious crimes. This calls for the need by security agencies to put in place measures to address robberies of motorcycles that could be the work of organized criminal gangs targeting boda boda operators.

3.8.3 How boda boda riders commit crimes against their victims

This study established that some boda boda riders commit crimes against their victims through various ways. The respondents gave the following as ways through which boda boda operators commit crimes against their victims: Stealing from passengers (31.8%); overspeeding resulting into accidents (28.8%); collusion with organized criminal gangs (13.6%); riding motorcycles while under the influence of alcohol and drugs (11.1%); starting off fights and beating up of victims (8.9%); by harassing passengers/clients (8.3%); rape and defilement of women and girls (6.4%); overcharging their clients (5.6%); murdering victims (3.2%); abductions and kidnappings (3.1%); enticing, luring and giving school girls money in exchange for sexual favors (2.5%); sexually harassing clients (2.4%); overloading and carrying excess passengers and or luggage (1.6%); through lynch mob (1.5%).

Whereas majority of boda boda operators are legitimate and conduct their trade without engaging in crime, the sub-sector has been infiltrated by criminal gangs.

These findings further confirm that errant boda boda riders commit serious offences against persons that patronize this mode of transport as presented in table 21 below.

Table 21: How boda boda motorcycle riders commit crimes against victims

How riders commit crimes against victims	Frequency	Percent of Cases
Stealing from passengers	1417	31.8%
Over speeding resulting into accidents	1323	28.8%
Through collusion with organized criminal gangs	622	13.6%
Riding motorcycle under influence of alcohol and drugs	508	11.1%
Starting off fights and beating up of victims	409	8.9%
Harass passengers/clients	383	8.3%
Rape and defile women and girls	295	6.4%
Overcharging clients	256	5.6%
By murdering victims	145	3.2%
Abduction/kidnappings	140	3.1%
Enticing, luring and giving school girls money in exchange of sexual favors	115	2.5%
Sexually harassing clients	112	2.4%
Overloading and carrying excess passengers/luggage	74	1.6%
Through lynch mobs (mob justice)	69	1.5%

In other jurisdictions like Enugu in Nigeria, *okada* (boda boda) riders had been reported as having been linked to serious crimes including robbery with violence, murder, theft, rape, kidnapping, ritual and political killings (Atubi et al, 2009; Okache,2010). In 2012, Ghanaian National Road Safety Commission banned operations of all motorcycle and three-wheeler taxis in urban areas because of their association with crimes and concerns around road traffic injuries.

3.9 Root Causes of Boda boda Related Crimes

The boda boda transport industry in Kenya is commonly associated with widespread impunity, accidents, crime, violence and a siege mentality. A number of factors have been attributed to this state of affairs. This study sought to find out the root causes of boda boda related crimes.

The main root causes of boda boda motorcycle related crimes given by respondents are: unemployment and idleness (48.3%); poverty (24.9%); drug and substance abuse (17.5%); non-regulation of the boda boda sub-sector (12.8%); greed and desire for quick money (10.6%); weak law enforcement by the security agencies and other authorities (10.4%); peer pressure (7.9%); high levels of illiteracy (6.3%); criminal mindset and tendency (5.3%); insecurity in some parts of the country (3.2%); poor transport infrastructure (3.0%); high cost of living (1.8%); corruption among law enforcers (1.7%); ease of access to firearms through porous Kenyan border (1.6%). These factors were found to predispose a section of boda boda operators and facilitate commission of some boda boda related crimes in the country.

Poverty and unemployment afflicts many Kenyans and have been ranked as the major root causes of boda boda related crimes by the study respondents. Poverty and unemployment are serious developmental challenges in the country. In terms of informal employment, the main industries where young people are majorly found are the transport industry, subsistence agriculture, *jua kali* (outdoor) manufacturing and small businesses.

In the absence of jobs and other meaningful economic activities, many Kenyans, including the unemployed youths have taken to eking out a living by transporting people and goods on motorbikes. In one of the interviews, an unemployed young graduate operating a boda boda at the coast intimated:

"My involvement in boda boda transport and sometimes criminal activities is driven by the need to survive and take care of our families in the face of widespread unemployment in Kenya"

Key informants in this study also noted that drug and substance abuse, desire for quick wealth, peer pressure and collusion of boda boda operators with some law enforcement officers were also root causes of boda boda related crimes. The boda boda industry in Kenya could potentially be a negative force if not well regulated, controlled and monitored. Table 22 presents root causes of boda boda related crimes.

Table 22: Root causes of boda boda related crimes

Root causes of boda boda related crimes	Frequency	Percent of Cases
Unemployment/idleness	2508	48.3%
Poverty	1289	24.9%
Drug and substance abuse	908	17.5%
Non regulation of the boda boda sub-sector	663	12.8%
Greed and desire for quick money	548	10.6%
Weak law enforcement by security agencies and other authorities	537	10.4%
Peer pressure	412	7.9%
High levels of illiteracy	324	6.3%
Criminal mindset and tendency	274	5.3%
Insecurity in some parts of the country	167	3.2%
Poor infrastructure	157	3.0%
High cost of living	95	1.8%
Corruption among law enforcers	90	1.7%
Ease of access to firearms through porous Kenyan border	88	1.6%
Hunger and droughts	44	0.8%
Uncoordinated boda boda SACCOs	43	0.8%
Political incitement	26	0.5%
Non sharing of information with security agencies	21	0.4%
Tribalism	11	0.2%

When the study respondents were subjected to a second level probing questions on possible causes of boda boda related crimes, majority affirmed that poverty (80.2%); unemployment (86.6%); weak law and order enforcement (81.6%); peer influence (77.1%) were probable contributors to boda boda related crimes. These findings are displayed in table 23 below.

Table 23: Possible root causes of boda boda motorcycle related crimes

Possible causes of boda boda motorcycle related crimes	Agree	Disagree	I am not sure	I don't know	Total
Un-registered motorcycles are the major class of boda bodas that cause boda boda related crimes	2975(55.7%)	1706(30.9%)	354(6.4%)	480(8.7%)	5515
Fake documentation and registration plates facilitate boda boda related crimes	2864(51.9%)	1655(30%)	465(8.4%)	531(9.6%)	5515
Poverty contributes to boda boda related crimes	4425(80.2%	826(15.0%)	99(1.8%)	165(3.0%)	5515
Unemployment contributes to commission of boda boda related crimes	4776(86.6%)	527(9.6%)	62(1.1%)	150(2.7%)	5515
Easy access to firearms contributes to boda boda related crimes	2660(48.2%)	1832(33.2%)	552(10.0%)	471(8.5%)	5515
Drugs and alcohol contributes to boda boda related crimes	4460(80.9%)	715(13.0%	145(2.6%)	195(3.5%)	5515
Lack of designated passenger picking and dropping points contributes to boda boda related crimes	3386(61.4%)	1623(29.4%)	280(5.1%)	226(4.1%)	5515
Peer influence contributes to bodaboda related crimes	4252(77.1%)	822(14.9%)	218(4.0%)	223(4.0%)	5515
Weak law and order enforcement contributes to boda boda related crimes	4498(81.6%)	603(10.9%)	203(3.7%)	211(3.8%)	5515

3.10 Consequences of Boda boda Related Crimes

Boda boda related crimes have profound consequences for the country. The following were the main consequences of boda boda related crimes pointed out by respondents: Crime and accident related deaths (52.9%); loss of property (23.8%); health related problems (21.2%); increased insecurity in the country (17.4%); increased motorcycle related accidents (10.7%); increased teenage pregnancies and school drop outs (9.8%); increased poverty levels (8.1%); loss of jobs (7.7%); loss of confidence and trust in boda boda means of transport (6.5%); smuggled contrabands and illegal goods into Kenya's economy (5.5%), family disintegration (2.6%); increase in drug and substance abuse (1.9%) among others as shown in table 24 below.

Table 24: Consequence of boda boda motorcycle related crimes

Consequence of boda boda motorcycle related crimes	Frequency	Percent of Cases
Crime and accident related deaths	2754	52.9%
Loss of property	1237	23.8%
Health related problems	1099	21.2%
Increased insecurity in the country	907	17.4%
Increased motorcycle related accidents	558	10.7%
Increased teenage pregnancies and school drop outs	510	9.8%
Increased poverty levels	424	8.1%
Loss of jobs	401	7.7%
Loss of confidence and trust in boda boda means of transport	338	6.5%
Smuggled illegal and contrabands goods into Kenya's economy	287	5.5%
Family disintegration	135	2.6%
Increase in drug and substance abuse	97	1.9%
Breach of public order and creating disturbance	78	1.5%
Tax evasion and loss of revenue/high corruption	47	0.9%
Boarder conflicts	40	0.8%
Increasing incidences of mob justice	40	0.8%
Political instability	22	0.4%
Increase in incidents of rape and defilement	35	0.7%
Increased noise pollution	15	0.3%

3.11 Measures, Challenges and Recommendations to Address Boda boda Related Crimes

3.11.1 Measures put in place to address boda boda related crimes

When asked a question on awareness levels on any measures that had been put in place to address boda boda related crimes in their localities, 38.8% of the respondents affirmed being aware of some measure, while 61.2% of the respondents were not aware of any measures put in place to address boda boda related crimes in their localities. This finding could be indicative that much should be done to address boda boda related crimes. Key stakeholders like the NPS, NTSA, KRA and Boda boda Associations, SACCO's need to create awareness to the public on the existing measures that are being implemented to address boda boda related crimes

Table 25 below shows the measures put in place to address boda boda related crimes. Generally all the existing measures were considered effective according to the respondents who were cognizant of the measures that had been put in place. These measures included: police road blocks, checks and patrols; street lighting; inspections by NTSA; sensitization of riders on safety by the stakeholders; counseling of riders; community policing; regulation by boda boda SACCOs/Associations; limiting boda boda operations at night among others.

Table 25: Measures put in place and their effectiveness in addressing boda boda related crimes

Measures	Effective	Not Effective
Police road blocks, checks and patrols	322(16.1%)	198(9.9%)
Street lighting	33(1.7%)	8(0.4%)
Inspections by NTSA	41(2.1%)	21(1.1%)
Sensitization of riders on safety by stakeholders	90(4.5%)	36(1.8%)
Counseling of riders	9(0.5%)	1(0.1%)
Regulation by boda boda SACCOs/ Associations	400(20.1%)	61(3.1%)
Increased security personnel	51(2.6%)	24(1.2%)
Limiting hours of boda boda operations at night	69(3.5%)	60(3.0%)
Crackdown on boda boda's violating laws	28(1.4%)	13(0.7%)
Curb on drug abuse/alcohol consumption by riders	5(0.3)	3(0.2%)
Community policing/nyumba kumi	249(12.5%)	70(3.5%)
Building of boda boda sheds	24(1.2%)	5(0.3%)
Issuance of safety gear e.g reflector jackets	25(1.3%)	20(1.0%)
Rules and regulations have been put in place to govern boda boda	71(3.6%)	47(2.4%)

On the raft of measures put in place to address boda boda related crimes, (20.1%) of study respondents perceived and ranked regulation by boda boda SACCOs/Associations as the most effective, followed by police roadblocks, checks and patrols (16.1%), then community policing/nyumba kumi (12.5%); followed by sensitization of riders on safety by stakeholders (4.5%); rules and regulations having been put in place to govern boda bodas (3.6%); limiting hours of operation of boda boda at night (3.5%); increased security personnel (2.6%); inspections by NTSA (2.1%) among others.

On the flip side, respondents perceived and ranked the following as ineffective measures in addressing boda boda related crimes: police road blocks, checks and patrols (9.9%), community policing/nyumba kumi (3.5%); regulation by boda boda SACCOs/Associations (3.1%); limiting hours of boda boda operations at night (3.0%); rules and regulations having been put in place to govern boda bodas (2.4%) as highlighted in table 25 above.

3.11.2 Institutional success in addressing boda boda related crimes

In terms of institutional rating in addressing boda boda related crimes, boda boda Associations were ranked to a large extent the most effective in addressing boda boda related crimes at (27.8%), followed by the National Police Service (18.3%). On the other hand, respondents rated National Transport and Safety Authority (38.7%), Kenya Revenue Authority (34.0%) and County Government Inspectorate and Enforcement (39.4%) to not have been successful at all in addressing boda boda related crimes as indicated in the table 26 below.

Table 26: Extent of institutional success in addressing boda boda related crimes

Institution	Large Extent	Small Extent	Not at all	I am not sure	I don't Know
National Police Service	983(18.3%)	2056(38.3%)	1848(34.4%)	192(3.6%)	291(5.4%)
National Transport and Safety Authority (NTSA)	307(5.7%)	715(13.3%)	2080(38.7%)	747(13.9%)	1529(28.4%)
Kenya Revenue Authority (KRA)	376(6.9%)	696(12.7%)	1862(34.0%)	933(17.0%)	1614(29.4%)
Boda Boda Associations	1520(27.8%)	1366(25.0%)	1168(21.4%)	544(9.9%)	870(15.9%)
County Governments Inspectorate and Enforcement	453(8.3%)	1143(21.0%)	2146(39.4%)	596(0.9%)	1107(20.3%)

Table 27 below indicates that (43.3%) of the study respondents were not aware of any mechanisms of managing boda bodas and related crimes by the National Transport and Safety Authority. The reasons advanced by the respondents are that NTSA is not present in their localities and that they have not seen any regulations put in place. This implies that NTSA work and modalities in managing and regulating the

transport sector may not be known by the public. This perception does not augur well for NTSA which has an important regulatory and enforcement mandate in the transport sector in Kenya.

Table 27: Awareness of NTSA mechanisms of managing boda boda related crimes

Does the National Transport and Safety Authority (NTSA) have mechanisms of managing boda boda Motorcycle transport and related crimes in this locality?	Response	Frequency	Percent
	Yes	1055	19.1%
	No	1113	20.2%
	Not Sure	957	17.4%
	I Don't Know	2390	43.3%
Total		5515	100.0%

3.12 Challenges Faced in Addressing Boda boda Related Crimes

The main challenges faced in addressing boda boda related crimes reported by respondents were: weak law enforcement for the boda boda sub-sector (32.6%); corruption among sections of the police and other law enforcement agencies (16.6%); culture of impunity among boda boda operators (14.8%); untrained boda boda riders (11.7%); anonymity of the boda boda industry making it difficult to trace criminals (9.3%); unemployment challenges (7.1%); fear of victimization from boda boda operators (6.6%), general insecurity in some parts of the country (6.0%); poor roads infrastructure (5.0%); drug and substance abuse (4.6%); unregistered motorcycles (3.9%); inadequate security personnel to handle crimes related to boda boda (2.8%); and harassment of boda boda operators by security apparatus and other road users (2.7%). Table 28 below presents challenges faced in addressing boda boda related crimes.

Table 28: Challenges in addressing boda boda related crimes

Challenges in addressing boda boda related crimes	Frequency	Percent of Cases
Weak law enforcement for boda boda sub-sector	1569	32.6%
Corruption among sections of the police and other law enforcement agencies e.g county inspectorate officers	799	16.6%
Culture of impunity among boda boda operators	712	14.8%
Untrained boda boda riders	564	11.7%
Anonymity of the boda boda industry makes it difficult to trace criminals	446	9.3%
Unemployment challenges	341	7.1%
Fear of victimization from boda boda operators	319	6.6%
General insecurity in some parts of the country	290	6.0%

Challenges in addressing boda boda related crimes	Frequency	Percent of Cases
Poor roads infrastructure	240	5.0%
Drug and substance abuse	223	4.6%
Unregistered motorcycles	190	3.9%
In adequate security personnel to handle crimes related to boda boda	133	2.8%
Harassment of operators by security apparatus and other road users	130	2.7%
Intimidation by local politicians	29	0.6%

In terms of addressing concerns in the boda boda sub-sector, generally most (97.3%) of respondents agreed that the government should ensure sensitization on community safety and security on boda boda transport; boda boda riders should be trained and obtain license from authorized motorcycle riders institution (95.9%); SACCO system should be introduced to regulate and monitor commercial boda boda motorcycle transport (88.3%); working hours for commercial/public service boda boda motorcycles should be regulated (83.8%); electronic identification and regular inspection of details of engines used in motorcycles and boats (80.3%); change of use and other particulars for all motorcycles should be captured by KRA and NTSA (78.3%); all motorcycles should be designated appropriately as per their use (76%); all commercial/public service boda boda motorcycles riders should obtain a Certificate of Good Conduct (71.2%) as highlighted in table 29 below.

Table 29: Respondents view points on various concerns of the boda boda sub-sector

Statement	Agree	Disagree	I am not sure	I don't know
All motorcycles should be designated appropriately as per their use (e.g, commercial/public service or private)	4094(76%)	1018(18.9%)	170(3.2%)	87(1.6%)
Change of use and other particulars for all motorcycles should be captured by KRA and NTSA	4208(78.3%)	462(8.6%)	380(7.1%)	321(6%)
Electronic identification and regular inspection of details of engines used in motorcycles and boats	4409(80.3%)	455(8.3%)	381(6.9%)	246(4.5%)
Working hours for commercial/public service boda boda motorcycles should be regulated	4599(83.8%)	589(10.7%)	186(3.4%)	116(2.1%)
All Commercial/public service boda boda motorcycles riders should obtain a Certificate of Good Conduct	3915(71.2%)	1430(26.0%)	100(1.8%)	50(0.9%)

Statement	Agree	Disagree	I am not sure	I don't know
Boda boda riders should be trained and obtain license by authorized motorcycle riders institution	5271(95.9%	153(2.8%)	39(0.7%)	31(0.6%)
A SACCO system should be introduced to regulate and monitor commercial boda boda motorcycle transport	4848(88.3%)	350(6.4%)	180(3.3%)	114(2.1%)
The government should ensure sensitization on community safety and security on boda boda motorcycle transport sector.	5322(97.3%)	61(1.1%)	52(1.0%)	36(0.7%)

In spite of the many challenges in the sub-sector, boda boda transport is becoming more entrenched in Kenya's public transport system. Therefore, focus should be geared towards addressing the challenges identified by this study to make it a safe and secure means of transport and livelihoods for millions who depend on it.

CHAPTER 4: SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

4.1 Introduction

This study sought to: establish the prevalence of boda boda related crimes; identify the root causes of boda boda related crimes; identify the perpetrators and victims of boda boda related crimes; identify the mode of operation of perpetrators of boda boda related crimes; examine the consequences of boda boda related crimes; identify the existing control measures and their effectiveness in addressing boda boda related crimes; and identify challenges and make recommendations to address boda boda related crimes.

4.2 Summary of Major Findings

The boda boda transport sub-sector is dominated by a majorly youthful population of males with family obligations and responsibilities. Majority have low levels of schooling with majority at primary and secondary education levels. Boda boda also employ minors with serious implications for the development trajectory and safety of children. The sub-sector further employ people with university level education – speaking to the realities and pervasiveness of unemployment in Kenya. The following are summaries of the major findings of this study:

4.2.1 Understanding Boda boda riders/operators

Majority of the boda boda riders or operators were males (97.4%) while female riders constituted (2.6%). On age, (38.2%) of the riders were in the age range of 26-33 years; with (30.0%) falling within the 18-25years age cohort; (20.0%) were aged 34-41 years; (7.3%) were between 42-49 years; (2.4%) were aged 50-57years. Notably (1.1%) of riders were aged 10-17 years. On marital status, (71.1%) of the riders were married, (25.5%) were single/never married; (1.7%) were separated and (1.6%) divorced. On education, (43.7%) had primary education; (42.5%) had secondary; (5.7%) had middle level college education (1.7%) had university education; (6.3%) had no education. On religion, (75.0%) were Christians while (23.7%) were Muslims.

4.2.2 Prevalence of boda boda related crimes

The most prevalent boda boda motorcycle related crimes committed by the boda boda riders were: causing death by dangerous riding (79.5%); general stealing (76.7%); breach of public order and creating disturbance (66.2%); theft of Motorcycle and motorcycle parts (62.9%); assault 57.0%; robbery and robbery with violence (52.9%); riding under influence of alcohol (52.7%); possession and usage of dangerous drugs (49.5%); handling and trafficking of dangerous drugs (42.1%); murder (38.7%); kidnapping and abduction (26.2%); bribery (23.1%); defilement (17.8%); rape (17.2%); smuggling of goods across borders (15.9%); theft of motor vehicle and motor vehicle parts (14.2%); fraud and forgery offenses (13.0%); handling stolen property (12.8%); burglary (11.3%); motorcycle hijackings (10.4%).

Prevalent crimes committed against boda boda motorcycle riders were: theft of motorcycle and Motorcycle parts (86.5%); robbery and robbery with violence (85.2%); murder (62.2%); general stealing (49.2%); motorist causing death by dangerous driving (29.3%); assault 28.9%; kidnapping and abduction (28.0%); mob justice (21.5%); fraud and forgery (16.9%); fighting (16.1%); handling stolen property (7.1%); indecent assault (7.1%); malicious damage to property (6.2%); burglary (5.5%); rape (2.1%); and sodomy (1.0%).

4.2.3 Root causes of boda boda related crimes

The main root causes of boda boda motorcycle related crimes were: pervasive unemployment and idleness (48.3%); poverty (24.9%); drug and substance abuse (17.5%); lack of/weak regulation of the boda boda sub-sector (12.8%); greed and desire for quick money (10.6%); weak law enforcement by the police and other law enforcement agencies (10.4%); peer pressure factors (7.9%); high levels of illiteracy (6.3%); criminal mindset and tendencies (5.3%); insecurity across the country due to absence of adequate security personnel (3.2%); poor transport infrastructure (3.0%); high cost of living (1.8%); corruption among law enforcers (1.7%); ease of access to firearms through the porous Kenyan borders (1.6%).

4.2.4 Perpetrators and victims of boda boda related crimes

The main perpetrators of boda boda motorcycle related crimes were: boda boda riders hired as casuals or on commission basis (71.9%); riders who hire motorcycles from owners (66.5%); passengers (61.6%); members of the public (33.7%); boda boda motorcycle owners (33.6%); some/sections of traffic police officers (15.8%); County government inspectorate and enforcement officers (2.6%); National Transport and Safety Authority officers (1.1%) and matatu drivers (1.1%).

The main victims of boda boda crimes were: boda boda pillion passengers (75.3%); riders employed by Motorcycle owners as casuals or on commission (71.0%); riders who hire motorcycles from owners (57.5%); boda boda motorcycle owners (47.5%); general members of the public (45.3%); and police officers (2.5%).

4.2.5 Consequences of boda boda related crimes

The consequences of boda boda related crimes were: boda boda crimes and accident-related deaths (52.9%); loss of property (23.8%); health related problems (21.2%); increased insecurity in the country (17.4%); increased motorcycle related accidents (10.7%); increased teenage pregnancies and school drop outs (9.8%); increase in poverty levels (8.1%); loss of jobs (7.7%); loss of public confidence and trust in boda boda as a means of transport (6.5%); smuggling of contrabands and illegal goods into Kenya's economy (5.5%), family disintegration (2.6%); increase in drug and substance abuse (1.9%); breach of public order and creating disturbance (1.5%).

4.2.6 Measures put in place to address boda boda related crimes

The measures put in place to address boda boda motorcycle related crimes included: regulation by boda boda SACCOs and Associations (20.1%); police road blocks, checks and patrols (16.1%); community

policing and nyumba kumi initiatives (12.5%); sensitization of riders on safety by stakeholders (4.5%) raft of measures, rules and regulations put in place to govern boda boda (3.6%); limiting hours of boda boda operations at night (3.5%); increased presence of security personnel (2.6%); inspections by NTSA (2.1%); street lighting (1.7%); crackdowns on boda bodas violating laws (1.4%) issuance of safety gear e.g reflector jackets, helmets (1.3%); and building of boda boda sheds (1.2%).

4.2.7 Challenges faced in addressing boda boda related crimes

The challenges faced in addressing boda boda crimes were: weak law enforcement and regulation of the boda boda sub-sector (32.6%); corruption among sections of police and other law enforcement agencies (16.6%); culture of impunity among boda boda operators (14.8%); untrained boda boda riders (11.7%); anonymity of the boda boda industry making it difficult to trace criminals (9.3%); unemployment challenges (7.1%); fear of victimization from boda boda operators (6.6%), general insecurity concerns in some parts of the country (6.0%); poor roads infrastructure (5.0%); drug and substance abuse (4.6%); unregistered motorcycles (3.9%); inadequate security officers to handle the boda boda sub sector and related crimes (2.8%); harassment of boda boda operators by security and other law enforcement apparatus and other road users (2.7%).

4.3 Conclusions

The explosion of motorcycles in Kenya is projected to escalate to new levels as boda bodas are increasingly becoming a popular means of transport for many rural and urban dwellers. However, in the context of the rising popularity, the boda boda transport sub-sector is largely operating with minimal regulation and control. The seemingly ineffective governance of the sector has occasioned increasing cases of boda boda related crimes and accidents with significant costs to public safety. Boda boda operators are also gradually turning into the new face of crime and impunity. Boda boda riders have become lynch mobs. Complaints of criminals on boda boda or boda boda - like motorcycles attacking people are common occurrences across Kenya. It is against this background that regulating the boda boda transport sub-sector is essential in ensuring a secure, orderly and reliable part of public transport in Kenya. There is therefore urgent need to put in place a policy framework to effectively register, regulate, monitor and govern the boda boda sub-sector in the country.

4.4 Recommendations

Stakeholders in the security sector and transport industry need to pay particular attention to the evolving boda boda sub-sector in light of the alarming increase in boda boda related crimes, accidents and impunity. This study does not advocate for banning of boda boda operations and other penal approaches of arresting and prosecuting operators as this is not sustainable in the long run for a developing economy like Kenya where bodas bodas are also making significant contributions to livelihoods and national development. Arising from the findings and conclusions of this study, the following recommendations seek to inform policy interventions in addressing boda boda related security challenges, accidents and impunity in the country.

(i) Establish a Data base of all boda boda operators in Kenya through mandatory registration, refresher training and testing

The boda boda industry in Kenya has evolved without a coherent and comprehensive legal framework to govern it. Lack of a data base of all boda boda operators in Kenya is a major policy gap and a serious threat to national security. This study found out that some boda boda riders committed petty and major violent crimes and motorcycles have become a major facilitator in commission of crimes. There are serious concerns for an industry dominated by a fairly youthful population of men who are not professionally trained, less educated and of lower socio-economic standing - operating in a context of weak policing, regulation and oversight. The United Kingdom government instituted strict licensing for riders in the 1990s that contributed to the fall in motorcyclists' casualties and brought sanity to the industry.

The Kenyan government should make it mandatory before one is allowed to operate a boda boda motorcycle on Kenyan roads to meet certain minimum conditions. These should include: must have undergone formal motorcycle rider training; acquired riders/driving licence; certificate of good conduct; helmet; reflector jackets. They must also have helmets and reflective jacket for the pillion passengers. Strategies should also be put in place for re-testing and validating professional competencies of operators who currently hold valid riding/driving licences.

Authorization to operate a boda boda motorcycle as public service vehicle/motorcycle should be granted by the NTSA/TLB only after the operator has joined a SACCO or a boda boda association. The NTSA should undertake the responsibilities of inspection of the motorcycle to be used in public transport service. Modalities should also be explored to assign boda boda motorcycle unique/special identifiers to distinguish them from motorcycle for courier services, personal or private use. Boda boda Associations would play a critical role in self-regulation and also being a consultative forum for membership to dialogue and negotiate with the government and other stakeholders.

A data base and formalization of the boda boda sub-sector will assist in addressing the challenge of impunity, recklessness, and criminals infiltrating the trade. Registration will make it possible to track legitimate riders and weed out criminals from the sub-sector. The current informality status of the industry offers great incentives for criminals to thrive – this was the case in the *matatu* industry where notorious criminal gangs like *Mungiki* reigned supreme.

The entry point could be partnering with existing boda boda Associations and SACCOs. Government sponsored motorcycle rider trainings to operators could also be incentives towards the registration and development of a data base of boda boda operators in Kenya.

(ii) Address government policy oversight by facilitating a shift of the boda boda industry from the current 'informal sector to the formal economy'

There is inherent policy oversight in the boda boda debacle. The 2008 government policy zero-rating motorcycles of up to 250cc was a noble effort to create jobs and spur development in the country. This policy led to a significant decrease in motorcycle prices with the net effect of explosion of motorcycles

into the economy without an attendant counter policy framework regarding their registration, regulation, monitoring and designation as Public Service Vehicle (PSVs).

There is need for government policy shift to officially recognize and designate boda boda motorcycles as part of the public service vehicles or public service motorcycles. Boda bodas have evolved as unregulated informal entities in the transport industry in Kenya. They are not legally recognized as public service vehicles but offer this crucial service that has critical implications for public safety. Boda bodas -just like when *matatus* were first introduced in Kenya, operated illegally as a means of public transport until 1973 when they were authorized by a presidential decree to operate legally in the country. Penal approaches or abolition of boda boda operations is not a sustainable option in the context of a developing country like Kenya with major challenges in public transport and widespread unemployment. Undoubtedly, boda bodas play an important role in the transport sector and Kenya's economy as alternative or complementary mode of transport.

The government should facilitate shift of the boda boda sub-sector from the current informal entities to the formal economy. The benefits derived from formalization would go a long way in addressing public safety risks in the sub-sector. Through this shift, boda boda owners and operators will see themselves as switching from informal to formal employers and employees with responsibilities as governed by laws. They also need to be recognized as making major contributions to national development. This will greatly reduce impunity and risk taking behaviours prevalent in the industry, and thereby promote public safety.

The State Department for Transport and other stakeholders can address this lacuna through the transport policy management. This can be achieved by expanding mandate of the TLB to also include the registration of motorcycles as PSV's and designation of specific routes akin to what TLB does in the *matatu* industry in Kenya. With formal recognition as public service providers, boda bodas will ultimately generate additional revenue to the government through taxes, TLB licenses and other levies.

(iii) Subsidize the cost of motorcycle riders' training and establish motorcycle specific riding schools

Stakeholders in the boda boda sub-sector need to recognize the necessity for a paradigm shift in policy for targeted support to the boda boda sub-sector. There is need to explore modalities to subsidize the cost of motorcycle riders training programmes in Kenya. Many riders interviewed in this study aver that fees currently being charged by motor vehicle driving schools are very expensive for poor riders and jobless youth who dominate the sub sector. Another important observation during the survey was the lack of motorcycle specific riding schools across Kenya. The current practice is that one enrolls into a motor vehicle driving school, gets a motor vehicle driver's license and thereafter has it stamped for motorcycle. This arrangement is a costly venture for many poor youth, who in most cases are unable to raise the higher fees required for training as motor vehicle drivers. This is a major disincentive to formal motorcycle rider training and the acquisition of riding licenses by boda boda operators in Kenya.

The government can partner with driving schools to establish motorcycle specific riding schools in each county. Government subsidies or waivers on motorcycle rider trainings would go along way in facilitating the shift of boda bodas from the informal to the formal economy as well.

(iv) Effectively implement the National Transport and Safety Authority (NTSA) Regulations (Operation of Motorcycles) 2014

This study found out weak law enforcement for the boda boda sub-sector as a contributing factor to crimes, accidents and impunity in Kenya. The boda boda industry operates on lawlessness, not because of inadequate legal regime but more because of weaker enforcement of laws. The subsector has therefore established systems that reinforce a culture of impunity. If not well regulated, the subsector has the potential of being infiltrated by violent criminal gangs akin to what was obtaining in the matatu industry a few years ago.

The boda boda sub-sector in Kenya has largely operated without effective regulation and control. The seemingly ineffective governance of the sector has occasioned increasing cases of boda boda related accidents, crimes and impunity. These regulations provides effective and comprehensive framework that if implemented, will be the turning point in addressing most of the challenges bedeviling the boda boda sub-sector in Kenya. The informal, unregulated nature of boda bodas connotes greater risks to public safety.

Strict enforcement of the National Transport and Safety Authority (NTSA) Regulations (Operation of Motorcycles) 2014, the Traffic Act CAP 403, 2009 and other regulations will self-evidently be part of the solution to taming a sub sector that has gained notoriety for lawlessness in Kenya.

(v) Undertake concerted sensitization and awareness education to boda boda operators and the general public towards road safety and crime free boda boda sub-sector in Kenya

This study found out that members of the public were at the highest risk of falling victim to boda boda related crimes. The Ministry of Interior and Coordination of National Government, Ministry of Information Communication and Technology, Ministry of Transport, Ministry of Education should undertake concerted partnerships with boda boda associations, media, private sector actors, civil society organizations and international development partners to institute a public campaign towards road safety and crime free boda boda sub-sector in Kenya. This will enlighten them and members of the public of the risks they face when using boda boda mode of transport. Surviving victims of boda boda related accidents should be involved in the campaign towards safe riding.

(vi) Address unemployment and poverty found to be the major root causes of boda boda related crimes

The government should put in place programmes and modalities to address poverty and wide spread unemployment especially among the youth which were pointed out by the study respondents as the push factors for young people venturing in boda boda trade and partly the key root causes of some boda boda related crimes. Empirical evidence asserts that unemployment and poverty induces people to adopt high-risk behaviours like involvement in crime, violence and young people are found to be the majority in boda boda trade.

(vii) Recommendations to the National Police Service and other law enforcement agencies

In order to effectively deal with boda boda motorcycle and related crimes, it is recommended that the National Police Service should increase intelligence and surveillance of the sub-sector to identify crime patterns, trends and hot spots in the boda boda sub-sector. The NPS should undertake intelligence led policing in gathering information and profiling of criminals or rogue operators masquerading as boda boda operators. Given the findings of this study on the time of the day, week, month and year when boda boda related crimes are likely to occur, police patrols should be upscaled around neighbourhoods and major areas of operation of boda boda at nights, weekends, end month, public holidays and the month of December. The police service and other law enforcement agencies should also strictly enforce laws and regulations meant to ensure public safety on the roads like wearing of helmets, reflector jackets; carrying only one passenger to ensure strict observance of traffic rules by boda boda riders. Security and law enforcement agencies must also uphold integrity and shift focus from the lackluster handling of boda boda sub-sector that has partly been blamed for lawlessness and impunity in the sub sector in Kenya.

(viii) Recommendations to the National Transport and Safety Authority

The objective of forming NTSA was to harmonize operations of the key road transport departments and help in effectively managing the road transport sector to minimize loss of lives through road traffic accidents. NTSA in conjunction with the National Police Service should carry out compliance and inspections crack downs on riders who violate traffic rules including motorcycles operating without insurance cover, overloading, over-speeding, operating unregistered motorbikes, riders without licenses, riding under the influence of drugs and alcohol. NTSA in conjunction with the County Transport and Safety Committees could also designate specific zones of operation for boda bodas in the Counties.

The NTSA in partnership with the National Police Service, County Governments, Boda boda Associations, SACCOs and other stakeholders should undertake concerted civic education and public awareness campaigns on road safety and crime prevention to boda boda operators in all counties.

(ix) Recommendations to the County Governments

The County governments should formulate relevant by-laws and policies to govern and regulate operations of the boda boda sector in their areas of jurisdiction. Such policies could include designating specific zones of operations for boda boda. The County governments and other partners should also purpose through policy to offer targeted support to the boda boda transport sub-sector in formation of Savings and Credit Cooperatives Organizations (SACCOs), sponsoring rider trainings and public awareness campaigns. Indeed, the formation of SACCOs in the matatu sector brought back sanity to the once ungovernable public transport industry.

County Governments should also install street lights and CCTV cameras in their jurisdictions to reduce the confidence of boda boda criminals since this study established that most boda crimes occur at night. The

County Governments should also assist the sub-sector by constructing sheds for operators that can also act as points of revenue collection from operators. The commercial boda boda transport sector's potential is not yet fully exploited as a major source of revenue for County governments.

(x) Recommendations to Motorcycle Dealers and Sellers

Motorcycle dealers and sellers have a critical contribution in terms of selling genuine motorcycles with standard basic safety gears of two helmets, reflector jackets as prescribed in law. They should also ensure buyers of new motorcycles undertake statutory registration with Kenya Revenue Authority/National Transport and Safety Authority to help address the issue of unregistered motorcycles that are often used in committing crimes and wanton impunity on Kenyan roads.

(xi) Recommendations to Boda boda Owners

Boda boda motorcycle owners can help in addressing challenges in the sub-sector by undertaking insurance policy cover for their motorcycles; employing professionally trained and certified riders; vetting and undertaking criminal background checks on riders they employ. They could further assist the trade by installing tracking devices on their motorcycles; ensuring all the statutory documents for ownership of the motorbike and riders are in place. Boda boda owners can also help by registering their motorcycles in boda boda SACCO's and associations.

(xii) Recommendations to Boda boda Riders' Associations and SACCOs

Boda boda riders Association can help by encouraging voluntary registration of their members and undertaking sensitization campaigns on road safety and concerns around crime affecting the trade. Boda boda Associations can also formulate and enforce rules of operation for their members in their jurisdictions. The association should monitor operations of their members and collaborate with security agencies in reporting criminal elements in the sub-sector. The associations can also champion legal representation and welfare of members by working closely with the government. Strong Associations and SACCOs will encourage self-regulation and hold to account their membership and there by ensure only qualified, licensed riders operate on our roads.

(xiii) Recommendations to Boda boda Riders

It is recommended that all boda boda riders should acquire requisite motorcycle rider trainings, licenses, and safety gears before venturing on the roads. Law abiding individual riders also have an obligation to collaborate with security agencies and other enforcement authorities to report operators who masquerade or engage in criminal activities and violations of the laws. Additionally, riders must strictly observe and adhere to road traffic rules to curb accidents.

(xiv) Recommendations to the General Public

In order to address boda boda related crimes and accidents, persons patronizing boda bodas as passengers must ensure their safety by wearing safety gears of helmets, reflector jackets. Passengers should take precaution when using the services of boda boda late into the nights as this study established higher incidences of victimization with regards to boda boda related crimes late in the nights. The general public should also champion Community Policing and Nyumba Kumi initiatives and report boda boda criminals to the authorities.

(xv) Recommendations for Further Research

The study recommends extension of this research to the twenty three Counties not covered by this study to provide a complete national outlook of boda boda transport and security challenges in Kenya.

REFERENCES

- Adesanya, A. (1998). "The use of motorcycle for public transport: the situation in Ibadan". *Nigeria Institute of Social and Economic Research*, Ibadan, Monograph Series, Vol. 6, 57.
- Atubi A. & Ali A, (2009). Motorcycle taxis in Enugu: *Implications for development. Sustainable Human Development Review, Vol.1, No.4*, December 2009.
- Australian Crime Commission (2011). Organized Crime in Australia 2011. Canberra: Commonwealth of Australia.
- Bassey, A. (2010). *Akpabio curtailing criminal acts by Okada Riders*. Retrieved from http://ww/compassnewpaper.com/ng/index.phb.
- Broughton D. (2005). The complete guide to insufficiency. New York, NY. Chronicle Books
- Bryceson, D. F., Mbara, T. C., & Maunder, D. (2003). Livelihoods, daily mobility and poverty in sub-Saharan Africa. *Transport reviews*, *23*(2), 177-196.
- Chioma, P. (2010). Okada ban: Different strokes for Lagos residents. *Compass*, 31-32.
- Chronic Poverty Research Centre (2008). The Chronic Poverty Report 2008-09. *Escaping Poverty Traps*. CPRC.
- Cohen, L. E., & Felson, M. (2016). Social Change and Crime Rate Trends: A Routine Activity Approach (1979). In *Classics in Environmental Criminology* (pp. 203-232). CRC Press.
- Cohen, L. E., & Felson, M. (1979). Social change and crime rate trends: A routine activity approach. American sociological review, 588-608.
- Gitonga, V. W. (2014). Factors influencing growth of informal transport sector: a case of bodaboda transport In Central Division, Embu West District (Doctoral dissertation, University of Nairobi).
- Gottfredson, M. R., & Hirschi, T. (1990). A general theory of crime. Stanford University Press.
- Howe, J. (2003). 'Filling the middle': Uganda's appropriate transport services. *Transport Reviews, 2003*, Vol. 23, No. 2, *161–176*: Oxford, UK

- Howe, J. and Davis, A. (2004). "Boda Boda Uganda's Rural and Urban Low Capacity Transport Services." Urban Mobility for All. 235-240. Web. October 9, 2014.
- Kenya National Bureau of Statistics (2010). Economic Survey report 2010. Nairobi, Kenya
- Kenya Republic of (2009) Traffic Act, CAP 403 Laws of Kenya: Government Printers; Nairobi.
- Kumar, A., & Barrett, F. (2008). Stuck in Traffic: Urban Transport in Africa. Retrieved from: http://www.infrastructureafrica.org.
- Kumar A. (2011). Understanding the emerging role of motorcycles in African cities. A political economic perspective. Sub-Saharan Africa Transport Program. World Bank.
- Krige, M. (1995b). Quantitative report on the profile of Australian motorcycle riders, Public Education Market Research Report 2/95. Canberra: Federal Office of Road Safety.
- Krishnan, R., & Smith, G. (1994). "Motorcycle injuries in south East Asia'. Worlds Health Forum15, 186-187.
- Kwale and Bungoma (2016) Crime and Violence Prevention Survey available at: www.crimeresearch. go.ke.
- Malaysian Institute of Road Safety Research. (2010). Spinal Injuries Among Motorcyclists in Road Traffic Collisions: Literature Review. MIROS Review Report; Retrieved from: http://www.miros.gov.
- Manyara, C. (2013). Combating Road Traffic Accidents in Kenya: A challenge for an Emerging Economy. Radford, VA: Radford University.
- Micheal, C. E. (2010). Public perception of the involvement of commercial motorcyclists in crime in Uyo Local Government Area, Akwa Ibom State. An unpublished M.Sc Project, Department of Sociology, University of Ibadan.
- Mohan, D. (2002). Traffic safety and health in Indian cities. Journal of Transport and Infrastructure. 9:79–94.
- Nyachieo G. M. M. (2012). Creating employment Through Transport; The Youth and Motorcycle (Bodaboda) in Kitengela and Kajiado County-Kenya. Research Journal in Psychology and Educational Studies 2 (4) 154-157, Emerging Academic Resources (2013).
- Nyachieo, G. M. M. (2015). Socio-cultural and Economic Determinants of Boda Boda Motorcycle Transport Safety in Kisumu County, Kenya (Doctoral dissertation, Kenyatta University).

- Odera O. T. (2015). Boda-Boda Economy: Its Socio-economic Impact On Rural Bondo.
- Olvera, L. D., Plat, D., Pochet, P., & Maïdadi, S. (2012). Motorbike taxis in the" transport crisis" of West and Central African cities. *EchoGéo*, (20).
- Pendakur, V. S. (1999). A Policy Perspective for Sustainable Cities-Non-Motorized Transport (NMT) in Asia. *IATSS research*, *23*, 51-61.
- Raynor, B. (2014). Informal Transportation in Uganda: A Case Study of the Boda Boda.
- Siegel LJ (2005) Criminology the Core (2nd ed.), U.S.A: Thomas wads worth.
- Spapens, T. (2012). Do mafias control the criminal world? A network perspective. 23 July. Retrieved from http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2089733 (accessed 3 April 2017).
- Sule, R. O. (2007). *Urban Planning Administration and Environmental Health Criticality*. Lagos: Thumbprints International Company.
- Tung, S. H., Wong, S. V., Law, T. H., & Umar, R. S. R. (2008). 'Crashes with road side objects along motorcycle lanes in Malaysia' *International journal of crashworthiness* 13(2), 205 210.
- Uganda Bureau of statistics, (2015) Statistical Abstract: https://www.ubos.org/publications/statistical/38/
- U.S. Dept. of Justice, (2009), Motorcycle Gangs. <u>www.justice.gov/gangunit/gangs/ motocycle.html</u>, retrieved on 27 May 2018.
- V.M.Nantulya, and F. Muli-Musiime, (2001) in M.Whitehead, G. Dahlgren, L. Gilson, (2001), Challenging Inequities in Health: From Ethics to Action: Oxford University Press.
- World Bank (2008), World Development Report: 'Agriculture for Development'. Washington DC: The World Bank Group.
- World Health Organization. (2009). Global status report on road safety. Geneva.
- World Health Organization. (2011). Global Plan for the Decade of Action for Road Safety, 2011–2020 Geneva.
- World Health Organization. (2013b). Global status report on road safety. Geneva.
- Zhang, J. Norton, R., & Tang, K. C. (2004). Motorcycle ownership and injury in China. Injury Control & Safety Promotion, 11:159–163.

https://www.bts.gov.

https://www.ntsa.go.ke.

https://www.techsciresearch.com

https://www.theeastafrican.co.ke 17th March, 2017

https://bioline.org.br/pdf?js10009: The Impact of Bodaboda Motor Crashes on the Budget for Clinical Services at Mulago Hospital, Kampala.

https://www.techsciresearch.com Africa, Two-Wheeler Market 2011-2021 report, accessed on 16th May, 2018.

APPENDIX 1: QUESTIONNAIRE/INTERVIEW SCHEDULE





NATIONAL CRIME RESEARCH CENTRE

A Survey on Boda Boda Motorcycle Transport and Security Challenges in Kenya

Questionnaire/Interview Sch	edule for Boda boda moto	orcycle riders & members of the public
County:		
Constituency		
Ward:		
Date of interview:		
Time of interview:		
Start time:	End Time:	Duration
INTRODUCTION		
and programmes towards ac sector. We would therefore	ldressing the security con like to ask you some que utmost confidence and you	andings of the study are aimed at informing policies cerns around the boda boda Motorcycle transportestions related to the subject. All the information ur identity will not be revealed. We would highly bllowing questions.
Thank you in advance.		
Signature of interviewer		Date
() RESPONDENT AGRE	ES TO BE INTERVIEW	ED
() RESPONDENT DOES	NOT AGREE TO BE IN	TERVIEWED
Types of respondent:		
(i) Rider (ii) H	lousehold	

Sec	tion A: Background Information
1.	Gender
	1. Male 2. Female
Age	e of respondents in years
	1 . 10 - 17 2 . 18 - 25 3 . 26 - 33 4 . 34 - 41 5 . 42 - 49
	6. 50 – 57 7. 58 – 65 8. 66 – 73 9. 74+
2.	Marital status:
	1. Single/Never Married 2. Married 3. Divorced 4. Separated 5. Widowed
3.	Highest level of education:
	1. None 2. Primary 3. Secondary 4. Middle Level College
	5. University 6. Adult literacy 7. Other (Specify)
4.	Religion:
	 Traditional 2. Christian Islam
	4. Other (Specify)
5.	Main occupation
	1. Farmer
	2. Business
	3. Formal Employment
	(i) Public Sector
	(a) Permanent
	(b) Temporary (Casual/Contract)
	(ii) Private Sector
	(a) Permanent
	(b) Temporary (Casual/Contract)
6.	Other (including House wife, student/pupil, unemployed, retiree, volunteer, intern)
	Specify
Sec	tion B: Contribution of Boda Boda Motorcycle Transport
7	(a) Which of the following applies to you regarding Motorcycle ownership.
	1. Owner 2. Employed 3. Leased/hired 4. Other (specify)
	(b) Do you know how the Motorcycle was acquired? 1. Yes 2. No
	(c) If Yes in (b) above, how was the Motorcycle acquired? (Tick all that apply)
	i. Family/Personal savings
	ii. Bank/Sacco/Chama Loan Facility

8. (a) Have you used a boda boda Motorcycle in the last six months? Yes () No ()

iii.

Free Donation/Gift

Other (Specify)

Combination of Family/Personal savings and Bank/Sacco/Chama Loan Facility

	(b)	i. ii.	As a pass As a pers As a com Transport	engeronal/ merc	r private r ial rider of good	ider	s)? (Tick an		. арргу)	
9.	(a)		ıld you sa sport like	y that	t boda bo	oda Motes/minib	orcycle tranuses) and b	sport	t has advantages over other forms of	
	(b)	If Ye	es in (a) at	oove,	what are	e the adv	vantages? _			
10.	Wha	at fact	ors have l	ed to	the rapio	d increas	se of boda b	oda	motorcycles in this locality?	_ _
11.	(a)	How					_		ibuted in this locality?	
		ii	Negative	ely (e	explain) __					
		iii	Both (ex	xplain	n)					
		iv	I don't k	now						
Sect	ion C	: Typ	es and pr	evale	ence of b	oda boo	da Motorcy	cle r	related crimes	
12.	(a) (b)	If Yo	,	bove,		he train		Moto	le rider? 1. Yes 2. No orcycle with a recognized riding school Not sure 4. I don't know.	/
	(c)						e a valid Ri			
	(-)	1.		ŕ	No		Not sure		I don't know	
13.	(a)	In th	ne LAST	12 M	ONTHS	, have y	ou and/or a	men	mber of your family experienced or da boda Motorcycle? 1. Yes 2. No	

(b)	If Yes in (a) above, please indicate the incident.

14. (a) In your opinion/knowledge/experience, would you say that there are CRIMES **COMMITTED BY BODA BODA Motorcycle RIDERS** in this locality?

1. Yes 2. No

(b) If yes in (a) above, please indicate the crimes (Tick all that apply).

No.	Crime	Tick all that apply
1	Murder	
2	Manslaughter	
3	Infanticide (Killing of a baby)	
4	Procuring of abortion	
5	Causing Death by Dangerous Driving/Riding	
6	Rape	
7	Defilement	
8	Incest	
9	Un-natural offences (Sodomy)	
10	Bestiality	
11	Indecent Assault	
12	Abduction	
13	Kidnapping	
14	Assault	
14	Creating Disturbance	
15	Affray (Fighting)	
16	Robbery	
17	Robbery with Violence	
18	Carjacking	
19	Motorcycle hijacking	
20	Robbery of Motorcycle	
21	Cattle Rustling	

No.	Crime	Tick all that apply
22	House Breaking	
23	Burglary	
24	Other Breaking	
25	Theft of stock	
26	Handling Stolen Property	
27	Stealing from Person	
28	Stealing from a building	
29	General Stealing	
30	Stealing by employee/servant	
31	Theft of Motor Vehicle	
32	Robbery of Motor Vehicle	
33	Theft from Motor Vehicle	
34	Theft of Motor Vehicle parts	
35	Theft of Motorcycle	
36	Theft of Motorcycle parts	
37	Possession of dangerous drugs	
38	Handling dangerous drugs	
39	Trafficking dangerous drugs	
40	Usage of dangerous drugs	
41	Taking Vehicle without lawful authority	
42	Driving/Riding under influence of Alcohol	
43	Malicious Damage to property	
44	Arson	
45	Negligence Acts	
46	Obtaining by False Pretence	
47	Currency Forgery	
48	False Accounting	

49	Other Fraud/Forgery Offences
50	Bag Snatching
51	Other offences against tourists
52	Other offences involving tourists
53	Human Trafficking
54	Illegal possession of firearms and weapons
55	Smuggling of fire arms and weapons
56	Poaching
57	Illegal possession of forest and wildlife products
58	Smuggling of forest and wildlife products
59	Smuggling of goods across borders
60	Tax evasion
61	Illegal possession of contrabands/counterfeits
62	Bribery
63	Other Penal Code Offences (Specify

(c) Based on your knowledge and/or experience, would you say that there are CRIMES COMMITTED **AGAINST BODA BODA Motorcycle RIDERS** in this locality?

1. Yes

2. No

If yes in (c) above, please indicate the crimes (Tick all that apply).

No.	Crimes	Tick all that apply
1	Murder	
2	Manslaughter	
3	Causing Death by Dangerous Driving	
4	Rape	
5	Un-natural offences (Sodomy)	
6	Indecent Assault	
7	Abduction	
8	Kidnapping	

No.	Crimes	Tick all that apply
9	Assault	
10	Creating Disturbance	
11	Affray (Fighting)	
12	Robbery	
13	Robbery with Violence	
14	Carjacking	
15	Robbery of Motorcycle	
16	House Breaking	
17	Burglary	
18	Other Breaking	
19	Handling Stolen Property	
20	Stealing from Person	
21	Stealing from a building	
22	General Stealing	
23	Theft of Motorcycle parts	
24	Theft of Motorcycle	
25	Robbery of Motorcycles	
26	Taking Motorcycle without lawful authority	
27	Malicious Damage to property	
28	Negligence Acts	
29	Obtaining by False Pretence	
30	Currency Forgery	

31	Fal	lse Accounting
32	Otl	her Fraud/Forgery Offences
33	Ba	g Snatching (from rider tourists)
34	Otl	her offences against tourists
35	Otl	her offences involving tourists
36	Otl	her Penal Code Offences (Specify them)
1.		ne specific areas/places in this locality where boda boda Motorcycle related crimes mostly
Secti	ion D	: Perpetrators and Victims of boda boda Motorcycle related crimes
2.		
	Who	would you say are the perpetrators of boda boda Motorcycle related crimes in this locality?
		would you say are the perpetrators of boda boda Motorcycle related crimes in this locality? k all that apply)
	(Tic	k all that apply)
	(Ticla.	k all that apply) Boda boda Motorcycle owners
	(Ticha. b.	k all that apply) Boda boda Motorcycle owners Riders hired by Motorcycle owners as casuals or on commission
	(Ticla) a. b. c.	k all that apply) Boda boda Motorcycle owners Riders hired by Motorcycle owners as casuals or on commission Riders who have hired motorcycles from owners
	(Ticha.) a. b. c. d.	k all that apply) Boda boda Motorcycle owners Riders hired by Motorcycle owners as casuals or on commission Riders who have hired motorcycles from owners Passengers
	(Ticha.) a. b. c. d.	k all that apply) Boda boda Motorcycle owners Riders hired by Motorcycle owners as casuals or on commission Riders who have hired motorcycles from owners Passengers General members of public
	(Ticha.) a. b. c. d.	k all that apply) Boda boda Motorcycle owners Riders hired by Motorcycle owners as casuals or on commission Riders who have hired motorcycles from owners Passengers General members of public Law and Order enforcers (Specify)
	(Ticha.) a. b. c. d.	k all that apply) Boda boda Motorcycle owners Riders hired by Motorcycle owners as casuals or on commission Riders who have hired motorcycles from owners Passengers General members of public Law and Order enforcers (Specify) i. Traffic Police Officers
	(Ticha.) a. b. c. d.	k all that apply) Boda boda Motorcycle owners Riders hired by Motorcycle owners as casuals or on commission Riders who have hired motorcycles from owners Passengers General members of public Law and Order enforcers (Specify) i. Traffic Police Officers ii. NTSA Officers

- Who would you say are the VICTIMS OF BODA BODA Motorcycle related crimes in this 3. (i) locality? (Tick all that apply)
 - Boda boda Motorcycle owners a.
 - b. Riders hired by Motorcycle owners as casuals or on commission
 - Riders who have hired motorcycles from owners c.
 - d. Passengers

- General members of public e.
- f. Law and Order enforcers (Specify)
 - Police Officers i.

		iv. County Government Inspectorate Officers g. Others (Specify)
	(ii)	Who would you say are the main victims of boda boda Motorcycle related crimes in terms of gender in this locality?
		a. Male
		b. Female
	(iii)	Who would you say are the main victims of boda boda Motorcycle related crimes in terms of age in this locality?
		a. Children
		b. Youth
		c. Persons above youth age
		d. Elderly
Sect	tion E	: Mode of operation of boda boda Motorcycle related crimes
4.	(a)	At what time of the day are boda boda Motorcycle related crimes mostly committed?
	(b)	Why?
5.	(a)	What day (s) of the week are boda boda Motorcycle related crimes likely to occur in this locality? (Tick all that apply)
		(i) Monday
		(ii) Tuesday
		(iii) Wednesday
		(iv) Thursday
		(v) Friday
		(vi) Saturday
		(vii) Sunday
		(viii) Others (specify)
	(b)	Why?
6.	(a)	Generally what time of the month are boda boda Motorcycle related crimes likely to occur in this locality?

NTSA Officers

KRA Officers

ii. iii.

	(b)	Why
7.	(a)	During the year, when are boda boda Motorcycle related crimes highest in this locality?
	(b)	Why?
8.	(a)	How are crimes against boda boda Motorcycle riders committed/carried out?
	(b)	How do boda boda Motorcycle riders commit crimes against their victims?

Section F: Root causes of boda boda Motorcycle related crimes

9. (a) Please list the root causes of boda boda Motorcycle related crimes in this locality.

1.	Possible root causes of boda boda Motorcycle related crimes	Agree	Disagree	I am not sure	I don't know
2.	Un-registered motorcycles are the major class of boda bodas that cause bodaboda related crimes				
3.	Fake documentation and registration plates facilitate bodaboda related crimes				
4.	Poverty contributes to bodaboda related crimes				
5.	Unemployment contributes to commission of bodaboda related crimes				
6.	Easy access to firearms contributes to bodaboda related crimes				
7.	Drugs and alcohol contribute to bodaboda related crimes				
8.	Lack of designated passenger picking and dropping points contributes to bodaboda related crimes				
9.	Peer influence contributes to bodaboda related crimes				
10.	Weak law and order enforcement contributes to bodaboda related crimes				

(b)	Please respond to the above statement in regard to the root causes of boda boda Motorcycle related crimes in this locality.
ection G	Consequences of boda boda Motorcycle related crimes
O. In yo	

Section H: Challenges, measures and recommendations to address boda boda Motorcycle related crimes

- 12. (a) Are you aware of any measures that have been put in place to address boda boda motor cycle related crimes in this locality? 1. Yes 2. No
 - (b) If yes in (a) above, what are the measures and how effective are they generally?

NT	M	Effect	tiveness		
No.	Measure	Effective	Not effective	Briefly explain	
1.					
2.					
3.					
4.					
5.					
6.					

(c) In your opinion, to what extent have the following institutions/organizations been successful in addressing boda boda Motorcycle related crimes in this locality?

	Institution/organization	Response					
No.		Large extent	Small extent	Not at all	I am not sure	I don't know	
	National Police Service						
	National Transport and Safety Authority (NTSA)						
	Kenya Revenue Authority (KRA)						
	Boda boda Riders Associations						
	County government and inspectorate						

13.	(a)	Based on your knowledge and/or experience, does the National Transport and Safety Authority (NTSA) have mechanisms of managing boda boda Motorcycle transport and related crimes in this locality?				
		1. Yes 2. No 3. Not sure 4. I don't know				
	(b)	If YES or No in (a) above, please explain your answer.				
14.		t would you recommend be done by the following parties to effectively manage boda boda prcycle transport and related crimes in this locality? National Police Service?				
		National Transport and Safety Authority (NTSA)?				
	ii.	Kenya Revenue Authority (KRA)?				
	iii.	County Governments?				
		Boda boda Motorcycle dealers/sellers?				
		Boda boda Motorcycle owners?				
	iv.	Local Community?				
	V.	Individual Boda boda Riders?				

cycles should be designated appropriately ir use (e.g, commercial/public service or				
use and other particulars for all motorcycles captured by KRA and NTSA				
<u>.</u>				
*				
ized Motorcycle riders institution before				
y safety and security on boda boda				
	ridentification and regular inspection of engines used in motorcycles and boats undertaken to curb crimes related to such mours for commercial/public service boda preycles should be regulated ercial/public service boda boda motorcycles ald obtain a Certificate of Good Conduct a riders should be trained and obtain license ized Motorcycle riders institution before flowed to operate to system should be introduced to regulate itor commercial boda boda Motorcycle riment should be strict on enforcement of aws touching on boda boda Motorcycle ernment should ensure sensitization on y safety and security on boda boda de transport sector.	rengines used in motorcycles and boats undertaken to curb crimes related to such mours for commercial/public service boda prcycles should be regulated ercial/public service boda boda motorcycles ald obtain a Certificate of Good Conduct a riders should be trained and obtain license ized Motorcycle riders institution before flowed to operate to system should be introduced to regulate itor commercial boda boda Motorcycle rement should be strict on enforcement of aws touching on boda boda Motorcycle ernment should ensure sensitization on by safety and security on boda boda de transport sector.	engines used in motorcycles and boats undertaken to curb crimes related to such hours for commercial/public service boda precycles should be regulated ercial/public service boda boda motorcycles ald obtain a Certificate of Good Conduct a riders should be trained and obtain license lized Motorcycle riders institution before flowed to operate D system should be introduced to regulate fitor commercial boda boda Motorcycle riment should be strict on enforcement of aws touching on boda boda Motorcycle ernment should ensure sensitization on by safety and security on boda boda de transport sector.	engines used in motorcycles and boats undertaken to curb crimes related to such nours for commercial/public service boda precycles should be regulated ercial/public service boda boda motorcycles and obtain a Certificate of Good Conduct a riders should be trained and obtain license ized Motorcycle riders institution before flowed to operate D system should be introduced to regulate itor commercial boda boda Motorcycle rument should be strict on enforcement of aws touching on boda boda Motorcycle remment should ensure sensitization on by safety and security on boda boda te transport sector.

	(b)	How can these challenges be addressed?
16.	Please	e give any other relevant comment

Thank you for your participation and stay well.

APPENDIX 2: KEY INFORMANT GUIDE



A Survey on Motorcycle Boda Boda Transport and Security Challenges In Kenya

Key Informant Guide	
County:	
Constituency	
Ward:	
Date of interview:	
Time of interview:	

INTRODUCTION

The National Crime Research Centre (NCRC) is a State Corporation established by the National Crime Research Centre Act (CAP, 62 L.o.K). The Centre is conducting a survey on 'Motorcycle Boda boda Transport and Security Challenges in Kenya'. The findings of the study are aimed at informing policies and programmes towards addressing the security concerns around the Motorcycle boda boda transport sector. We would therefore like to ask you some questions related to the subject. All the information you give will be treated in utmost confidence and your identity will not be revealed. We would highly appreciate if you spared some time to respond to the following questions.

Thank you in advance

Section A: Contribution of Boda Boda Transport

- 1. What factors have led to the rapid proliferation of boda boda motorcycles in this locality?
- 2. (a) Has the boda boda Motorcycle transport contributed positively in this locality? Please explain your answer with regard to economic, socio-cultural and political contribution.

Section B: Types and prevalence of boda boda related crimes

- 3. (a) Based on your knowledge and/or experience, would you say that there are crimes committed against boda boda riders in this locality? Please explain.
 - (a) In your opinion/knowledge/experience, would you say that there are crimes committed by boda boda riders in this locality? Please explain.
- 4. Name specific areas/places in this locality where boda boda related crimes mostly occur.

Section C: Perpetrators and Victims of boda boda related crimes

- 5. Who would you say are the perpetrators of boda boda related crimes in this locality?
- 6. (a) Who would you say are the victims of boda boda related crimes in this locality?
 - (b) Who would you say are the main victims of boda boda related crimes in terms of gender (that is, male and female) and age (that is, children, youth and persons above youth age) in this locality?

Section D: Mode of operation of boda boda related crimes

- 7. (a) Based on your knowledge and/or experience, what time of the day are boda boda related crimes mostly committed in this locality and why?
 - (b) Based on your knowledge and/or experience, what day (s) of the week are boda boda related crimes likely to occur in this locality and why? Monday
 - (b) Based on your knowledge and/or experience, what time of the month are boda boda related crimes likely to occur in this locality and why?
 - (d) Based on your knowledge and/or experience, during the year, when are boda boda related crimes highest in this locality and why?
- 8. (a) How are crimes against boda boda riders committed/carried out?
 - (b) How do boda boda riders commit crimes against their victims?

Section E: Root causes of boda boda related crimes

9. What are the root causes of boda boda related crimes in this locality?

Section F: Consequences of boda boda related crimes

10. In your opinion, what are the consequences of boda boda related crimes in this locality?

Section G: Measures to address boda boda related crimes

- 11. Please comment about the measures that have been put in place to address boda boda related crimes in this locality.
- 12. In your opinion, to what extent have the following institutions/organizations been successful in addressing boda boda related crimes in this locality?
 - a. National Police Service?
 - b. National Transport and Safety Authority (NTSA)?
 - c. Kenya Revenue Authority (KRA)?
 - d. Boda boda Riders Associations?
- 13. (a) Based on your knowledge and/or experience, does the National Transport and Safety Authority (NTSA) have mechanisms of managing boda boda transport and related crimes in this locality? Please explain your answer.

Section H: Challenges and recommendations in addressing boda boda related crimes

- 14. (a) What do you think are the challenges faced in addressing boda boda related crimes in this locality and how can they be addressed?
 - (b) What would you recommend be done to effectively manage boda boda transport and related crimes in this locality?
- 15. Please give any other relevant comment.

Thank you for your participation and stay well.







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