

**STREET-LEVEL BUREAUCRATS AND POLICY IMPLEMENTATION IN
KENYA: A CASE STUDY OF TRAFFIC POLICE OFFICERS AT NAIROBI
TRAFFIC COMMAND AREA**

By

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Requirements for the Degree of Doctor of Philosophy in Political Science and Public
Administration**

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DECLARATION

I hereby declare that this thesis is my original work and that all references are properly and duly cited. This work has not been submitted to any other university for degree award or other purposes.

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ABBREVIATIONS/ACRONYMS

ACF	Advocacy Coalition Framework
DALYs	Disability-Adjusted Life Years
GDP	Gross Domestic Product
HIV/AIDS	Human Immunodeficiency Virus /Acquired Immunodeficiency Syndrome
KII	Key Informant Interview
KLRC	Kenya Law Reforms Commission
NPDES	National Pollutant Discharge Elimination System
NTSA	National Transport and Safety Authority (Kenya)
PSV	Public Service Vehicle
RTI	Road Traffic Injuries
SACCO	Savings and Credit Cooperative Societies
SLBD	Street Level Bureaucratic Discretion
SLBT	Street-Level Bureaucratic Theory
SPSS	Statistical Package for the Social Sciences
TLB	Transport Licensing Board
USA	United States of America
USD	United States Dollars
WHO	World Health Organization

DEFINITION OF TERMS

Chronometric Discretion: The researcher coined this term to refer to choices taken by the traffic police officers on the time of day, week, and month to enforce road safety policies.

Discretion: The nominal of this term is the powers bestowed upon an administrative official to make decisions with limits of statutory provisions (Lipsky, 2010). In this study it is used to refer to choices by traffic police officers over which road users to target during traffic enforcement activities, aspects of the traffic Act to first check at the traffic checkpoints and timing of implementation.

Domain discretion: This term has been coined by the researcher to represent paying more attention to certain aspects of road safety policies as opposed to others in the implementation process.

Policy Implementation: The nominal definition of this term is to carry out a statutory directive of a government institution (Birkland, 2010). It can also be defined as the process of turning policy objectives into goods and services (Hudson, et al., 2019). The term has been contextualized in this study to mean those processes undertaken by the police to ensure compliance with road safety policies.

Road Safety Policy: The term public policy generally denotes a statement of intentionality by a government institution to deal with a specific societal problem (Moran et al., 2008). In this study, the term road safety policy is taken to mean measures taken by the Government of Kenya to reduce road traffic injuries, fatalities and losses associated with them.

Street Level Bureaucratic Discretion: The nominal definition of street-level bureaucratic discretion is the front-line workers' powers to contextualize policy objectives to the overall implementation context (Evans, 2015). In this study, it represents the choices of traffic police officers over which road users to target for implementation, which set of laws to apply, and what time to be strict with the implementation process.

Street-Level Bureaucrat: The nominal definition of this term is frontline workers in the public service with substantial discretionary powers in the course of their jobs (Lipsky, 2010). In this study, it represents traffic police officers involved in the day to day road safety policy implementation process.

Target discretion: The researcher has coined this term to refer to the choices made by traffic police officers on which road users to pay more attention to during traffic law enforcement activities. The road users in this regard include pedestrians, drivers and cyclists.

ABSTRACT

This study examines the relationship between discretion by traffic police officers and road safety public policy implementation in Kenya. It focuses on the implementation activities of traffic police officers in Nairobi's traffic command area. It is informed by the fact that every year 1.35 million deaths and 50 million injuries are recorded on the world's roads. Most of these fatalities and injuries occur in the developing world. In sub-Saharan Africa, Kenya is among the countries with a high rate of traffic injuries. To address this problem, over the years, several legislative efforts have been made to create stiff penalties for non-compliance. These efforts began in 1954 with the enactment of the Traffic Act. Since then the law has been amended 46 times to contextualize it to the changing road safety needs. Besides the foregoing, in 2012 the National Road Transport and Safety Authority was established to coordinate road safety policy reforms. Despite these, the number of accidents has continued to rise. To understand the nature of this problem, the study employed the Street Level Bureaucratic Theory for conceptualisation purposes. The theory postulates that workers in the street level bureaucracies, including social workers, teachers, police officers and other frontline officers in public service, exercise a lot of discretion in their jobs which may undermine the policy implementation process if not checked. From this, the study sought to determine if traffic police officers in Kenya exercise discretion as part of their jobs and the effect of these discretionary practices on road safety policy outcomes. It focused on three types of discretion: discretion over which road users to target for traffic law enforcement, discretion over which policy domains to focus on during the implementation process, and timing of implementation. The study was based on a cross-sectional design composed of a survey, structural observation and police records. The study respondents were recruited using random samples. The study hypothesis was tested using Spearman's ranks of correlations between indicators of implementation practice and road safety policy outcomes. All the tests conducted revealed a negative correlation figure. This implies that enforcement officials frequently conduct safety checks during hours of the day and days of the week when violations are not prevalent. Similarly, they target road users and traffic offences that are not associated with the highest number of violations for enforcement. The study concludes that street-level bureaucratic discretion undermines road safety policy implementation. The study hopes to inform policymakers about which kind of road safety policy is more implementable. It will contribute to improved implementation practices by outlining ways of directing police discretion. Finally, the study provides empirical variety to street level bureaucratic studies that focus on welfare programs in advanced liberal democracies of Western Europe and North America.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Road Traffic Injuries (RTI) constitutes one of the global most pervasive health and development problems today. It is estimated that more than 1.35 million people die on the world's roads annually, and 20 to 50 million suffer injuries of various degrees (World Health Organization (WHO), 2020). Globally, RTI is the eighth leading cause of death and first among children and young adults (Shaw et al., 2017). With the rising number of vehicles and motorcycles used in many parts of the globe, traffic crashes are expected to become the fifth leading cause of death by 2030 (Uriel et al., 2016). Most of these deaths occur in the developing world, where the fatality rate is estimated to be 20.1 per 100,000 people compared to 8.7 per 100 000 people in the developed world (WHO, 2020). Africa has the world highest RTI rate, estimated at 24.1 per 100 000 people (Ezekiel et al., 2019). RTI is also a leading cause of disabilities. It is estimated that more than 7,151,000 people in Africa experience physical disability and other impairments annually due to RTI (Adeloye et al., 2016). Similarly, the families of those affected experience a great loss of income resulting from the incapacitation of their breadwinners (WHO, 2018). Furthermore, 75% of RTI victims are young adults and thus the most productive segment of society (WHO, 2013).

In Sub Saharan Africa, Kenya is one of the countries with the highest RTI rates. Annually, the country records more than 3,000 fatalities and 3,000 severe disabilities resulting from traffic crashes (Mogami & Nya Keri, 2015). RTI rate in the country is estimated to be 34.4 deaths per 100,000 populations (Karau et al., 2015). This has created a heavy health burden for the country. Casualties resulting from RTA account for 45-60% of the country's total admissions in surgical wards and up to 75% in national spinal injury wards, placing a high demand on medical resources (Odera et al., 2013). On the economic front, Kenya spends a significant proportion (11%) of its Gross Domestic Product (GDP) on losses associated with RTIs (Karau et al., 2015). This figure is estimated to be approximately 14 billion Kenya shillings per year (Matheka et al., 2015). It is also important to note that most RTI and Road Traffic Fatalities (RTF) victims are vulnerable road users, including pedestrians, wheelchair users, and cyclists. For instance, out of the 2735 deaths recorded by the National Transport and Safety Authority (NTSA) between January and October 2019, 1,049 were pedestrians (Kinuthia, 2019).

Given the magnitude of the road safety problem in Kenya, various efforts have been instituted to deal with it by the government. To begin with, in 1993, traffic laws were reviewed by the Kenya Law Reforms Commission (KLRC) to align them with the evolving road safety policy (Asingo & Mitullah, 2007). Additionally, following the upsurge of traffic accidents between 2001 and 2002, the Traffic Act No. 403 of 2003 was amended through Legal Notice No. 161. The new law aimed to restore sanity in the road transport sector (Chitere & Kibua, 2004). Apart from this, it sought to ensure that only persons with good conduct, sufficient training and adequate experience were employed as Public Service Vehicles (PSV) operators. It also sought to limit the speed of PSV's and reduce the severity of injuries when accidents occur by ensuring that all PSVs were fitted with speed governors and seat belts (National Council for Law Reporting, 2003).

The introduction of Legal Notice No. 161 led to a 73% reduction in RTIs within the first six months of its implementation. However, this reduction was short-lived since road carnage rose again a few months later when the enforcement mechanisms relaxed and things returned to normal (Chitere & Kibua, 2004). In 2010, 3,055 road accident-related fatalities were reported in Kenya (Matheka et al., 2015). December 2011 witnessed some of the grisliest traffic accidents in Kenyan history (Mitullah & Asingo, 2014). In response to this, the Traffic Act was amended one more time to increase penalties for breaking traffic laws with the hope that this would result in a higher level of road safety policy compliance (The Republic of Kenya, 2012, The Traffic [Amendment] Act, No. 37 of 2012).

Moreover, on 26th October 2012, the National Transport and Safety Authority (NTSA) was founded to coordinate and provide technical advice on road safety policy development and implementation processes (Republic of Kenya, 2012, The National Transport and Safety Authority Act, 2012). On the advice of NTSA, various transport ministers/cabinet secretaries have issued several legal notices dealing with various issues. These include a ban on night travels for PSVs, restrictions on tinting windows, legalizing the use of breathalysers, operation of PSVs under Savings and Credit Cooperative Societies (SACCOs), speed limits, wearing of helmets for motorcycles, among others (NTSA, 2015). Notable among these is the Traffic (Minor Offences) Rules, 2016, which outlaws and prescribes fines for offences such as driving on pavements, failure to follow directions issued by uniformed police officers, and failure to renew a driving license, among others. Mitullah and Asingo (2014) have observed that every time there has been a significant accident in the country, a new set of laws has been enacted to deal with the problem at hand.

However, while Kenya's government seems to emphasise improving the legal and policy framework, RTIs persist. This implies that the problem may not be related to a lack of policy direction or legal framework but inadequate enforcement. Most of the provisions in the new safety laws have been deemed repetitive, and their objectives and instruments are like the provisions in the previous laws. They have, therefore, been viewed by some scholars as unnecessary (Asingo & Mitullah, 2007). For instance, section 42 (1) and (3) of the Traffic Act 403 (1975, Revised 2012) specified speed limits for vehicles. Similarly, Traffic Act No.10 of 1984 set out guidelines for conductors and drivers. Additionally, the requirements for wearing seat belts have always been in place (Chitere & Kibua, 2004). Moreover, the failure of the officers to enforce the speed limits on speeding resulted in the introduction of speed governors (Asingo & Mitullah, 2007).

Therefore, the fundamental question is: why would the road safety problems persist despite all these policy initiatives? In the public policy literature, there are three main explanatory factors to public policy failure: lack of causal relationship between the policy objective and policy problem; lack of implementation; and wrong implementation (Peters, 2018). On the linkages between policy objectives and policy problems, Kenya has legislated on four out of five RTI high-risk factors outlined by WHO. These include laws on drunken driving, use of seat belts, over speeding, and the use of a helmet. The only high-risk factor for which Kenya has not enacted law is child car restraint (WHO, 2018).

Concerning the extent of implementation, in 2018, the Government collected Ksh. 683 million from traffic offenders who were arrested in various parts of the country (National Police Service Annual Crime Report, 2018). This negates the argument that road safety policies are not being implemented. Regarding the ineffective implementation, a report by NTSA notes that various enforcement agencies had not done enough to curb road accidents in Kenya. According to the report, within the first three months of the year 2020, 407 people had been seriously injured, compared to 336 people the previous year, translating to a spike of 21% (NTSA, 2020).

From the bottom-up/ backwards mapping approach to policy implementation studies, it is argued that policy outcomes are primarily shaped by the actions of those engaged in implementation, especially at the lowest level (Narain, 2018). Frontline workers in public service provide an intersection between citizens and public policies (Lipsky, 2010). It has been observed that frontline

workers, also known as street-level bureaucrats, exercise discretion as part of their jobs. The author notes that these powers stem from three sources. In the first place, street-level bureaucracies are characterized by resource scarcity, which force the street-level bureaucrats to select who among their deserving clients to serve, and who not to. Secondly, rules and regulations in these bureaucracies are encyclopaedic and sometimes conflicting with each other. The street-level bureaucracies must thus make decisions on which rules to apply at any given time. Finally, their institutional mandates commonly outweigh their resource capacities, including human resources. To this end, choices have to be made on which activities to execute first, which ones later, and which ones to leave.

While street level bureaucratic discretion is allowable in administrative practice, empirical studies have found bias in some of its applications. Traffic police officers commonly use social profiles to decide who to arrest and who not to at the traffic checkpoints (Moody, 2003). Similarly, social workers prioritize some program beneficiaries based on their social profiles (Kaiser 2012; Schneider & Ingram 2012). These decisions are affected by both the client's characteristics and the socioeconomic backgrounds of the frontline worker (Raaphorst & Groeneveld, 2019). Moreover, street-level bureaucrats have their own interests, which differ from their managers and policy makers. In case of a conflict between their interest and policy makers, theirs take precedence (Henderson et al., 2018). In sum, if not controlled, street-level bureaucratic discretion can undermine the policy implementation process. Against this background, this study examines the effects of traffic police officers street-level bureaucratic discretion on road safety policy implementation in Kenya.

1.2 Statement of the Problem and Research Questions

Having discussed the study background above, this section delves into the problem statement and research questions which guided the study.

1.2.1 Statement of the Problem

Implementation failure is one of the policy sciences' themes that has received considerable attention from some leading public administration scholars (Hudson et al., 2019; North, 1990; Hill, 1997; Hill and Hupe, 2008). The above notwithstanding, the public policy implementation challenge remains unresolved, and practitioners find themselves enmeshed in the vexing challenges of converting policy objectives into desired outcomes (Alila & Hyden, 2021). In Kenya, road safety

is one of the policy areas where there is a significant discrepancy between public policy objectives and results. On the one hand, the government has enacted over 46 road safety policies in the last three decades. On the other hand, this period has witnessed a steady increase in traffic accidents (National Transport and Safety Authority, 2015).

Generally, policy failures emerge from three primary sources: poorly formulated policies, lack of implementation, and poor performance of the implementing officials (Howlett, 2018). However, poor policy formulation arguably does not pose a significant challenge in Kenya. According to WHO (2018), Kenya has made tremendous strides in creating a legal and policy environment for road safety. This view is supported by other writings (Asingo & Mitullah, 2007; Chitere & Kibua, 2004; Asingo, 2004; Orero et al., 2012). Moreover, there is evidence of apparent structures charged with implementing road safety policies such as NTSA, traffic police, and the city council traffic marshals. This may indicate that road safety policies are being adequately formulated (National Police Service Annual Crime Report, 2018).

However, the effectiveness of the performance of the implementing officials or street-level bureaucrats remains in question (Odero et al., 2003; Habyarimana & Jack, 2011; Sidha et al., 2021). Implementation challenges confronted by the street-level bureaucrats, traffic police officers in this case, are multifaceted and complex. For example, they cannot be on the road 24 hours a day and seven days a week due to resource limitations. Similarly, these street-level bureaucrats cannot stop all traffic offenders, and it is also impossible to monitor all traffic offences at any given time (Sidha et al., 2021). Consequently, they must make discretionary choices over what time of the day or day of the week to conduct road safety checks. At a more technical level, some officers and motorists also lack capacity and training on traffic regulations to ensure the effective implementation of road safety policies in Kenya. This phenomenon is common in the Kenyan bureaucracy, decoupling legal policy frameworks and practical implementation processes (Onyango and Hyden, 2021). Thus, human factors play a critical role in influencing the policy outcomes of road safety policies in Kenya (Raynor & Mirzoev, 2014), as elsewhere globally and as primarily advanced in Michael Lipsky's street-level bureaucracy (Lipsky 2010). While these discretionary practices are expected to conceptualize the policy implementation process (Wanyande 2021) and thus increase traffic police effectiveness (Odero et al. 2003; Sidha et al. 2021), it is also possible to make wrong discretionary decisions. This study, therefore, investigates the effectiveness of implementation practices of traffic police officers in Nairobi's traffic command area.

In the light of the above discussion, the critical study research question is:

How effectively do traffic police officers employ implementation strategies to prevent road safety policy violations in Nairobi's traffic command area?

Given that road safety policy implementation involves many discretionary practices, this study measures implementation effectiveness in how traffic police officers employ discretionary decisions to prevent safety violations. It focuses on the following aspects of bureaucratic discretion: (i) discretion over which traffic enforcement tasks to pay more attention to in the implementation process, especially when it is not feasible to execute all policy implementation tasks simultaneously. (ii) discretion over which category of road users to target more to ensure road safety; and (iii) discretion over what time of the day, what day of the week, or what date of the month to effect implementation, since they cannot mount a 24-hour and 360 degrees surveillance.

The specific research questions are as follows:

- i. How does target discretion by traffic police officers influence the implementation of road safety policy in the Nairobi Traffic Command Area?
- ii. How does domain discretion by traffic police officers influence the implementation of road safety policy in the Nairobi Traffic Command Area?
- iii. To what extent is road safety policy implementation in Nairobi Traffic Command Area influenced by chronometric discretion by traffic police officers?

1.3 Objectives of the Study

To determine the effectiveness of the implementation strategies employed by traffic police officers in preventing road safety policy violations in the Nairobi Traffic Command Area.

1.3.1 Specific Objectives of the Study

The specific research objectives of the study were:

- i. To establish how target discretion by traffic police officers influences road safety policy implementation in Nairobi Traffic Command Area.

- ii. To investigate how domain discretion by traffic police officers influences road safety policy implementation in Nairobi Traffic Command Area.
- iii. To determine how chronometric discretion by traffic police officers influences road safety policy implementation in Nairobi Traffic Command Area.

1.4. Justification of the Study

The study findings expand the external validity of Street Level Bureaucratic Theory (SLBT) to a different administrative context and category of street-level bureaucracy. The SLBT concept and its current empirical application focus on service provision in North America and Western Europe. These regions exhibit substantial differences from Africa and the rest of the World, hence the need to understand SLBT beyond its traditionally applied contexts (Henderson et al., 2018). Given the contextual nature of public administration, Kenya's street-level bureaucrats experience public policy implementation challenges different from those identified in North America and Western Europe (Hyden and Onyango 2021). It is equally possible that they face the same challenges but employ different coping mechanisms¹. Consequently, the study tested the universality of theoretical principles propagated by SLBT.

The SLBT outlines several street-level bureaucracies in which frontline workers exercise significant discretion as part of their jobs. These include police officers, schoolteachers, social welfare workers and other frontline workers in public service. Most of the empirical applications of the theory have been on welfare programmes (Evans, 2015). Besides, the study bridges the literature gaps in Kenya's road safety policy scholarship, which has ignored bureaucratic discretion as a possible cause of implementation failure. The road safety policy studies in Kenya have focused on road users' behaviour (Chitere & Kibua, 2004; Asingo & Mitullah, 2007; Mitullah & Asingo, 2014; Orero et al., 2012). However, as North (1990) puts it, shirking pays, and therefore, strong enforcement action is required for the road safety policy process. This assertion is supported by previous studies, which note that traffic law violations are rampant and road users only respect the traffic laws if the police are present (Mitullah & Asingo, 2014).

¹According to SLBT Street-level bureaucratic discretion needs to cope with dilemmas in the workplace.

1.5 Scope and Limitations of the Study

The findings of this study are limited by thematic and geographical scope. The details of its scope and limitations are hereunder discussed.

1.5.1 Scope of the Study

The thematic scope of this study was public policy implementation. It sought to determine the effect of traffic officer discretion on road safety policy implementation. While several categories civil servants participate in the road safety policy implementation outcomes, the study focused on traffic police officers. The study also appreciated that the practice of street-level bureaucratic discretion might take several components, but for this study, only three aspects were examined. These are domain discretion, target discretion and chronometric discretion. Their prevalence informed the selection of these aspects in criminal justice systems and other street-level bureaucracies such as social welfare systems (Evans & Evans, 2010). Concerning the geographical scope, the study was conducted in the Nairobi Traffic Police Command Area. The police divisions in the command area include Dagoreti, Makongeni, Buruburu, Kilimani, Gigiri, Starehe, Embakasi, Kasarani, Central, Langata, Industrial Area, Pangani, Kayole, Karen and Government Vehicle Accident Inspection Unit (GVAIS), which oversees government vehicles. According to NTSA (2015), most of the road traffic fatalities in Kenya occur in Nairobi County. Other plausible explanations for the choice of the Nairobi traffic command area as the study area for collecting primary data are explained in section 1.9.2 on the study site.

1.5.2 Limitations of the Study

In the course data collection and analysis process, several challenges were experienced, which could limit the study's external validity regarding its geographic scope. Primary data collection was done in the Nairobi Traffic Command Area. Police and road users' behaviours in Nairobi may differ from their behaviours in a different public administration context. For example, in rural areas where supervision is much lower than in Nairobi where the traffic, Criminal Investigation Directorate and police service headquarters are domiciled. The findings are also limited by the thematic scope in that the study only investigated three aspects of discretion: timing, target, and domain. The study conclusions are therefore limited to these aspects. However, this being the case, a thorough literature review was conducted to document and analyse road safety policy experiences across the world.

The study also appreciates that not all accidents get reported, and the data retrieved from the police records are just a portion of all the accidents. Additionally, data collection was done within one month. The observations within that month may be different from what happens during the rest of the year. Finally, there was a risk of the police seeing the enumerators who may either change their behaviour or chase them away. Many police officers were also reluctant to discuss how they enforce traffic laws for fear of victimization. Triangulation of both method and data sources was used to delimit these limitations.

1.6 Literature Review

The literature review took a thematic approach, selecting documents to be reviewed as determined by the main and specific research questions. The main scholarly works that were reviewed fell within two main themes, namely: street-level bureaucratic discretion; and road safety policy implementation. This section is subdivided into subsections according to the specific research questions: target discretion, domain discretion, and chronometric discretion. The literature review in each subsection is organized chronologically from the oldest to the most recent publication to show how concepts analysed in the chapter have developed.

1.6.1 Target Discretion and Road Safety Policy Implementation

Target discretion refers to the decisions by street-level bureaucrats to ration their services by limiting the number of people being served. Street-level bureaucrats apply this strategy as a coping mechanism to deal with the challenge of having chronically limited resources against an overwhelmingly high demand (Schneider & Ingram, 2012). Because street-level bureaucrats apply discretion as coping mechanisms to the challenges related to their work conditions, it is imperative to define coping as a concept used in public administration theory (Lipsky, 2010). The concept was first used in administrative theory and behaviour scholarship by Lazarus and Folkman (1984, p. 223), who define coping as "the cognitive and behavioural efforts made to master, tolerate or reduce external and internal demands and conflicts among them". The term was later defined by Tummers, Bekkers, Vink, and Musheno (2014) as the act of rule-breaching and routinizing in the course of dispensing public goods and services. It thus looks like the quality of goods and services offered to the public are primarily determined by the choices of street-level officials. The following paragraphs discuss different ways in which street-level bureaucrats apply their discretionary powers and the effects of these decisions on public policy outcomes.

Clark-Daniels and Daniels (1995) investigated the street-level decision-making process during the implementation of the elder mistreatment policy. The study employed data from 11,544 allegations of mistreatment reports and used a cross-sectional research design. The study observed that the policy required social workers to investigate all allegations of mistreatment within 72 hours from when the case was reported and file a report within 30 days. The study observed that the social workers complied with the 72 hours rule in 86% of the cases and with the 30 days rule only 37% of the time. Out of all the cases that were investigated, 56% were found to be valid, but placement facilities could only be accorded to 29% of those in need of the same. Further analysis of the results revealed that compliance to both 72 hours and 30 days rules was lower in situations where African Americans' complaints were made compared to the situations in which reporting was done by people of a different race and social standing. Interestingly, the cases involving Americans of African descent were more likely to be in dire need of placement. The study also observed variations in the decision-making processes of the caseload. In cases where there was a high caseload, the investigation process was less thorough than departmental offices with lower caseloads. From the foregoing, it is deducible that discretion is done concerning clients' rationing and activities. Both kinds of rationing apply to this study. However, the unit of analysis for the study was race, and the target population are not highly racially differentiated. Therefore, the study findings were retested to ascertain if there are more types of social profiling of clients based on other social stratification indicators other than race. Some of the ways of social stratification tested included age, gender and socio-economic status.

It has also been observed that police decision to arrest or not arrest a suspect is determined by the suspect's characteristics, including their employment status, age, gestures and demeanour. For instance, the police are more likely to investigate and arrest young suspects than those who are old. This arises from the fact that police believe that older people are more credible. The police biases may have also been informed that younger people are more involved in crime than older people (Baumgartner et al., 2017). However, the above study's findings cannot be relied upon to answer the study question because it aimed to explore the use of excessive force by police officers while interacting with the public during crime prevention patrols. It would be essential to find out if police behave differently when conducting road policy implementation.

Asingo and Mitula (2007) conducted a qualitative study on road safety policy measures in Kenya. The primary data was mainly collected in Nairobi through focus group discussions (FGDs) and key

informant interviews (KII). The study observed that traffic law enforcement in Kenya is biased against PSVs. They submit that while the Traffic Act sets speed limits for private cars and PSVs, enforcement-only PSVs must be fitted with speed governors. Similarly, while all vehicles are expected to be equipped with seat belts, and their occupants must always wear them while moving, the police only checked PSVs. In their view, letting some categories of road offenders go scot-free significantly impacts the road safety policy implementation in Kenya. This study appreciates the presence of client assessment during road safety policy implementation. The scope of the above research was limited in that it compared only PSVs and private vehicles, leaving out a huge proportion of other road users, including pedestrians, motorcyclists, and cyclists. The study was also descriptive and did not explain the root causes of Kenya's road safety policy failure. To that end, its findings were further investigated in this study to include other road users excluded and increase the depth of the analysis.

According to Maynard-Moody (2009), one of the coping mechanisms applied by street-level bureaucrats is making their work lighter. This is done by managing caseloads by focusing on clients who are easier to deal with and avoiding, dismissing or reducing contact with unpleasant and impossible cases. These decisions are motivated by the desire to move as many clients through the system as possible. With this finding in mind, the study examines and documents discrepancies in how traffic police officers treat road users based on how they can be dealt with or how their cases can be solved.

Evans and Evans (2010) have identified "creaming" as one of the mechanisms employed by street-level officials dealing with challenges in their workplace. The term creaming is used here to refer to the practice of dividing clients into various categories and prioritizing them with the highest potential of success for project inclusion. Those who have little potential for success in the project being undertaken are kept on the waiting list and often not being served. The above finding is important to this study. It highlights the fact that street-level officials do not treat all their clients alike. The effect of differential treatment accorded to various clients for street-level bureaucracies is one of the key questions of this study. The external validity of the finding of this study is limited because the empirical data for the study was collected in England and targeted social workers. In situations where the bureaucratic function involves giving rewards, it becomes possible for project success from how the benefits accrued by the beneficiaries have been utilized by themselves to make their lives better. This study, however, focuses on law enforcement. The bureaucratic

responsibility is, therefore, a dispensation of sanctions. Consequently, the above findings must be tested to determine if the conclusions driven from the study would equally apply the street-level bureaucratic theory (SLBT) analysis of law enforcement functions in Africa.

A study by Gaines and Kappeler (2011) observed that the likelihood of arrest and even shooting of a fleeing felony is higher if the suspect is from a poor neighbourhood than from a rich neighbourhood. Furthermore, the study observed that the police employed strict enforcement mechanisms while operating in black-dominated neighbourhoods, compared to white-dominated ones. For instance, the police treated people of colour more harshly than their white counterparts in similar crime situations. This assertion confirms an earlier study by Kleinig (1996 p.115), which observed that police decisions "to observe, monitor, to stop, frisk, to arrest and use deadly force is influenced by racial generalizations." The above findings point out that police officers' conduct client assessments based on social status and race at the traffic checkpoint. However, these studies aim to demonstrate racial discrimination by the police and therefore do not tell us the impact of client assessment on public policy implementation; therefore, this study further investigates the relationship between client profiling and road safety policy implementation outcomes.

According to Schneider and Ingram (2012), social workers in social protection programmes experience the dilemma of whom to give food stamps and who not to. This arises because more people are qualified to be given food stamps than the number of food stamps available. To this end, decisions must be made on which members of the target populations deserve food stamps more than others. These decisions are based on social construction by the welfare workers on the client's suitability to receive stamps. The study further observes that some people are denied services based on social constructs, yet their situations may be desperate, leading to policy failure. These findings are useful in shaping the direction of the current study; in particular, they point out that street bureaucrats use their discretionary powers to ration services and rationing is sometimes done in a manner that undermines the policy implementation process. However, the external validity of those findings to this study is limited because it focuses on welfare programmes and law enforcement. Moreover, they were based on data collected in an administrative context different from Africa and road safety policy implementation. Therefore, the assumptions of this study need to be retested to establish if police conduct full enforcement.

The National Council for the Administration of Justice (2016) conducted an audit of the criminal justice system in Kenya to determine the challenges associated with the administration of justice in Kenya. The study observed that police exercise discretion on whom to arrest and who not to arrest. The data showed that one is most likely to be jailed if they are poor compared to rich. Those with money bribe their way out of the judicial system and do not appear on the charge sheet. Similarly, from the police cell entries, it was observed that 75% of people jailed are between ages 18-35 years old. To this end, the youth are more susceptible to arrests in comparison to adults. There are chances that more youth are being charged since they do not have money to bail themselves out. The study also noted that only 32% of arrested people end up being charged in court. Out of the 68% who did not appear in court, 64% had been released from the police cells without proper documentation indicating the reasons for their release. The other finding of the study is that most of the people who end up being charged in court are petty offenders who are not supposed to be there in the first place. Given the high levels of discretion practised by the police, no one can guarantee equal protection by the law. For instance, out of 2.2 million people arrested annually in Kenya, only 35% end up appearing in court. Resulting from poor investigation and incorrect triaging at the police stations, 45% of the cases were overturned or sentences were reduced to lesser punishment when the accused persons filed appeals.

These studies provide useful information and are likely to shape the current road safety policy implementation research. To begin with, it points to the fact that police exercise much discretion concerning those to arrest and those to take to court while protecting their own interests as opposed to those of the policymakers during the policy implementation process. The study is limited because both its geographical and thematic scopes were smaller than this study. Thematically, the study observed only nine (9%) of the traffic offences. The study scope covered only one police station in Nairobi. To this end, the study findings may not give an accurate picture of what is happening in Nairobi. Therefore, this study endeavoured to determine if there are any variations in the number of people arrested by road user categories and the impact of the exact on-road safety policy implementation.

Another study analysed the effects of driver's demographic characteristics such as race and gender on the police officer's decision to search the vehicle and take legal action. The study employed traffic stop data (N = 48,586) from the Louisville Police Department in America. To reduce bias, its controlled confounders such as the driver's dress code, demeanour, and traffic offence. The study

reported that male drivers of Africa's descent were more likely to be arrested than their white male counterparts (Vito et al., 2017). The study mentioned above is very informative. It is analytical and targets road users, just like this current study. However, the race is not a big problem in Kenya, and therefore, its external validity is limited. Against this background, the study sought to investigate the effects of police discretion over road user categories to target road safety policy implementation on implementation outcomes.

In a qualitative study on the correlation between the frequency of traffic stops and the driver's social status conducted on 58 individuals from mixed-race families, the respondents were sampled using a snowball sampling design due to the illegal status of the undocumented immigrants. The families were composed of white wives and undocumented Latino husbands. The families reported that they were stopped more times at the traffic checkpoints if the husbands were driving compared to when the wives were driving. The study also observed that one was more likely to be stopped if casually dressed instead of formally dressed (Schueths, 2019). The above data indicates that police do not equally target road users for enforcement. However, it is limited on two fronts; its respondents were selected through a non-probability sampling design, reducing its external validity. Its generalization to the study context is also limited because the data was collected in an advanced economy and thus a different implementation environment (Audemard, 2020).

1.6.2 Domain Discretion and Road Safety Policy Implementation

The other means by which street-level officials cope with the discrepancy amongst resources availability and organization mandate is by prioritizing policy goals and activities to implement (Henderson et al., 2018). The act of prioritization of work considering insufficiency of the resource is what is referred to in these sections as domain discretion. Davis (1969 P.4) observed that "a public officer has discretion whenever the effective limits on his power leave him free to choose among possible courses of action or inaction". Arising from this definition, Kleinig (1996) defines domain discretion as a choice by a public officer to take a certain course of action from an array of alternatives. It is permissible by law since, in certain instances, judgment can yield better results than if the laws, rules, regulations and procedures were written in a stringent method that cannot be adjusted in light of the prevailing circumstances.

Domain discretion is seen as a means of improving implementation since it can bring about increased meaningfulness of the results by adjusting the parameters of service provision to the

specific need of the clients. Discretion can also be used as a motivation factor for street-level bureaucrats, thereby increasing their willingness to participate in the implementation process (Tummers & Bekkers, 2014). Irrespective of the good intentions of policymakers in allowing for street-level bureaucratic discretion, it does not always bring about the intended benefits. Street-level officials have their interests which are in many cases incongruent with those of the policymakers. If that interest is pursued, there is little likelihood that the policy objectives will be achieved (Hill, 1997). In light of the foregoing, the extent to which street-level bureaucrats use their discretionary powers to make judgments that are beneficial to their employers and the public, in general, have been a subject of emotive debate and empirical research for several years. Some of the ground-breaking studies in this area are hereunder analysed.

Brown (1998) conducted a qualitative study consisting of in-depth interviews and focus group discussions (FGDs) on exploring factors that impact police decisions during the policy implementation process. The study observed that most police decisions are dependent on their mood. One officer observed, "some days you feel like getting everybody, and you go out and scratch; other days you take it easy, make a few stops and write a few field interrogation reports to make your log look good and let it go like that" (Brown, 1998:142). This finding indicates that police discretion over how many vehicles to stop, how many to search and how many to arrest is sometimes influenced by factors apart from the seriousness of the crime. The challenge, however, is how to measure a police officer's mood, and these findings may not be retested. Because of the discussion in the paragraph above, the study's external validity was limited. Therefore, its findings were retested with a view of finding out what are the possible causes and effects of street-level bureaucratic discretion.

Kochel, Wilson and Mastrofski (2011) studied factors affecting police discretion through case-control study design. They concluded that the ease with which a case can be proven in court affects the officer's decisions on whether to stop the car at the traffic checkpoint or not. Equally, once the vehicle has been stopped, the same decision criterion is applied on choosing which kind of offences to check for and whether arrests should be made or not. This finding relates to an earlier study by Lipsky (2010), which noted that street-level bureaucrats prioritize implementation activities that are easy to execute compared to difficult ones. There are variations in the ease with which some traffic violations can be checked and prove their existence in court compared to others. This study,

therefore, cross-checked the relationship between the ease with which various road safety policies can be implemented and their level of prioritization for implementation.

Dempsey and Forst (2011) conducted a similar study and concluded that the other determinant of police discretion is the public mood. Police are more likely to arrest a suspect if community members around the patrol base consider the issue under investigation to be criminal. This study provides important insight into the determinants of police discretion. However, given its methodological limitations, it may not be useful in demonstrating causality between police discretion and road safety policy outcomes. It is difficult to measure mood. Additionally, it fails to investigate the impact of policy decisions driven by personal and public mood on police effectiveness. The above literature gap is bridged in this study by examining the relationship between various traffic police implementation choices and their effectiveness because of the number of accidents prevented.

Hess and Orthmann (2011) also conducted a study on police choices of implementation activity and concluded that the police discretionary choices are also affected by their boss's preferences. The chances of an arrest occurring depend on whether the police intervention is initiated by a police officer or responds to citizens' complaints. The research indicates that interventions initiated by police managers are more likely to result in formal actions as compared to those initiated by citizens. Road-safety policy interventions in Kenya are largely police-initiated and are assumed to be informed by the departmental police view of efficient allocation of resources. The need for the police to make choices on road safety objectives to implement is further reinforced by the fact that traffic law violations are prolific - they occur every hour of the day. This informed the study to establish the extent to which their supervisors' preferences influenced traffic enforcement decisions. This question was fundamental to this study since a police inspector always coordinates implementation actions at every traffic stop. The effectiveness of the supervisors/managers is currently one of the hotspots of street-level bureaucracy debates (Brehm & Gates, 1999).

Concerning other street-level bureaucrats, Evans (2011) examined the operations of social workers in England's mental hospitals and older people care facilities and concluded that social workers rarely observe all their organization's rules or those of their profession in the exercise of their duties. The study reported that street-level bureaucrats struggle in remembering all the rules in their organization and thus are forced to prioritize aspects to implement. The study provides an important contribution to public administration scholarship. It mainly elucidates that street-level bureaucrats

do not implement all aspects of public policies. It fails, however, to explain the impact of such discretion on the public policy implementation process. Moreover, it focuses on compliance with organizational and professional operation procedures. On the other hand, this study focuses on police choices over different policy options during the road safety policy implementation process.

Additionally, it is based on empirical data collected in England. England's public policy implementation context may be different from that in Kenya. Therefore, considering the foregoing, the study examined selective enforcement among the Kenyan Traffic Police Officers.

Habyarimana and Jack (2012) conducted a longitudinal study to compare the effects of consumer empowerment initiatives in the prevention of road accidents and third-party road safety policy enforcement mechanisms. It involved placing posters asking a passenger to complain to the drivers whenever they were involved in risky driving behaviours. Data would after that be collected on the number of accidents caused by vehicles, which were part of the consumer empowerment initiatives and those that were not. The study observed that the number of accidents was lower among the PSVs that benefited from the consumer empowerment initiative than the control group. The reduction in the number of accidents brought about by consumer empowerment initiatives was further compared to the reduction brought about by the coming into force of the legal notice No 61 of 2013 referred to as "Michuki Rules". The study observed that consumer empowerment initiatives had better outcomes than the new law. In effect, the above study seems to suggest that better implementation outcomes can be realized if road users complained about risky driving behaviours. It provides a big departure from other road safety studies in Kenya, which have underscored enforcement's role in maintaining sanity in Kenya's roads (Mitula and Asingo, 2014). Because the study was exploratory, it would be important to test its assumptions further using quantitative methods.

In an explorative study on uncertainties tax officials face in the Netherlands, data was collected from seventeen frontline tax officials during tax administration. Among them, there were 14 men and three (3) women. The study observed that street-level bureaucrats constantly face dilemmas arising from legal provisions and personal values. In response, they fail to apply the full force of the law either due to their sympathies for the client or a feeling that if the law is applied just as it is, some clients will unfairly go scot-free. The second dilemma arose from grey areas of public policy. The study observed that tax policies in the country do not cover all aspects of tax administration responsibilities. Therefore, the administrators must use their intuition to guide their

citizens' encounters (Raaphorst, 2018). From the above study, administrators face uncertainties during the implementation of legal provisions guiding their work. As a result, they rarely conduct full enforcement. This study establishes the aspects of the Traffic Act that are frequently implemented and under what conditions.

According to Engel et al. (2019), one of the main determinants of police decisions to arrest is the seriousness of the offence. For instance, crimes of violence receive more credence in comparison to property crimes. The application of the aforementioned finding to this study would, therefore, suggest that traffic offences with a high propensity to cause an accident, and offences related to the highest number of road fatalities, are likely to be processed by the traffic police in contrast to those that have little bearing on the rate of traffic injuries. According to WHO (2013), speeding, drunk driving, or driving without fastening a seat belt, lack of helmets and reflector jackets, and failure to use child restraints while driving are leading road fatality risk factors. To this end, the study sought to find out if there were correlations between the seriousness of a traffic offence and the probability of arrest in case one is involved in such an offence.

A study aimed at finding out the level of rule adherence among emergency medical service workers in Pennsylvania conducted an online survey among paramedics. The survey attracted 56,000 participants. It was observed that frontline workers frequently break the rules and treatment protocols to the respondent to the unique need of the patients (Borry & Henderson, 2019). This study shows that street-level officials can also use discretionary powers to influence implementation outcomes positively. In this study, however, all tests of relationships between indicators of domain discretion and road safety revealed a negative correlation implying that to a great extent, street-level bureaucratic discretion undermines road safety policy implementation in Kenya.

1.6.3 Chronometric Discretion and Road Safety Policy Implementation

Chronometric discretion refers to decisions made by traffic police officers regarding the time of the day and day of the week or the month to prioritize road safety policy implementation. This occurs because the work schedules for traffic police officers cannot allow them to monitor traffic enforcement activities 24 hours a day, seven days a week and all the weeks of a month. Below is a literature review on variations of street-level bureaucrats' behaviour at different times of the day.

To begin with, Alpert et al. (2006) conducted an observational study on the effect of time on police discretion. The study observed that the police stopped vehicles suspected of violations 69% of the time during weekdays and only 41% of the time during weekends. The low percentages of safety checks during the weekends were informed that weekends are much busier and therefore the police can only stop a small proportion of vehicles on the road. These findings point out that police employ different road safety policy enforcement practices during different days of the week. It also shows that there is a possible association between timing of implementation and road safety policy implementation. However, these findings are not conclusive since the observation targets only one aspect of chronometric discretion: discretion over time of enforcement, thereby not allowing for comparison. This study thus sought to find out if there are associations between other aspects of chronometric discretion, such as the timing of the day, the week of the month, and road safety policy implementation.

Komba (2006) reviewed the in-patient and out-patient records of Tumbi hospital in Tanzania for the period running from 2001 to 2004. The data revealed that most accidents take place during the daytime on Monday, Friday and Saturday. The study observed that a high number of deaths that occur during the day compared to night-time might be attributed to the fact that passenger vehicles are not allowed to travel at night in Tanzania. The above study points to the fact that there can be variations in the number of accidents during various times of the day and on different weekdays. However, the study fails to explain why these variations occurred. To this end, this seeks to find out if the variations in the number of accidents observed by the study above are associated with the level of implementation employed by the police.

Solomon et al. (2009) collected data from 88 counties in Ohio on seat belt usage by occupants in motor vehicle accidents. Their main data source was police records. The study showed that seat belt usage is much higher during the day than at night. The study attributed these findings to the fact that the police rarely check seat belt usage at night. Besides, late-night drivers are more likely to be young male drivers with poor driving records using older vehicles. They are also likely to be involved in aggressive and high-risk driving behaviour such as over-speeding and impaired driving. This study contrasts with preceding research on road safety in the sense that while it attributes road safety policy failure to bad policies and road user behaviour. It focuses on enforcement practice by discussing when the police conduct safety checks of seat belt usage and the times of the day when this is not done. It goes further to conclude that discrepancies in enforcement practice are

responsible for discrepancies in seat belt usage. This notwithstanding, the study has a narrow focus. It only discusses one policy item leaving out other road safety risk factors such as drunk driving, speeding and use of helmets. The researcher's opinion is that it is not possible to conclude that domain discretion undermines road safety policy implementation if only one aspect of domain discretion has been investigated. On the other hand, this study investigates a wide range of road safety policy domains for purposes of comparison and generalization. Besides, since the study only used police records to observe, it is susceptible to records bias. The findings, therefore, need to be retested.

The Government of Canada (2011) conducted an exploratory study on time, location and causes of truck drivers instigated road traffic accidents. The study observed that most heavy truck road accidents occur during the day, during dry seasons and in high-speed zones. It further stated, most of these accidents resulted from over-speeding and other aspects of aggressive driving. These findings point to the fact that road safety policy violations do not equally occur during different hours of the day. The researcher, however, did not examine explanatory factors responsible for the variation in the number of violations during a different time of the day. This study takes the above discussion forward and tests the association between different enforcement practices at different times of the day, days of the week and weeks of the month, and the prevalence of traffic accidents.

Dempsey and Forts (2011) conducted a comparative study on police behaviour at different times of the day. The study observed that the police tend to be much more alert at night than during the day. This behaviour results from police perception that those driving at night are either drunk or are criminals. They expect the average citizen to be at home at that time. This perception makes the police to be highly sceptical of the people they encounter at night. They also tend to be concerned about their security, given that more armed criminal activities also take place at night. This study provides important information about police behaviour at different times of the day. However, its external validity to road safety policy implementation in Kenya is limited because it was conducted in a policy implementation context that is different from Kenya. This study helps domesticate the above findings by examining road safety policy implementation in Kenya at different times of the day.

Mitullah and Asingo (2014) surveyed three major towns of Kenya: Embu, Siaya and Nairobi. Their study sought to document the level of road users' compliance with road safety policies. The survey

indicated that more RTIs occur during weekends than weekdays. They occur at night more than during the day and during the end month rather than mid-month. These findings show that the number of RTIs is higher during certain hours of the day, days of the week and weeks of the month compared to others. These findings are comparable to another study on the frequency of accidents in Belgium by the time of the day. The study employed 11,000 respondents and reported that most accidents occur at night due to fatigue. The study further observed that road users are more likely to make errors on Saturdays at 6% more than Monday. Errors that may result in accidents were said to be lowest on Tuesdays, Wednesdays, and Thursdays (Roets & Christiaens, 2019). These studies, however, do not tell us if and how the traffic police use data on the timing of accidents to schedule enforcement efforts. For instance, does the adequacy of police officers on the road at a given time relate to compliance efforts, or are there more vehicles on the road leading to a relatively higher number of accidents? Considering this finding on discrepancies in the number of accidents at different times of the day, week, and month, this study sought to find out if this phenomenon is related to differences in enforcement practice.

The National Council for the Administration of Justice (2016) conducted an audit of the justice system in Kenya to establish the challenges associated with the administration of justice in the nation-state. The study observed that 45% of entries in police cells were recorded during weekends. The highest numbers of entries were done on Friday (16%), and the least number of people arrested was recorded on Tuesday (13%). The proportion of people arrested on Saturday and Sunday was 14% and 15%, respectively. The study concluded that one is more likely to be arrested during the weekend than on weekdays from these observations. The study also observed that those arrested during weekends are more likely to be released on the same day than those arrested during weekdays. This is surprising because the 24-hour release rule is more difficult to observe during the weekends when courts are closed than on weekdays. The study found it imperative to collect more data from a representative sample in Nairobi with the foregoing in mind.

1.6.4: Gaps in Literature

A review of the literature shows that most of the reviewed studies did not assess the influence of target discretion on the implementation of road safety policy. Instead, most of the studies were purely descriptive (Clark-Daniels and Daniels, 1995; Baumgartner et al., 2017; Asingo and Mitula, 2007; Maynard-Moody, 2009; Evans and Evans, 2010; Gaines and Kappeler, 2011; Kleinig, 1996 p.115; Schneider and Ingram, 2012; National Council for the Administration of Justice, 2016; Vito

et al., 2017; Schueths, 2019; Audemard, 2020), and did not test the cause-effect of the independent on the dependent variable. Objective one of this study seals this gap by establishing how target discretion influences the implementation of road safety policy in Kenya.

In the same vein, the reviewed literature on how domain discretion influences the implementation of road safety policy was only descriptive and did not go further to test the hypothesis (Tummers & Bekkers, 2014; Hill, 1997; Brown, 1998; Kochel, Wilson and Mastrofski, 2011; Dempsey and Forst, 2011; Hess and Orthmann, 2011; Brehm & Gates, 1999; Evans, 2011; Habyarimana and Jack, 2012; Raaphorst, 2018; Engel et al., 2019; Borry & Henderson, 2019). Therefore, this study sought to test the hypothesis that domain discretion by traffic police officers influences road safety policy in Kenya.

Similarly, numerous studies were reviewed in relation to chronometric discretion and the implementation of road safety policy. However, none of the studies attempted to establish the cause-effect relations and was purely descriptive (Alpert et al., 2006; Komba, 2006; Solomon et al., 2009; The Government of Canada, 2011; Mitullah and Asingo, 2014; Roets & Christiaens, 2019; The National Council for the Administration of Justice, 2016). In sealing this gap in the literature, the third objective of this study sought to determine how chronometric discretion influences the implementation of road safety policy.

A review of the available literature shows that most analysed studies concentrated on mainly one aspect of discretion. Discretion over which activities to prioritize for implementation and chronometric discretion have not been given adequate attention. Objective two and three on domain discretion and chronometric discretion will fill this gap. Most of the studies have also been done in the west. They focus on social welfare programs and to the most part, qualitative. This study collects data from a developing country, targets a different department from the one commonly targeted, and employs quantitative data.

1.7 Theoretical Framework

There are three theoretical perspectives from which public policy implementation failure can be explained (Birkland, 2010). These are top-down, bottom-up and a synthesized approach. This study adopts the bottom-up approach as expounded in Michael Lipsky's Street-Level Bureaucratic Theory (Lipsky, 1983). However, before outlining the assumptions of SLBT and its utility in this

study, it is imperative to provide a brief outline of top-down, bottom-up and synthesized approaches and why they are not viable in this study.

According to the top-down scholars, policy implementation failure or success is dependent on whether the prescribed policy objectives are aligned to the policy problems and whether the policy objectives are well communicated from the policymakers through bureaucratic executives to frontline workers and finally policy target population. To this end, implementation failure is attributable to either wrong policy formulation or poor communication of the policy objectives from the policymakers to the frontline workers (Hill, 1997). Some of the main progenitors of this perspective include Pressman and Wildavsky (1984), Van Merter and Van Horn (1975), Sabatier and Mazmanian (1979), and Gunn (1978). The top-down approach is often criticised for focusing on the key decision-makers while ignoring other actors and their contribution to the policy implementation process. They have specifically been accused of neglecting the un-intended policy consequences by bottom-up scholars such as Rhodes and Marsh 1992, Hjen and Porter 1981, Smith 2000 (cited in Glachant, 2001). They also ignored the ability of frontline workers to either subvert policy objectives or sabotage them together during the implementation process (Brehm & Gates, 1999; Elmore, 1979).

The bottom-up perspective gives prominence to street-level bureaucrats (Lipsky, 2010). This is because their action determines if policies will succeed or not (Schneider & Ingram, 2012). This is because public policy objectives are rarely succinct; therefore, they require interpretation and contextualization at the implementation level. Thus, the implementation success depends on how the policy objectives and programmes are effectively contextualized and the prevailing implementation environment. This approach prescribes that the policy analysis process must start at the grassroots level and move upwards to verify if implemented is infidelity with the policy objectives (Moran, Rein, & Goodin, 2008). Advocates of this perspective include (Lipsky, 1980; Elmore, 1980; Hjern and Porter, 1981; Hjern, 1982; Hjern and Hull 1982) cited in (Fischer & Miller, 2006).

The Synthesis approach attempts to combine the advantages of both bottom-up (backwards mapping), and top-down (forward mapping) approaches into a single model. The leading proponent of this approach is Richard Elmore, who sought to combine the elements of backward mapping with those of forwarding mapping” (Elmore, 1979). Similarly, Lawrence O’Toole (cited in Hill &

Hupe, 2008) has argued that there are instances in which the top-down approach is useful and others when one would rather use the bottom-up approach, particularly when one is looking for the implementation dynamics. There is no single statute or dominant program (Birkland, 2010). The other prominent writing within this model is that of the Advocacy Coalition Framework (ACF). Sabatier (2007) tries to fuse various aspects of the top-down approach and bottom-up approach into one framework.

According to ACF, public policy implementation is undertaken by many actors (advocacy coalitions) with various belief systems. Therefore, the policy change is influenced by external and internal shocks, policy-oriented learning, and negotiated agreements (Sabatier, 2007). Mintrom (2000) has postulated that, while the ACF provides us with a useful guide on the external environment in which policy change occurs, it fails to tell us what exactly determines policy change. In other words, not all policy learning and external shocks lead to policy change. According to Hamo (2008), the utility of AFC outside America is limited since advocacy coalitions in other parts of the world may not operate in an environment of high literacy rates, mature democracy and adequate resources. In addition, learning, conflict in the belief systems, and environmental shocks are not the focus of this study. Thus, such concepts may not help the study unravel the salient problem, which is to interrogate if road safety policy implementation failure in Kenya is associated with policy choices taken by traffic police officers during safety checks.

1.7.1 Principal Agency Theory

This study adopts Street Level Bureaucratic Theory (SLBT), a subsidiary of the Principal-Agent Theory (PAT). To understand SLBT, one needs to understand PAT. PAT is an empirical tool that helps researchers understand and explain delegation and discretion in political organizations (Debreu & Adriaensen, 2017). Economists originally used it to explain government interventions in situations of market failure and later gained usage in other social sciences especially political science (Walle & Groeneveld, 2016). The principal-agent relationship entails “a contract under which one or more persons (the principal(s) engage another person (the agent) to perform some service on their behalf that involves delegating some decision-making authority to the agent ” (Gottschalk, 2007:162).

PAT assumes that problems between principals and agents arise from two distinct sources: hidden actions and hidden information. Hidden action is associated with what is commonly referred to in

PAT literature as a *moral hazard*. This concept explains the principal's inability to observe the agents' actions once the contract is in place (Gordon et al., 2019). Confidential information relates to the problem of adverse selection, which is used in PAT literature to refer to uncertainties associated with knowing the agent's motivation and preference before the contract is in place (Ruachhaus, 2009). These problems arise because the relationship between the principal and the agent is characterized by conflicts of interest (Peters & Pierre, 2006). "The agent is trusted to make decisions that are in the best interest of the principal. However, the agent's preferences derive from self-interest and self-preservation and do not {concern themselves} with the interest of the principal" (Smart, 2008 p.145). According to Brehm and Gates (1999), the goal conflict might arise from differences in their preference for the budget magnitude, policy goals and leisure maximization. Secondly, the agents typically have access to more information than their principals, hence information asymmetry (Bjurstrøm, 2020). This stems from the fact that agents have specialized professional training and are directly involved in the implementation processes (Smart, 2008). Knowledge disadvantage among the principals limits their ability to design contracts. In other words, agents can hide some information about work such that they are paid more than the value of their inputs (Wilson, 1989).

The functionality of PAT can be explained by its ability to explain agent's discretion, examine the setup and working of administrative control procedures and explain the effectiveness of incentives in affecting agent behaviour (Brandsma & Adriaensen, 2017). While PAT provides valuable insights on the public policy implementation process, it is limited. This is because it lays the responsibility of public policy implementation on the policymakers and bureaucratic executives who must make the rights of employees, design optimal contracts, and oversee the implementation process to guarantee implementation success. The agent's choices are thus assumed to be dependent on his contractual relationship with the principal. In real life, however, several factors influence the job performance of public servants. These include but are not limited to national pride, organizational culture, pressure from colleagues and work environment (Brehm & Gates, 1999). The principal stewardship theorist also criticised the principle stewardship theorist for assuming that there is always goal incompatibility between the principal and agents and that agents are always opportunistic (Bjurstrøm, 2020). Given these limitations, the theory does not fully explain the public policy implementation phenomena.

1.7.2 The Street-Level Bureaucratic Theory

This study is underpinned by the theory of street-level bureaucracy (SLBT). The concept of street-level bureaucracy was coined by Michael Lipsky (1980) to describe the role of frontline workers in the public policy implementation process. According to Lennon and Corbett (2003), SLBT is useful for studying complex organisations mandated to put the policy to practice.

According to SLBT, the street-level bureaucrats are the “ultimate policymakers” (Durant, 2010 p. 272). Indeed, “street-level bureaucrats make policy in two main ways. They make a substantial amount of discretion over services and citizens who are the clients in their organizations. When taken together, their actions add up to agency behaviour” (Lipsky, 2010 p. 13). In the view of SLBT writers, public policies rarely provide sufficient guidance to policy implementers. More often, they are either too broad or sometimes conflicting with one another.

Consequently, frontline workers in public service work with limited understanding of the policy implication on the immediate tasks (Durant, 2010 p. 270). Moreover, “in most welfare departments, regulations are encyclopaedic yet, at the same time, they are constantly changed” (Lipsky, 2010 p. 14). This is exacerbated by the fact that the aforesaid departmental regulations are rarely available for the street-level bureaucrats in a usable manner, even though their caseloads tend to be high and episodic. Therefore, they are under constant pressure to make decisions with no opportunity to search for relevant information about the case brought before them (Lipsky, 2010).

The street-level bureaucrats are professionals and thus enjoy some autonomy from the scrutiny of their supervisors and the public. As professionals, they are expected to make professional judgments about their areas of operation. In police practice, the level of scrutiny is further reduced because often, their role is to respond to emergencies and thus unassigned. Similarly, the patrol officers are mostly alone in the field, and therefore, the inspectors cannot check on what they are doing all the time (Loh, 1984).

The street-level bureaucrats normally have interests of their own. Often, these are either incongruent with those of the agencies they work for and those of their team leaders, “At the very least, workers have interest in minimizing danger and discomfort of the job and maximizing income and personal gratification” (Lipsky, 2010 p18). Street-level bureaucracies provide essential services which cannot be found in any other place. The net effect of this is that the clients cannot punish them by

seeking services from alternative service providers, as would be the case for the clients in the private sector (Lipsky, 2010). In the case of the police, who are the subjects of this study, those who are aggrieved by the dismal performance of the police officers cannot turn to the private sector for enforcement. They just must tolerate them.

Street-level officials operate in an environment of resource inadequacy, and often, the public demands for goods and services from the government far outweigh its ability to supply them. For instance, the government cannot provide social security for all who require the same. This problem is exacerbated by the fact that the demands for public goods grow faster than the government budgets. Given that the street-level bureaucrat cannot satisfy the demand for the services they offer, they are forced to engage in rationing. The street-level bureaucrats do this by dividing their clients into big categories; from these categories, they choose who deserves the policy sanction or reward (Keiser, 2012). For instance, the police cannot stop and check all vehicles at the traffic checkpoints. They tend to check certain kinds of vehicles driven by people (Chitere & Kibua, 2004). One of the challenges bedeviling road safety policy enforcement is the lack of institutional capacity within the Kenya police service (Orero *et al.*, 2012).

Irrespective of its valuable insights, SLBT has been accused of its pessimistic view on the role of the frontline workers whose actions it attributes to public policy failure. However, in real life, situations policy discretion can be used in a positive sense. Lipsky has also been accused of over-generalizing his findings to a variety of government departments. Furthermore, the utility of SLBT in other nation-states different from America has also been doubted given that Lipsky's writings and that of his research students Weatherly (1979) and Prottas (1979), who provided empirical data for the theory's development, were all focused on the American experience. In the recent past, many scholars have advocated for comparative studies to verify conditions under which the theory is useful and enhance its empirical diversity (Henderson *et al.*, 2018; Hill & Møller, 2019).

According to Lennon and Corbett (2003), SLBT is useful for studying complex organisations mandated to put policy into practice (Lennon & Corbett, 2003). This study targets traffic police officers. These officers have been said to work in an environment of resource scarcity. Often the resources available to implement policies within their job description are far less than the activities within the same job description. Additionally, their work involves interacting with road users and therefore cannot be predetermined. In that regard, their working context can be characterized by

ambiguity and uncertainty. In addition to the foregoing, the police service has been identified in SLBT as an agency that employs many frontline workers with substantial discretionary powers. It is premised on the above postulation that the study uses SLBT to achieve its set out objectives.

1.8 Research Hypotheses

The study is centred on the following hypotheses:

1.8.1 Main hypothesis

Implementation strategies employed by traffic police officers in preventing road safety policy violations in Nairobi's traffic command area are not effective.

1.8.2 Sub Hypotheses

H₁: Target discretion by traffic police officers influences road safety policy implementation in Nairobi Traffic Command Area.

H₀: Target discretion by traffic police officers does not influence road safety policy implementation in Nairobi Traffic Command Area.

H₂: Domain discretion by traffic police officers influences road safety policy implementation in Nairobi Traffic Command Area.

H₀: Domain discretion by traffic police officers does not influence road safety policy implementation in Nairobi Traffic Command Area.

H₃: Chronometric discretion by traffic police officers influences road safety policy implementation in Nairobi Traffic Command Area.

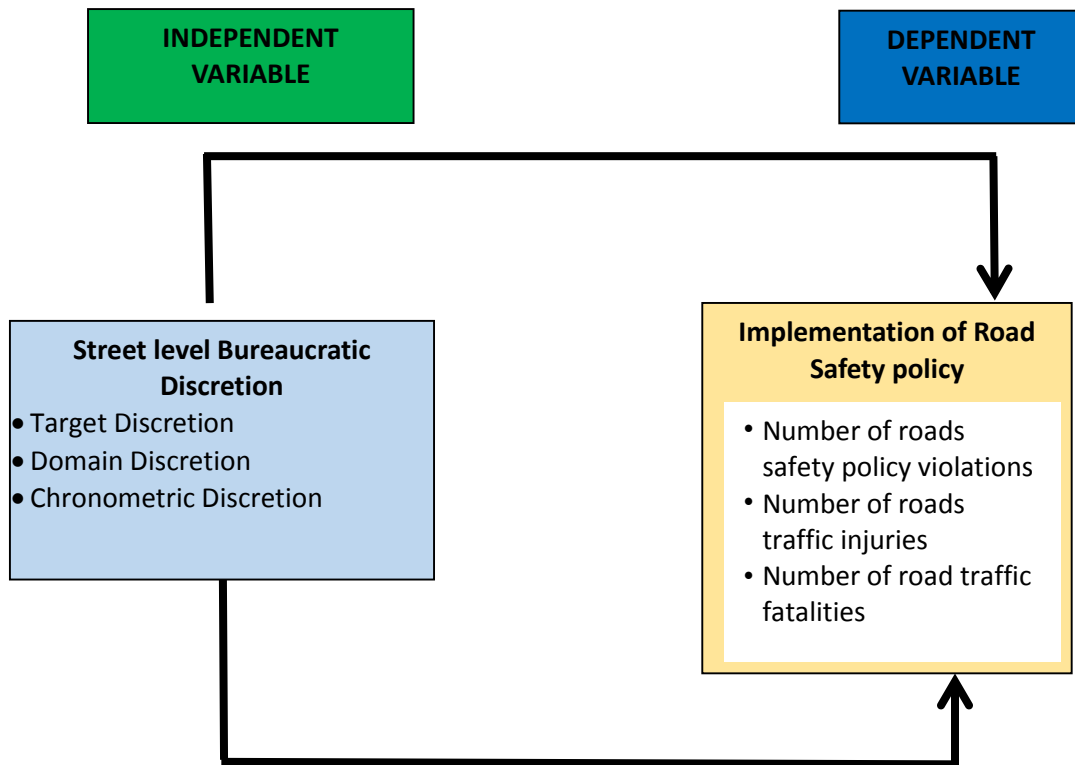
H₀: Chronometric discretion by traffic police officers does not influence road safety policy implementation in Nairobi Traffic Command Area.

1.8.3 Conceptual Framework of the Study

The conceptual framework that guided this study was derived from SLBT and modified for this study. The variables have been divided into three categories, namely street-level bureaucratic discretion, circumstances under which discretion occurred and road safety implementation outcomes, as illustrated in Figure 1.1.

Figure 1.1: Conceptual model of the study

Source: Author (2021)



In the conceptual framework, the independent variable (predisposing factor) is street-level bureaucratic discretion. It refers to the decision-making power of the traffic police officers at the traffic checkpoints. According to Schafer et al. (2006), police employ three types of decisions at the traffic stops. First, the officer must choose whether to stop a road user at the traffic checkpoint; the second decision is what to search for. In this regard, an officer may decide to search the driver alone, or search the driver and the vehicle or search the driver, the vehicle, and passengers; lastly, the third decision factor is what to do with the search outcome. An officer may decide to issue a warning, a citation or make an arrest. This study concerns itself with only two types of discretion, namely i) to conduct a safety check and ii) to arrest traffic offenders.

According to the Traffic Act, 2018, the police can stop a vehicle or any other road user if he suspects an offence has occurred or is about to occur (Government of Kenya, 2012). Previous studies indicate that both legal and extra-legal factors influence that police arrest decision. The extra-legal may include the gravity of the offence, the strength of evidence, offender characteristics and other situational variables (Meeker et al., 2019). This study focuses on the impact of three situational variables on the police decision to conduct safety searches and arrest traffic offenders if a violation

is detected. These include the traffic offenders' characteristics (road user category or road user type), type of traffic offence and time of the violation (hour of the day/day of the week).

According to Mitullah and Asingo (2014), traffic law violations are commonplace. Road users only respect traffic laws when there is a police officer present. The study, therefore, assumes a relationship between enforcement practices and road safety policy implementation outcomes. To this end, the dependent variable is the implementation outcome. It has two indicators which include the number of traffic violations and the number of traffic accidents. These concepts are here under-explained.

1.8.4 Operationalization of Variables

To test the study hypotheses, measurable indicators were identified for both independent and dependent variables. Data collection methods and procedures were informed by the identified variables, which are outlined in this section. Objective one of this study was to establish the relationship between road user targeting and road safety policy implementation outcomes. Correspondingly the independent variable is road user targeting, and the dependent variable is policy implementation outcomes. The indicators for road user targeting included the number of road users stopped at a traffic check, searched and/or arrested at point by road user category and the number of road users stopped at the traffic check, searched and or arrested at point by vehicle type. The dependent variable is the number of traffic violations, accidents and fatalities disaggregated by road user type and vehicle type. Objective two of the study examined the effects of domain discretion on road safety policy implementation outcomes. The independent variable is domain discretion, and the dependent variable is road safety policy implementation outcomes. The indicators of discretion include policy domains prioritized by traffic police officers for implementation. The dependent variable is the number of violations, accidents and fatalities documented under each cause code.

The third objective sought to determine the influence of timing of implementation on road safety policy outcomes. The independent variable is street-level discretion over the timing of implementation. In contrast, the dependent variable is the road safety policy implementation outcomes during the paired hours of the day and days of the week. The indicator of street-level discretion in this objective is the number of road users stopped, searched and arrested at different times of the day and days of the week. The indicators of implementation outcome include the

number of violations, accidents and fatalities during the paired hours of the day. The relationship between indicators of independent and dependent variables are here under visualized:

Table 1.1: Measurable Indicators of the Study

Variable type	Variable name	Variable indicator	Indicator definition
Independent	Street-level bureaucratic discretion by traffic police officers	Target discretion	The number of road users checked at roadblocks disaggregated by category of road users, i.e. pedestrians, drivers etc.
		Domain discretion	The number of road users arrested for violating road safety policies disaggregated by type of policy i.e. safety belt, over speeding etc.
		Chronometric discretion	The number of road users arrested for violating road safety policies disaggregated by the time of arrest i.e. time of day, day of the week etc.
Dependent	Road safety Policy implementation	Road safety	Number of roads safety policy violations Number of roads traffic injuries Number of road traffic fatalities

Source: Author (2021)

1.9 Research Methodology

This section presents the methodology of the research. The section includes the research design description of the data collection techniques, description of the study site, the target population sample, the sampling method and sample size, data collection, data analysis and presentation and the quality control mechanisms in place to overcome the inherent limitations.

1.9.1 Research Design

This study employed a mixed-methods approach in which both qualitative and quantitative approaches to data collection, analysis and presentation were employed. Quantitative data were used to examine variations in response to various discretionary practices by traffic police officers. Qualitative data, on the other hand, was used to explain the nature of the above variations.

The study applied a longitudinal research design. This design effectively examines and compares a single variable across multiple subgroups that are similar in characteristics (Spector, 2019). It can be used to identify patterns, incidences, correlations, and the prevalence of an outcome in the target population during the study (Bryman, 2016). The choice of this design was informed by the fact that longitudinal studies are useful in helping to establish if there is a significant relationship among certain variables over some time (Yin, 2014). This study design was essential given that the study sought to measure the prevalence of violations and enforcement practices during different days of the week and times of the day. The data collection and analysis procedures are here-under explained.

1.9.2 Study Site

Primary data collection was conducted in fourteen police divisions of the Nairobi Traffic Command Area. The command area covers Nairobi county and its metropole. The Traffic police divisions under the command area include Dagoreti, Makongeni, Buruburu, Kilimani, Gigiri, Starehe, Embakasi, Kasarani, Central, Langata, Industrial Area, Pangani, Kayole, Karen and GVAIS, which oversees government vehicles. The total population of traffic police officers in the city is 500 officers. According to the last censuses' report, Nairobi County has 4,397,073 people (Kenya National Bureau of Statistics, 2019). The city inhabitants move from one place to another by walking, pedals and motorcycles, or in private and public service vehicles. There is also a small percentage of the population that use rail transport for their movement. Given that Nairobi is also the capital city of Kenya, the Command area hosts the police headquarters and the traffic police headquarters. As a result, it has the highest number of traffic police officers, and as such, it is expected to have the most efficient implementation practice. On the contrary, the county records the highest annual traffic fatalities (National Transport and Safety Authority, 2015). It is with this understanding in mind that the study location was selected.

1.9.3 Target Population

This study had two primary respondents: road users; and traffic police officers within the study location. The road users targeted included drivers, conductors, riders, pedestrians, trolleys and hand carts pullers. There is no official record of the number of vehicles and other road users in Nairobi. Estimating the number of road users is problematic because many people come from neighbouring counties to work and travel back to their counties at the end of the day. Data from road users primarily focused on enforcement practices and that from traffic police officers on road safety

policy compliance. Data from the primary respondents were supplemented with key informants such as Divisional Traffic Commandants, Chairpersons of Road Users' Associations, the NTSA Director in charge of Road Safety and one officer in the statistics and planning division.

1.9.4 Sample Size determination

The study sample of 994 comprised 885 road users and 109 traffic police officers. The sample size determination of various respondents in hereunder explained:

a) Sample Size Determination for Road Users

The infinite population formula: $z^2 pq/e^2$ adopted from (Daniel, 2012, p. 9) was applied to determine the sample size for road users, where:

$$z = 1.96,$$

$p = 0.10$ (the proportion of road users who are likely to have had an accident from the NTSA records in any given year)

$$q = 0.90 (1-0.10)$$

$$e = 0.02 (e^2 = 0.0004)$$

$$n = 3.8416 \times 0.10 \times 0.90 \times 650 / 0.0004 = 864.$$

To deal with the challenge of non-response or loss of data during the cleaning process, 21 more respondents were interviewed. The total number of respondents in each of the study locations was thus 177, and the total number of interviewees was 885.

b) Sample Size Determination for Traffic police officers

So as to determine the sample size for traffic officer to be included in the study,

Finite population formula: $n = \frac{z^2 * p * q * N}{e^2 (N-1) + z^2 * p * q}$ adopted from Kothari (2004) was applied to, where:

$$z = 1.96,$$

$p = 0.10$ (the prevalence of accidents in Nairobi)

$$q = 0.90 (1-0.10)$$

$$e = 0.05 (e^2 = 0.0025)$$

$$n = \frac{3.8416 * 0.1 * 0.9 * 500}{0.0025 * 499 + 3.8416 * 0.1 * 0.9}$$

$n = 108.503$ which is approximately 109

The differences in formulae used were informed by the fact that while the population of traffic police officers in the command area is known, there is no authoritative data on the number of road users in the Nairobi Traffic Command Area.

1.9.4 Sampling Procedure

This study applied both probability and non-probability sampling designs and methods to identify respondents. The sampling strategies were guided by the research design and research questions. Below is the documentation of how different study respondents were selected to participate in the survey.

a) Selection For Road Users

Because the study area is fairly large, with a very large population, this study applied the multi-stage clustering method to funnel down to data collection sites. The sampling process involved five stages. In the first stage, the study area was divided into five zones based on their geographic location. These zones were the central business district (CBD) and its environs, the Eastern, Western, Thika highway and Northern zones. One division was purposely selected per cluster, as shown in Figure 1. 2 above. In the Western zone, the Dagoretti division was purposively selected because Waiyaki Way and the Kabete-Limuru section of the Nairobi-Eldoret highway fall within Dagoretti division, have been identified as hotspots for traffic violations and probably, for this reason, the section has several permanent traffic police stops. In the CBD and environs zone, the central division was selected because it has a heavy traffic flow by both private and public vehicles and has both a highway (Thika Highway) where vehicles may speed up and sections adjacent to the CBD characterized by regular traffic snarl-ups. This accorded the study an opportunity to investigate both situations concerning violations, compliance and policy implementation. Buruburu and Langata were selected from the Eastern and Northern zones, respectively. Buruburu was selected because it is highly populated and likely to have the highest number of motor vehicles in the study area (Kenya National Bureau of Statistics, 2019). Karen was picked because it is on the city's outskirts and will enable the study to capture a broader perspective of the research problem. Kasarani was also picked to provide data on the nuances relating to road safety policy enforcement in the peri-urban Eastern part of Nairobi.

In the fourth stage, quotas were assigned for each of the selected divisions. Because the exact number of road users and their distribution across the study area is not documented, an equal quota of 177 road users was assigned to each selected five (5) divisions ($5 \times 177 = 885$). The fifth stage

involved mapping each of the selected divisions to identify data collection sites, as illustrated in Figure 1.2. The study used motor vehicle garages to private motorists, vehicle and motorcycle terminus for commercial motorbike and public service vehicles (PSV) for road users. The study purposely identified these sites because they are the locations where the main respondents were most likely to find time to respond to questionnaires.

The final stage of the sampling procedure involved the selection of respondents. The sample allocated for each site that is 177 road users as subdivided into motorcycles, drivers of private vehicles and those of commercial vehicles as follows:

- i. Motorcyclists 54
- ii. Private vehicles 62
- iii. Public service vehicles 61

The research assistants interviewed every tenth person to arrive at a base, termini, or garage until their quarter was done. For public service vehicles (PSV) and commercial motorcycle riders, respondents were randomly selected at each data collection site (terminus and bases). Random selection ensured that the sample was as representative as possible.

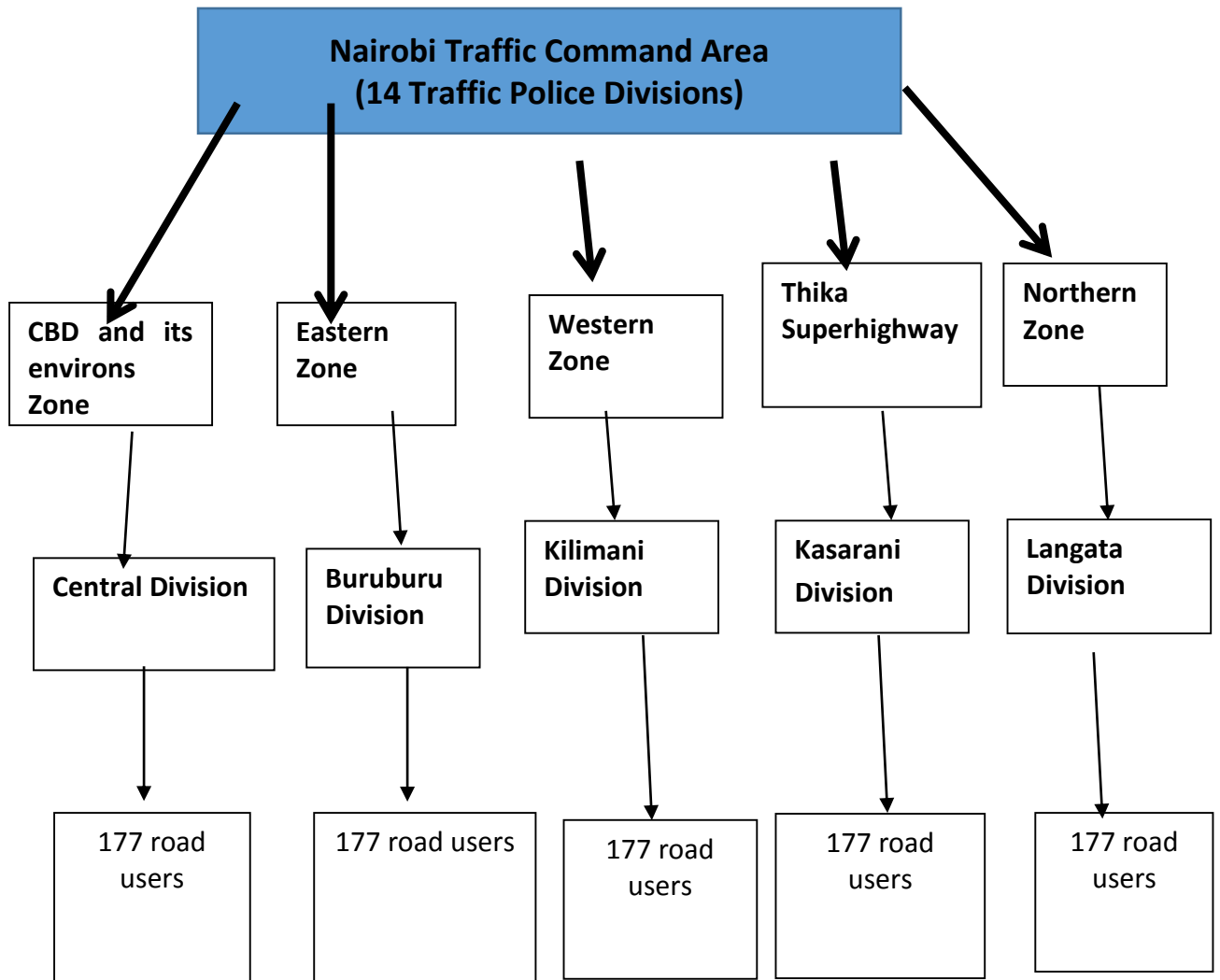


Figure 1.2: 14 Nairobi Traffic Police Divisions

Source: Author's conceptualization, (2017)

a) Selection of Traffic Officers

To determine the number of traffic officers to include in the survey, a proportionate quota was assigned for each division, depending on the number of traffic police officers in that division, as illustrated in Table 1.2. Traffic police officers were randomly selected from the sampling frames provided by the divisional traffic enforcement officers at each traffic division. Whenever a targeted respondent declined to participate in the study, the next available person was approached until the predetermined quota was met for each division.

Table 1.2: Sample Size for Enforcement Officers

S/No.	Selected Police Division	# of Traffic police officers in Division	Allocated Quota
1.	Kilimani	52	26
2.	Central	43	22
3.	Buruburu	41	21
4.	Langata	49	25
5.	Kasarani	29	15

Source: Nairobi Traffic Command area, Human Resources Records (2016)

b) Selection of Key Informants

The informants were purposively selected based on their birds-eye-view knowledge of the research problem in the study area. The selected key respondents included two Divisional Traffic police officers (DTOs), both of whom had served in the study location for a minimum of two years, two senior officers of NTSA, two managers of PSV SACCOs, and two managers of commercial motorbike riders' SACCOs.

c) Selection of FGD Respondents

The FGD respondents were randomly selected from those that had filled up questionnaires. The researcher made deliberate efforts to ensure that FGD respondents had similar characteristics – that is – hailed from the same traffic division. Road users and traffic police officers were separately interviewed. In the same code, different categories of road users such as motorcycle riders, Public service vehicle operators, Taxi drivers and private car owners were invited to different FGD sessions. Efforts were also made to take care of issues of social class. Thus, road users from rich neighbourhoods were separately interviewed by road users from poor neighbourhoods.

1.9.5 Inclusion and Exclusion Criteria

Only those respondents that had operated in the study location for a minimum of two years preceding the study were included in this study. This was informed by Kothari (2006) argument that informants tend to have good knowledge of a problem if they have interacted with it or lived in the study area for at least two years. Motorists and motorcycle riders were only included if they had driven or ridden in the study area for more than two years preceding the study. Police officers

and key informants were also included if they had served in the study location for the same number of years.

1.9.6 Data Collection Tools

As described in this section, the study utilised four tools: questionnaires, focus group discussion (FGD) guide, interview guide, and an observation checklist.

a) Questionnaires

Two questionnaires were developed to collect data from the two categories of primary respondents (see appendix II and III). The questionnaire was selected because it allows for data collection from a large population quickly and efficiently (Mugenda & Mugenda, 2004) and is relatively easy to administer compared to other tools (Blaise & Achola, 2004). Both questionnaires were semi-structured, with both closed and open-ended questions. Both questionnaires had questions that sought to establish the demographic characteristics of respondents, in addition to information on compliance to and violations of traffic rules. However, to capture more specific data, the questionnaire for road users included questions covering perceptions and opinions on the implementation of road traffic rules. In contrast, the questionnaire targeting police officers had questions on their actual implementation of discretionary practices.

b) Focus Group Discussion (FGD) Guides

Two focus group discussion guides were developed for this study to capture data from the two categories of main respondents. The FGD guide allowed for the collection of qualitative data to complement information collected through questionnaires. The FGD guide was selected for this study because it facilitates the collection of opinions and perceptions from groups with similar characteristics (Bryman, 2016). This is important because the group environment allows participants to bring out and articulate issues that may not be captured in a questionnaire or one-on-one interview (Oates & Alevizou, 2018). Each FGD guide comprised seven discussion points, touching on compliance and violations of traffic rules. However, the point of divergence is related to the implementation of the same. The FGD guide for road users had a discussion topic on perceptions and opinions about implementation. In contrast, the FGD guide for police officers included a question on actual discretion practices and decisions.

c) **Interview Guide**

An interview guide was developed for this study to extract data from key informants (see appendix I). The interview guide consisted of open-ended questions that sought to collect qualitative information on the research problem. This tool was selected because it allows for collecting in-depth data that can provide useful insights to augment data collected through other tools (Kothari, 2004). The questions dwelt on the policy implementation aspect, as well as opinions on street-level bureaucratic discretion.

d) **Observation checklist**

An observation checklist was developed for this study (see appendix IV). Considering that the phenomenon under study involves the sensitive matter of compliance to and violation of the law, the checklist was selected to collect factual, real-time quantitative data from complementing information collected through survey tools. The observation checklist allows a researcher to document occurrences and record observable items, to build up factual data (Kothari, 2004). The checklist for this study included a list of specific items to be observed concerning compliance to, and violations of traffic rules, in addition to observable actions by traffic police officers.

1.9.7 Data Collection Procedure

Various procedures were undertaken to collect data as guided by the data collection tools.

a) **Collecting data using questionnaires**

To ensure a speedy collection of accurate and reliable data, eight research assistants (RAs), all masters students familiar with the study area, were recruited and trained for this study. The two-day training conducted by the principal investigator exposed the RAs to the study's objectives and the research problem. Furthermore, RAs were meticulously taken through the questions in the tool to internalize them. Besides, RAs were trained in research ethics and field procedures, including etiquette and effective communication skills.

After the training, RAs administered the questionnaires to the target population in the selected data collection sites indicated in Figure 1.2. Considering the nature of the target population and data collection sites, it was not viable to distribute and collect the questionnaires later, resulting in a very low response rate. To mitigate this challenge, RAs issued questionnaires, waited for them to be filled, and then collected them right away.

b) Focus Group Discussions

A total of eight FGDs were conducted for this study. In each of the selected divisions, two FGDs were conducted, one for each category of road users. Each FGD had a maximum of 12 discussants, who were randomly selected from among respondents who had filled up questionnaires. This study settled on 12 discussants, as guided by Smithson (2012), who argues that 12 is the ideal number for FGD participants. Care was taken to ensure that each FGD had participants with similar characteristics. The dates, timing and venue of each FGD were determined in consultation with and at the convenience of participants. However, care was taken to ensure that the venues provided a conducive environment for FGDs.

All the FGDs were conducted by the principal investigator, with a rapporteur who recorded proceedings. The discussions were guided by an FGD guide (see appendix V). After welcoming discussants to the sessions and facilitating introductions, the principal investigator (PI) guided discussants through rules formulation, then set the discussions off. The PI ensured that each participant got an opportunity to contribute to the discussions. All FGDs were conducted in a friendly, relaxed environment that encouraged every discussant to participate without any fear actively.

c) Key Informant Interviews

The PI conducted all interviews. The dates, timing and venue of each interview were determined in consultation with interviewees. Each interview lasted for approximately one hour. The PI went out of the way to ensure that the environment was free and conducive. Interviewing skills such as paraphrasing, polite challenging, reflection and probing were applied to delve deeper into issues and seek clarifications for ambiguous responses. Inasmuch as a guide guided each interview, the order of questions was not followed religiously and could be varied depending on the flow of the interview.

d) Structured Observation

All observations were done by the PI at selected observation points, as shown in Figure 1.2. The observation involved documenting various road safety policy violations, such as crossing the road at non-designated places and using a mobile phone while driving and the reaction of traffic police officers to those violations. All such events were recorded in the observation checklist. Observations were conducted during different times, days of the weeks to detect variation in

enforcement and road user behaviours during a different time, days of week such as Monday, Tuesday and Thursday

e) Document Review

The study reviewed both accidents and enforcement registries at the command headquarters. Data on the number of accidents and the number of road users arrested during the study period were extracted from these sources. The police data was supplemented with data from NTSA and other relevant publications listed in the reference section. In general, the objective of secondary data review is two-fold. In certain aspects, secondary data is used to triangulate data from primary sources, while in other instances, it is used to fill in gaps in the primary sources.

1.9.8 Data Entry and Analysis

Overview

The quantitative data were entered using a database developed on Epi info. The software is preferable because it is open-source software and suitable for such analysis. The errors identified during the process were fixed by cross-checking entries with re-entries from five per cent of the questionnaires. Program checks, simple frequencies and crosstabs were applied to detect inconsistencies, missing values and misrepresentation of variable labels. For purposes of quality assurance, consistencies between the questionnaires, structured observation schedules, information forms and data in the Epi info file were verified. Once the verification process was complete, the data was transferred to SPSS and R statistical software for further analysis. Besides, normality tests were conducted to determine if the data collected was normally distributed and hence suitable for parametric statistical analysis. Since tests of the analysis indicated that data was not normally distributed, Spearman's and Kendall rank correlation correlations, which are a non-parametric test, were employed instead of the Pearson test of correlations.

a) Statistical Tests Employed

Four main statistical tests were employed in the study, namely: Item Cluster Analysis, Kendall, spearman's rank of association and two sample t-test. The uses are hereunder explained:

The study employed triangulation both by method and sources. Thus, cluster and Kendall tests of concordance were employed to test the internal consistency of the various observations made in the study. The cluster values were automatically calculated in r software while the formula used for Kendall was drawn from (Kraska-Miller, 2013).

$$W = \frac{12S}{m^2 (N) (N^2-1)}$$

Where S= sum squared of ranks

M= Number of judges or respondents ranking the objects or attributes.

N=Number of attributes or objects that is evaluated by judges or respondents.

Moreover, in chapter three two sample t-test was used to compare the frequency of both violations and safety checks first among different categories of road users and secondly among different categories of vehicles. The independent samples t-test, also known as the two-sample t-test, evaluates whether the means of two samples are different from one another (Masami Nishishiba, 2014). Similarly, two sample t-test were also used in this chapter to compare the level of enforcement effort among different road user categories and among vehicle types. Paired sample t-tests were also applied in chapter five to compare frequency of violations during weekdays and weekends as well as during the day and at night. The data generated were compared to those on t-test between enforcement efforts between weekdays and weekends as well as between day and night. The t-test were however not applied in chapter four because there were more than two categories of road safety policy domains under observation.

Spearman's rank of association was used to test the correlation between the independent and the dependent variable. Spearman's rank-order correlation was calculated using the following equation from (Allen, 2017):

$$\rho = 1 - \frac{6D}{n(n^2-1)}$$

Where DF describes the difference between variable rankings and n is the number of cases.

The study assumes that traffic police officers do not target their enforcement practices according to the prevalence of traffic violations in terms of road user category, policy domain, and enforcement time based on accident records. Consequently, it accepts the alternative hypothesis if there is a negative relationship (rho is $-v$) or a non-significant relationship. However, it fails to reject the null hypothesis if there is a positive relationship between the dependent and independent variables. Level of Significance was determined at an alpha (α) of 0.05 which is recommended for social

science research (Capraro & Yetkiner, 2012). The study rejected H0 if the p value is less than the alpha level (0.05) but failed to reject it in cases where it was higher than alpha level.

b) Testing of hypothesis

The first hypothesis focussed on the relationship between road user targeting and road safety policy implementation. It assumed that target discretion undermines road safety policy implementation. In this regard, the independent variable targets discretion, and the dependent variable is road safety policy implementation. The hypothesis was tested by running Spearman's rank of correlations between the indicators of the independent and dependent variables. The indicators of target discretion, on the one hand, were as follows: the number of road users stopped at the roadblocks disaggregated by category, time spent by each road user at the roadblock disaggregated by user category and the number of road users arrested disaggregated by user category. On the other hand, road safety policy implementations were prevalence of violations disaggregated by road user category, the number of accidents, and the number of road traffic fatalities disaggregated by road user category. The alternative hypothesis was accepted in cases where there was a negative or no significant correlation between target preference indicators and road safety policy implementation indicators.

The second hypothesis predicted a negative correlation between domain preference and road safety policy implementation success. Spearman's rank of correlations was done between the indicators of the independent and dependent variables to ascertain the truth value of this proposition. The indicators of independent variables include the frequency of traffic checks for a given road safety domain and the number of road users arrested for violating a given road safety domain. The indicators of the dependent variable, on the other hand, were prevalence of violations disaggregated by cause of the accident, the number of accidents and, the number of road traffic fatalities disaggregated by cause of an accident. The alternative hypothesis was accepted in cases where there was a negative or no significant relationship between domain discretion indicators and road safety policy implementation indicators. However, it fails to reject the null hypothesis in cases where there is a significant positive relationship between domain discretion and road safety policy implementation.

The hypothesis assumed a negative correlation between chronometric decision and road safety policy implementation success. The proposition's validity was tested by conducting Spearman's

rank of correlations between the indicators of chronometric discretion and safety policy implementation outcomes. In this study, chronometric discretion was taken as an independent variable, and road safety policy implementation was taken as the dependent variable. The indicators of the independent variable included frequency of traffic checks, time spent during traffic checks and the number of people arrested during a different time of the day. The indicators of the dependent variable, on the other hand, were the prevalence of violations disaggregated by the time of occurrence, the number of accidents and the number of road traffic fatalities disaggregated by the time of occurrence. The alternative hypothesis was accepted in cases where there was a negative or no significant relationship between chronometric discretion indicators and road safety policy implementation indicators. However, it failed to reject the null hypothesis in cases where there is a significant positive relationship between chronometric discretion and road safety policy implementation.

Qualitative data were thematically analysed. The data from KIIs were transcribed and filled according to the method and location of data collection. The data were reviewed to develop thematic codes. Following this, all the data was entered into various thematic codes. The study findings were analysed based on the repeated occurrence of certain wording, phrases, or issues within and across various categories of respondents. Phrases repeated by the respondents several times both within the same cohorts and across various cohorts were assumed to be of importance and cross-cutting.

1.9.9 Ethical Considerations

The researcher obtained permission to conduct this study from the Graduate School, University of Nairobi and the Inspector General of Police through the Head of the Department after defending the research proposal in the Faculty of Arts Postgraduate Board (see Appendix VI). Consent was sought for and obtained from all participants after explaining the purpose and importance of the study. Only those respondents who consented to participate, and signed a consent form, were included in the study (refer to consent form in Appendix). Respondents were assured that they were free to answer all or none of the questions and maintain confidentiality. It was made clear to participants that their contributions would remain anonymous. In this regard, no names of the respondents and their other personal identifiers have been used in this thesis document or publications extracted from it. Besides, participants were informed that they were free to opt out of the study at whichever point, and that they would not be victimized or penalized for doing so.

1.9.10 Thesis Chapter Outline

The main purpose of this study is to examine the effect of street-level bureaucratic discretion on road safety policy implementation. This task is undertaken in six chapters as outlined below:

Chapter One provides a background to the study and describes the prevalence and severity of the problem under study. The study analysed previous attempts to unearth the study problem and the shortcomings of those studies. The chapter provides a requisite theoretical framework and the study methodology encompassing the research design, data collection procedures, data entry and analysis and ethical considerations.

Chapter Two provides an overview of the road safety policy process, including the policy problem, the policy agenda-setting, the policy adoption, implementation and evaluation. In the provision of the overview above, efforts are made to find out how much discretion the police are allowed within the road safety policies and how they have used their discretionary powers during the policy implementation process.

In Chapter Three, the study presents findings on policy choices by police officers on the categories of road user, to the subject, to traffic law enforcement and how that is related to the number of road traffic crashes. The study documents the prevalence and nature of variation of sanctions applied by police depending on the categories of road users.

Chapter Four analyses the level of enforcement of various road safety policy interventions. This includes comparing the number of arrests resulting from a violation of various offences under the Traffic Act (Cap 403). Data on other enforcement aspects, such as road checks, warnings, and others, are discussed. The chapter documents the frequency of violations of various aspects of the Traffic Act (Cap 403) gathered through observations. Additionally, it presents an analysis on the test of the relationship between levels of enforcement for various aspects of the Traffic Act (Cap 403) and the number of road accidents resulting from behaviour punishable by the outlined aspects of the Act.

Chapter Five compares the level of enforcement of the Traffic Act (Cap 403) during different hours of the day, days of the week and the month. It provides an analysis of the number of road traffic crashes during the day and at night. Additionally, it presents the correlation data on the relationship between the number of road traffic crashes and road traffic policy enforcement time.

Finally, Chapter Six is a summary of the findings detailed in the other chapters of the report. It presents the conclusions derived from the hypotheses tested in chapter's three to five. Finally, the chapter makes policy recommendations and identifies areas for further research.

CHAPTER TWO
BUREAUCRATIC DISCRETION BY TRAFFIC POLICE OFFICERS AND ROAD
SAFETY POLICIES IN KENYA: A HISTORICAL AND CONTEXTUAL
BACKGROUND

2.1 Introduction

This chapter provides a contextual background to the study. This study is underpinned by the assumption that traffic police officers employ a substantial amount of discretion in the course of their jobs, and these discretionary powers, if unchecked, can undermine the implementation process. However, the original data which informed conceptualization of SLBT and most of its testing to date has been based on the American and Western European systems (Henderson et al., 2018). The implementation inevitably takes different shapes and forms in different cultures and institutional settings (Hill & Hupe, 2014 p.1). Various scholars have therefore underscored the importance of testing the critical assumptions of SLBT in different administrative contexts (Hill & Møller, 2019; Caswell, 2019). It is against this background that, before establishing the level of discretion the traffic police officers are allowed within the road safety policies and how they have used their discretionary powers during the policy implementation process.

The chapter is divided into five main sections: the introduction; section two on the legal and policy framework for road safety policy implementation. The third section delves into the road safety policy implementation and coordination mechanisms. Section four examines the extent to which police conduct full enforcement of road safety policy in Nairobi. Finally, section five provides chapter conclusions.

2.2 The Legal and Policy Framework for Road Safety Policy Implementation in Kenya

Road safety is a complex process involving different sectors. There is thus a need for a functional and effective institutional framework for the development and implementation of policies and programmes to prevent road traffic injuries.

2.2.1 Road Safety Policy Process

According to Birkland (2015), the public policy process comprises the following stages: issue emergence, agenda-setting; alternative selection; enactment; implementation; and evaluation. Kenya's road safety policy cycles have followed a path like that described by Birkland (2015) above

to a great extent. Their emergence and development have been reactive as opposed to proactive. Asingo and Mitullah (2007) have observed that every time a serious accident has occurred in the country, the government's automatic reaction has been to develop a new law. For instance, in 2003, the annual number of traffic fatalities overtook the average mark of 2,849 for the first time in four years to stand at 3,004. As a result of this, the Minister for Transport and Communication issued legal notice no. 161 in December of the same year (Chitere & Kibua, 2004). The Minister in charge of Transport oversaw the strict implementation of the legal notice, which reduced the number of accidents during the first half of 2003. However, the number increased later when the Minister was transferred to a different portfolio. The number continued rising until it reached unmanageable levels in 2011, which resulted in the constitution of the National Road Safety Authority in 2012 (Mbao & Mwangangi, 2017). The spontaneous nature with which road safety policy issues emerge in Kenya means that the services of policy entrepreneurs have not been employed to define the policy issue on which advocacy efforts should be rallied as it is commonly the case (Brasil & Capella, 2017).

The agenda-setting stage of Kenya's road safety policy cycle has been, for the most part, accomplished by the mass media. Asingo and Mitullah (2007) opine that road safety policymaking in Kenya usually happens after either a fatal accident or a televised documentary on an upsurge in accidents. The reports of these incidences have helped Kenya's public opinion to prevent further deaths and economic losses associated with accidents. In response to the public demand for action, the government normally responds in two specific ways. First, by developing new legislation and second by momentarily enhancing enforcement efforts. Hon. Pkosing expressed his views quite clearly (Deb 4th December 2019) that favourable public opinion created by media reports facilitated committee discussion processes. Every Member of Parliament wants to be seen as supporting and not opposing the process of reducing deaths on the roads. As a result, in most instances, these policy proposals guide the governments' reaction to the prevailing road safety policy problems as all road safety legislation in Kenya is brought to the floor of Parliament as a government bill. Thus, they are initiated in a way that is so different from how they would have emerged if either interest groups or political parties initiated them.

Even though policy proposals introduced to Parliament as a government bill hastens the process of coming up with traffic laws, it is inadequate as far as participatory policymaking is concerned. The process excludes some key stakeholders such as road users' associations leading to the rejection of

most of the proposals in the road safety policy. Hornsby's (2013 p. 427) observed that in 1984, the Government of Kenya passed a new law requiring annual inspections, limiting passenger numbers and setting minimum standards for drivers. However, enforcement was difficult. A series of *matatu* strikes against the rules resulted in massive disruption of public transport, forcing the government to abandon the controls in their entirety.

A similar phenomenon is observed by Chetere and Kibua (2004) during the programme development process for legal notice No 161 that the Minister for Transport and Communications issued in Kenya. The new law sought to reduce the number of accidents by ensuring that only qualified people and good conduct were employed as *matatu* operators. Additionally, it set the speed limits for PSVs and required that the PSV's be fitted with speed governors. Also, PSVs were to be fitted with seat belts and failure by passengers to fasten seat belts would result in legal sanctions. To ease the process of monitoring compliance to the law, *matatu* (commuter vehicles) operators were expected to wear uniforms for ease of identification. The driver's photo had to be placed in front of the vehicle. The PSVs were to be painted white with a yellow line around them. Additionally, the vehicles were made safe by being tested for roadworthiness and fitted with speed governors.

In reaction to this, on 1st February 2004, the *Matatu* Owners Association (MOA) and some members of the Matatu Welfare Association went on a countrywide strike that paralyzed the public transport system. The strike would later be called off following an intervention by the President. A similar case was observed in 2015 when NTSA suspended all the vehicles belonging to the Embassava SACCO, banning them from operating in Nairobi because one of their vehicles had caused a fatal road accident. In reaction, the chairperson of *Matatu* Welfare Association termed mass punishment of all the vehicles belonging to Embassava SACCO as harsh and called for the resignation of the director of NTSA Francis Meja due to incompetence. They threatened to call for a nationwide strike if the ban was not lifted. How different aspects of Kenya's road safety policy were formulated made it difficult to create awareness and foster community ownership of its objectives. In response, the government is forced to use forceful means to ensure compliance. For instance, it has been observed that Kenyans only use seat belts whenever police officers are around (Pengpid & Peltzer, 2019).

The fourth stage in Birkland (2010) classification of stages of the policy process is enactment. This stage involves adopting the policy proposal developed in the preceding stages and making it binding by law. Usually, the stage is characterised by evaluating government proposals and suggestions of alternative courses of actions by National Assembly members. While the debates at national assemblies during the policy adoption process tend to be lengthy and controversial, the government rarely picks the alternatives. Regarding the Traffic Act, a review of Hansard reports (HC Deb 4th December 2019) for the parliamentary discussions undertaken during the presentation of Traffic Act amendment bills indicates that road safety policy legislations rarely elicited fierce debates in parliament by those opposed to laws. This phenomenon was occasioned by the fact that most of these bills came to the house floor when most assembly members are sympathetic to their policy objectives. This was occasioned by the fact that they are brought just a few days or weeks after a major accident and therefore solicit sympathies from Members of Parliament.

The fifth stage in the policy process is the implementation which involves turning policy objectives into goods and services for the policy target population and is usually done by the bureaucracy (Hill & Hupe, 2014). The policy implementation can be top-down, bottom-up or synthesis. The top-down perspective requires a favourable external environment, resource availability, causality between the policy objectives and policy problem, unity of command, clear and effective communication of objectives, that the lead implementing agency be respected by other agencies involved in the implementation process. The success of the bottom-up perspective is dependent on how street-level bureaucrats use their discretionary powers. Finally, the synthesizers believe that implementation success is achievable if the implementation objectives are clear. The causal theory between policy problem and objectives is clear, the existence of an implementation structure that encourages compliance by all those involved, and presence of committed and skilful workers, favourable external environment and political will (Sapru, 2011).

Historically, road safety policy implementation in Kenya has been undertaken by traffic police officers. However, there have been occasions where other organizations have supplemented efforts by the police. Some of these organizations have been government departments, while others have been non-governmental organizations. Some of the organizations that have supported police efforts include: the National Road Safety Council established in 1979 under the Ministry of Home Affairs; Road Safety Unit (RSU) established in 1981 in the Ministry of Transport; as well private sector

initiatives such as those that Invesco Insurance Company initiated in 2003 to educate the public on road safety (Asingo & Mitullah, 2007).

The above discussion notwithstanding, the implementation process has been faced with several challenges. To begin with, Chitere & Kibua (2004) observed that some traffic police officers own PSVs vehicles which can violate traffic rules with impunity. Moreover, Asingo and Mitullah, (2007) have also noted that coordination challenges inundate the policy implementation process. Until 2012, different parts of the Traffic Act were being implemented by different departments including the Ministry of Communications, Ministry of Finance, the Ministry of Home Affairs, and the Ministry of Transport (Mbao & Mwangangi, 2017). While the 2012 amendments of the Traffic Act and the establishment of NTSA may have reduced the number of organizations engaged in the road safety policy implementation process, discussions with some NTSA officials during the study established that some coordination challenges still exist especially between NTSA and the police.

The final stage in the policy process is policy evaluations (Caswell, 2019). While there have been several studies on road safety policy problems as indicated in the literature review, these studies only touch on a small policy section. Central to this is that decision-makers and street-level bureaucrats have developed good policies that guide road safety policy and detect potential deficiencies. However, applying road safety policies requires recognising the complexity of road safety actions and, therefore, the importance of taking that road user's specific needs into account. The complexity in evaluating road safety problems arises from the fact that these problems are multidimensional and tend to be interlinked. Thus, an evaluation of road safety challenges is hardly done. In instances where evaluation is done, it is isolated as opposed to a systematic approach. These studies indicate a policy implementation failure, evidenced by the rising RTI rate (Mbao & Mwangangi, 2017).

2.2.2 The Traffic Act, 2014

Occasionally ineffective policies are due to poor implementation and not because policies are bad per se (Hill, 2014). Occasionally ineffective policies come by because of poor implementation instead of them being bad (Hill, 2014). This arises when policies are hinged on a flimsy understanding of the policy problem, its root causes, and solutions for those problems. Concerning those policies that intended to exploit certain opportunities in the political system, the formulators might have a weak understanding of nature and opportunity presented and what is needed to exploit

it. Pressman and Wildavsky (1984) insist that public policies must be stated as hypotheses containing initial preconditions and the predicted consequences. The typical reasoning should be that if x occurs at time t (1) then y should be expected at time t (2). If there is a policy failure, the problem is with the correlation between the explanatory variable (x) and the response variable (y). This section of the study analyses the relationships between the traffic act and the road safety policy problems outlined by the previous implementation studies (Asingo & Mitullah, 2007; Chitere & Kibua, 2004; Orero, McCormick, Mitullah, & Chitere, 2012).

The discussions in this section are based on the 2014 edition of the Traffic Act. They focus on the following main issues: vehicle registration; licensing of vehicles; provision of driving licences; traffic regulations; parking; offences for drivers other than motorized vehicle and other road users; and regulations of public service vehicles. One of the ground-breaking aspects of the 2014 amendments of the Traffic Act is that it provides for a coordinated way of implementing road safety policies in Kenya. In the past, different organizations were undertaking various road safety implementation activities. For instance, driving and vehicle licences were being issued by the Kenya Revenue Authority (KRA). The driving tests and training curricula were under the ambit of the Kenya Police. With the current law, however, NTSA is expected to register and keep records of all vehicles in the country and coordinate the road safety policy implementation process (Asingo & Mitullah, 2007).

The Traffic Act (2014) stipulates that for one to apply for a road licence, the vehicle owner must ensure that the vehicle registration details are legitimate. The vehicle must also be insured against third party risks to cushion the owner from claims associated with accident situations. The licensing process also ensures that the vehicles being authorized by the Kenyan Government to use the roads are roadworthy. The law requires that for a vehicle to be accorded a road licence, it must have undergone inspection at least one month before the day of the commitment of the licence. The above provision is generally put into place to prevent accidents occasioned by mechanical defaults. Besides speeding, loss of control is associated with brake failures

Over 90% of traffic crashes occur because of driver errors (Mutual, 2014). Part IV of the Traffic Act requires that no one drive on Kenyan roads without a valid driving licence. Similarly, it is an offence for a vehicle owner to allow anyone to drive his/her vehicle unless such a person has been licensed to drive. To have a driver's licence, one is required to pass a competency test for drivers

conducted for the class of vehicle for which he/she intends to drive. The competency test includes knowledge of road signals and signs, highway codes, and being physically fit to drive the vehicle of the class for which he or she is being tested to drive. In addition to these, one needs to be medically fit to be authorized to drive on the Kenyan roads. To ensure ease of enforcing this law, the Traffic Act requires that all drivers carry their driving licences while driving and must produce it whenever demanded by a police officer for examination (Government of Kenya, 2012).

The Traffic Act requires all drivers and vehicle owners to ensure that their vehicles are not driven beyond the prescribed speed limit for the class of vehicle for which they are driving. Other than private saloon cars, bicycles and motorcycles, Section 42(2) of the Traffic Act, Cap 403 provides that vehicles are expected to write their maximum allowable speed limit boldly on the side of the vehicle, next to the number plates. The WHO standards also require drivers not to exceed a speed of 50 kilometres per hour within the boundaries of towns, market centres, and municipalities. Additionally, the highway authority is expected to put signs in all places where the 50 kilometres per hour restriction begins and ends (WHO, 2018). The law also institutes strong penalties for contravening this aspect of the road safety policy. When one is convicted for the very first time for speeding, he or she is fined a maximum amount of Ksh100 000. Their licence can also be withheld for one month. In the case of a second conviction, the licence is held for three months [Act No. 1 of 1986, s. 9, Act No. 38 of 2012, s. 11]. These provisions are important because speeding is one of the top five causes of accidents outlined by the World Health Organization (WHO, 2018).

Many factors contribute to the prevalence of speeding and the chances of a vehicle being involved in an accident while speeding. According to WHO (2004), a driver's choice of speed is dependent on many factors, including age, gender, alcohol level and the number of people in the vehicle. In terms of age, young drivers under 35 tend to speed compared to those over 35 years. Women tend to be more careful on the road, including observing speed limits compared to men. The probable reason for this phenomenon is that women are generally more risk-averse in comparison to men. Speeding is not only a risk factor for road accidents, but it also increases the probability that if an accident occurs, then there will be fatalities.

The higher the speed of a vehicle, the shorter the time a driver must stop and avoid an accident. An increase in the average speed by 1 km/h typically results in a 3% increase in the risk of an accident involving injury occurring, with a 4–5% rise in accidents that result in fatalities. Speed also

contributes to the gravity of the impact when a collision happens. Section 42. (1) Of the Traffic Act prohibits drivers, owners or persons in charge of a vehicle from causing or permitting any other person to drive a vehicle on the road at speed greater than such speed as may be prescribed as the maximum speed for that class of vehicle. This concurs with earlier studies which established that car occupants in an accident with an impact speed of 80 km/h are 20 times at risk of death compared to the impact with a speed of 30 km/h. (WHO, 2009).

The legal sanction for drunk driving is provided for in section 44 of the Traffic Act. One is not allowed to drive if he or she is drunk. Compliance with this policy requirement is mainly monitored using an Alco blow breathalyser which NTSA officers administer with assistance from traffic police officers from various traffic divisions. If one is found to have gone beyond the set limits, section 45 of the Act prescribes that he or she should either be fined a maximum fine of Ksh 100,000 or face two-year imprisonment. In addition to the foregoing, s/he could also be prevented from obtaining a driving licence during the same period. These offences are also applicable to vehicle conductors.

According to the Alcohol and Drugs Foundation (2016), alcohol consumption impairs effective driving in several ways. To begin with, it impairs one's vision at night, increasing the chances of either hitting a pedestrian or a motorcyclist. Alcohol consumption also reduces reaction time, meaning if one was overtaking and there was an oncoming vehicle. There is the likelihood of delay in swerving back to the right lane, which increases a head-on collision. Additionally, alcohol consumption reduces concentration and vigilance on the part of the driver, making it difficult to see oncoming vehicles, potholes, and pedestrians crossing the road in good time. It also brings about a feeling of relaxation and drowsiness, which may cause the driver to fall asleep at the wheel.

Moreover, it reduces the ability to understand one's sensory information. It is also noted that drunk drivers commonly experience difficulties performing many functions, including sticking to their lanes and driving in the right direction. It has also been observed that drunk driving increases one's level of confidence, resulting in higher chances of risky driving behaviours.

To address challenges relating to pedestrian fatalities, Section 45A of the Traffic Act prescribes that driving on the pavements or pedestrian walkways attracts a fine of Ksh. 30,000 or imprisonment of three months for the first conviction and six months for the second conviction (the Republic of Kenya, 2014). This is surprising because more than half of the road traffic fatalities are

pedestrians. For instance, between January to October 2019, 2,735 road traffic fatalities occurred in Kenya, out of which 1,049 were pedestrians (Kinuthia, 2019).

The past decade witnessed a tremendous increase in the number of motorcycles on the Kenyan roads, which was occasioned by the zero taxation on their importation. Consequently, there has been an upsurge in the number of road accidents during this period. This increase in the number of motorcycles on the roads resulted in a significant rise in the number of road accidents. This is attributed mainly to the fact that motorcycles are driven under poor road safety conditions. A study conducted in Naivasha established that motorcycle accident victims occupied 36% of hospital beds in the emergency section, 75% of whom admitted to riding without wearing protective helmets at the time of the accident (WHO, 2013).

A survey conducted on the Kenyan roads much later revealed that only three (3%) of the motorcycle riders and their passengers wear helmets (WHO, 2015). To reduce the number of deaths occasioned by motorcycle accidents, motorcycle riders and their passengers are expected to wear reflector jackets and protective helmets². The law also prohibits carrying more than one passenger. The motorcycles are also expected to be insured against third party risks, and the riders are required to have valid licences. If one is found to have contravened the provisions of the law highlighted above, they are liable to either pay a fine of Ksh 10,000 or face one-month imprisonment. The Ministry of Transport is expected to provide regulations for the type and quality of helmet and reflector jackets to be used. The law also expects all motorcycles to be registered by NTSA.

The Draft Integrated National Transport Policy attributes 10.5% of traffic accidents in Kenya to mechanical defects (Asingo & Mitullah, 2007). Consequently, Section 55 of The Traffic Act requires that all vehicles must be in good condition. For a vehicle to be considered roadworthy, all parts equipment, lights and tyres must be maintained in the conditions prescribed by the traffic laws. Part two of the same section prescribes that no vehicle is allowed on the road if overloaded. Failure to comply with the law on overloading can attract a court fine of Ksh. 400,000 or imprisonment of two years or both. Contravention of overloading laws more than once can result in the suspension of the vehicle's licence.

²section 103b of the Traffic Act 2012

From the foregoing discussion, it can be deduced that there are adequate causal relationships between road safety policy problems and policy objectives. This is evidenced by the fact that the Traffic Act covers all the deviant road user behaviour responsible for most traffic accidents, including drunk driving, careless overtaking, speeding and overloading. The traffic act also covers road user behaviours identified by WHO (2013) as responsible for traffic accidents' severity. These include failure by motor vehicle users to wear seat belts and helmets for riders and their passengers.

2.2.3 Kenya Roads Act of 2007

The main legislative document concerning road infrastructure is the Kenya Roads Act (No. 2 of 2007). The Act's purpose is to establish the Kenya National Highways Authority, the Kenya Urban Roads Authority, and the Kenya Rural Roads Authority. It also outlines their powers and functions. All three organizations are currently under the Ministry of Transport and Infrastructure.

The Kenya National Highways Authority is mandated to oversee the development, rehabilitation and maintenance of national roads and prevent accidents associated with road infrastructure and ease traffic flow. The authority is managed by a board of directors composed of permanent secretaries from the Ministry of Finance, Roads, Transport, Director-General of the Highways Authority and six people. They are experts in highway engineering, transport economics, surveying, accountancy, or the law.

Part B, Section 6(1) of the Kenya Roads Act establishes Kenya Rural Roads Authority which plays a similar role to the Kenya National Highways Authority. However, its jurisdiction is limited to rural areas. It is managed by a secretariat headed by the Director-General and governed by a board of directors. The board consists of a non-executive chairman appointed by the President, Permanent Secretaries in the Ministry responsible for Roads or his designate, Finance, for Local Government, and the Director-General, an *ex officio* member. Additionally, the Minister for Transport is mandated to appoint five individuals knowledgeable in surveying, highway engineering, transport economics, urban and regional planning or farming.

Furthermore, Part C, Section 9(1) of the Act provides for establishing the Kenya Urban Roads Authority. This authority plays a role like the two organizations discussed above. The only difference is that its area of jurisdiction is limited to urban areas. While it is agreeable that much more needs to be done concerning accessibility of the road to vulnerable road users, Orero et al.

(2011) observe that since independence, tremendous efforts have been made by the Kenyan government to expand the country's road infrastructure. These findings agree with those of previous studies that indicate that 90% of traffic accidents in Kenya are human behaviour (Pengpid & Pelzer, 2019).

2.2.4 Laws Relating to Regulatory Agencies

Mitula and Asingo (2014) observed that, in general, Kenyans have a culture of non-compliance to policies and only obey the traffic rules when the police officers are in sight. Therefore, good laws and infrastructure are not enough to reduce the number of road traffic accidents. This section discusses Kenya's policy legislation regarding the establishment and giving powers to road policy implementing agencies. Road safety policies in Kenya are implemented by various organizations, including the National Transport and Safety Authority (NTSA), National Police Service and County Council Road Traffic Marshals, regulated by different Acts of Parliament and policy legislations. However, this section discusses only the police and NTSA because they frequently interact with road users in Nairobi.

To begin with, NTSA is regulated by the National Transport and Safety Authority Act (No. 33 of 2012). The primary purpose of this act is to outline its scope of responsibility and authority (The Republic of Kenya, 2012 p.1718). Section 3 of the Act indicates that the authority will be a corporate body with a legal personality of its own, different from the parent ministry, and therefore capable of: suing and being sued, owning property, borrowing, and entering into contracts things. The establishment of the authority through an Act of parliament differentiates it from its predecessors: The National Road Safety Council established in 1970 and 1982 and the Road Safety Unit (RSU), which were either established through legal notices or were departments of government ministries.

To this end, the implementing agencies mentioned above could be allocated funds by the national assembly or mobilize resources from other funding sources. Indeed, one of the reasons for the failure of the National Road Safety Council was over-reliance on donor funding since parliament could not give it money because it was not established by an act of parliament (Asingo & Mitulla 2007). Section 4 of the Act provides for the functions of the authority. These include providing technical advice to the Cabinet Secretary on road safety matters and the implementation of road safety policies (The Republic of Kenya, 2012).

Section 5 of the National Transport and Safety Authority Act provides for the location of the Authority, while Section 6 to 25 details how the authority is to be managed. Part 4 of the Act is on licence provision. Concerning licensing of motor vehicles, section 26 provides that the authority must register all the motor vehicles that carry goods and passengers. Contravention of this provision carries a penalty of Ksh 300,000 or a five-year jail term. There are different types of licences, including those for private vehicles, PSVs, tourist vehicles, and those carrying commercial goods. Before issuing a licence, the authority verifies whether the vehicle is roadworthy, provisions such as speed limit and passenger capacity, records are well kept, and TLB is complied with. The vehicle licences issued for one year are not transferable and can be revoked by the authority if the road user violates road safety laws in the country. The vehicles are also expected to keep records of travel for ease of monitoring compliance to the Act's provisions on the maximum number of hours of travel.

The other important agency for road safety policy implementation in Kenya is concerned is the National Police Service. The police operations are outlined both in the constitution, their standing orders and the National Police Service Act (2011). Article 243 of the constitution provides for establishing a National Police Service consisting of the Kenya Police Service and the Administration Police Service. An inspector general heads the National Police Service while deputy police inspectors head the Administration Police Service and the Kenya police service. For purposes of accountability, article 246 of the constitution provides for establishing the Police Service Commission. The function of the commission includes recruitment, discipline and promotion of police officers. Article 245 section 2(a) 4 and 5 underscore the principles of constabulary independence. While noting that the police can receive requests and directions from the Cabinet secretary in charge to pursue certain lawful objectives, the law also states that no person may give directions to the Inspector-General concerning:

- (a) The investigation of any offence or offences;
- (b) The enforcement of the law against any person or persons; or
- (c) The employment, assignment, promotion, suspension, or dismissal of any member of the National Police Service. (The constitution of Kenya, 2010 p. 149).

Part V of the National Police Service Act is on the directorate of criminal investigations. It mainly discusses the establishment of the directorate, its functions and its structural configuration, including the main staff members, their recruitment process and circumstances under which they

can be removed from office. This part also discusses how the directorate can lawfully fundraise and how to account for such funds.

Part VI of the National Police Service Act details the county policing authorities and concerns itself with establishing and equipping police stations and county police authorities. The main function of these authorities is to contextualize the policing services to the local level by providing forums through which the public can feedback and influence the quality of the services they get from the police at the local level. The data collected during the KII indicated that while this unit is functional in Nairobi, their main concern is security and how to improve community policing. Additionally, from the way the police service is structured and its culture as will be seen in section 2.3, this authority has little influence on police discretion and, consequently, on how road safety policy is being implemented.

Part VII is on general functions, powers, obligations and rights of police officers in the service and mainly focuses on the rights and obligations of police officers. Some of the issues discussed include police working hours, limitations to their fundamental rights and freedoms, and their general powers, including the power to compel the attendance of witnesses at the police station, power to require a bond for attendance of court and road safety. They are also allowed to collect forensic evidence from suspects, such as photographs and fingerprints. The part also outlines the circumstances in which a person can be arrested or have their houses searched without a warrant and use of firearms.

Part VIII is on recruitment, enlistment and training of police officers. It concerns itself with how police officers should be recruited and trained. This part empowers the service to develop a curriculum to be used for purposes of police training. The service is also allowed to work with other institutions such as universities to provide training for their members. According to police, recruitment and training form an essential part of police culture and their discretionary powers. Discussions with some police bosses indicated that the police service rarely recruits people from the right segments of the society because policing jobs are not attractive to many parents as compared to other professions such as medicine and law. Those who get recruited therefore bring along a bad culture to the police service.

2.2.5 Laws Regulating Road User Associations (SACCOs)

The formation of road users' associations in Kenya dates to 1973, when the *Matatu* Vehicle Owners Association (MVOA) was formed as a self-regulatory mechanism for the sector. The primary function of this association was to allocate routes to the new *matatus* and lobby the government against developing policies that were considered detrimental to their interests (Chitere & Kibua 2004). This association was, however, deregistered in 1988 due to its politicisation. Following the return of multiparty politics in 1991 and the civil liberties that followed, the association was registered again in 2001 as *Matatu* Welfare Association (MWA). In 2003, vehicle owners formed the *Matatu* Owners Association (MOA).

Additionally, drivers and conductors on some routes formed route-based welfare associations and savings and credit cooperative societies (SACCOs) for resource mobilisation purposes (Behrens et al., 2017). However, in 2003, the then Minister for Transport issued legal notice No 161, which required that all PSV vehicles belong to a registered SACCO or a company. The SACCOs were required to regulate the behaviour of their members towards ensuring compliance with the road safety policies (Orero et al., 2011).

The Co-operative Societies Act, 2012 regulates SACCOs in Kenya. The Act is divided into 16 parts. The first part introduces the Act by defining the main terms used in the legislation. The second part discusses the offices and officeholders mandated to implement the Act. The third part discusses the process and requirements for registering a cooperative society. It also provides the circumstances in which one can be denied an opportunity to register a SACCO and the available opportunities for appeal against such decisions. The fourth part discusses the privileges that accrue from one being a member of a cooperative society. The fifth part is concerned with the responsibilities of members of a cooperative society. These include qualification for membership, limitation of holding share capital, membership subject to authorisation by the annual general meeting, membership of the co-operative society, limitation of membership to one society, voting rights of members, transfer of shares, rights of members and member's rights vis-a-vis the co-operative society. The sixth part is on the duties of co-operative societies.

It stipulates that cooperatives must have a registered address to which communications can be sent. They are also expected to keep a copy of the Cooperatives Act, any other relevant legal notices and by-laws made by the society. In addition, they are expected to conduct accounts audits every

financial year. Part seven concerns itself with the management of society. Part eight is on ways in which a cooperative society can either be amalgamated or divided. Part nine is on the rights and obligations of co-operative societies on their members. Part ten is on property and funds of co-operative societies and is concerned with how money and other assets belonging to cooperative societies can be employed, including loans, investments, dividends, among others. The rest of the document provides further guidelines on the management of co-operative societies. Co-operative societies which are deposit-taking have an additional law to follow. That is the Sacco Societies Act. Beyond providing regulation for deposit-taking SACCOs, the Act also provides the establishment of the SACCO society's regulatory authority (SASRA). This is government cooperation that regulates, licenses and supervises deposit-taking Sacco Societies in Kenya.

An assessment by Asingo and Mitula (2007) revealed that *matatus* managed by well-organized SACCOs tended to have lower levels of accidents than those not in SACCOS. The improvements in the sector are associated with the fact that SACCOs support processes related to recruitment and vetting employees for the sector. Unlike in the previous years when each operator sourced for their workers, currently, the SACCOs manage the recruitment process and undertake background checks. This makes it difficult for a driver who has erred with one operator, seeking employment with the next (Behrens et al., 2017). The SACCOs also provide their members with networking and collaboration opportunities.

These opportunities ease the process of dealing with new legislation and reduce the costs of acquiring information on the places where fuel is cheap. They can even start a fuelling station of their own. Orero et al. (2011) observed that *matatu* SACCOs issue loans to their members lower than the bank interest rate. These loans can either upgrade the vehicles, buy spare parts, or buy new PSVs, thereby reducing unworthy road vehicles. The presence of SACCOs has also increased the *matatu* operators' ability to effectively participate in the policymaking processes because they now have a forum through which they can aggregate and articulate their interests (Behrens, et al., 2015)

2.3 Institutional Frameworks for Road Safety Policy Implementation

The public service bureaucracy does the process of turning policy objectives into goods and services (Baviskar, 2018). In Kenya, the main institutions discussed are the NTSA and the traffic police (Mbao & Mwangangi, 2017). This section discusses structural configuration emergence, evolution and functionality for road safety policy implementing agencies in Kenya. The section has been

informed by the crucial role played by implementing agencies in the policy process. Campos and Syquia (2006, p. 1) observed that after decades of research, discussion, and debate, economists finally acknowledged the importance, if not the primacy, of institutions as the bedrock of sustained growth and development. While policies can make a difference, they agree that much depends on the institutions that govern a country. This observation delves into a long-standing debate in public administration scholarship over the role of bureaucracy in the policy process (Brehm & Gates, 1999). In implementation studies, the role of the bureaucracy cannot be overemphasized because policy execution occurs within the setting of an institution or a group of institutions (Quah, 2016). One of the key propositions of SLBT is that discretionary powers employed by street-level bureaucrats stem from the institutional challenges in the street-level bureaucracies, including inadequate resources and lack of clarity of performance goals (Evans, 2015). In addition to the internal organizational constraints to public policy implementation, many policies require various agencies to collaborate during implementation efforts that have their challenges. The problems associated with networking and collaboration between agencies during the policy implementation process have been described in the public policy scholarship as the complexity of joint effort (Pressman & Wildavsky, 1984). This arises due to conflict of interests, competition and lack of understanding, commitment and differentiation of resource capacities among the collaborating implementing agencies.

With the foregoing discussion in mind, this section of the study provides a historical and contextual background to the various agencies involved in road safety policy-making processes. Three categories of institutions do road safety policy implementation in Kenya. These are road users associations, including the SACCOs, road infrastructure agencies, and road safety policy enforcement agencies. The figure below illustrates the road safety institutional framework for road safety policy implementation.

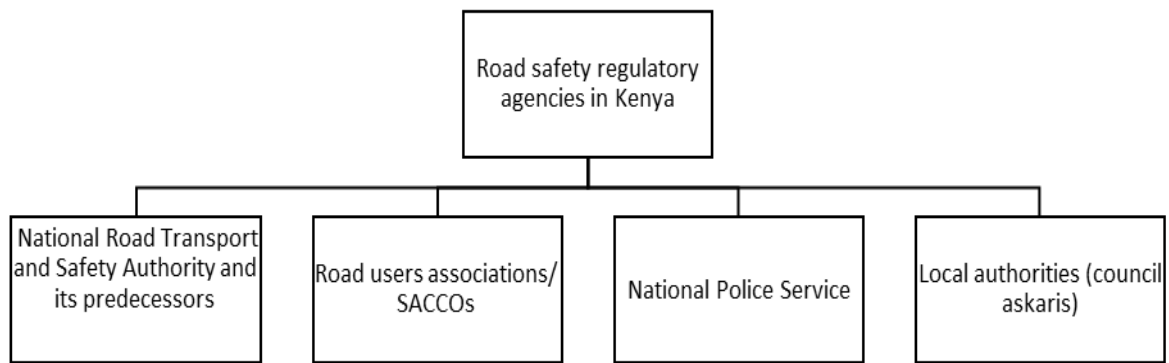


Figure 2.1: Road safety policy regulatory framework

Source: Author (2021)

2.3.1 National Road Transport and Safety Authority (NTSA)

Until 1970, the prevention of traffic accidents was mainly done by traffic police. The first attempt to institutionalise the road safety policy implementation process was witnessed in January 1975 when the Ministry of Home Affairs set up a Road Safety Council. The council was an advisory committee representing various ministries and organizations (Asingo & Mitula 2007). The council did not, however, last long. It was wound up after the first meeting because the Ministry in which the organization was housed lacked the coordination powers in the government departments whose efforts were required for the implementation process. The first meeting during which the Council was to be launched was poorly attended. Following the dissolution of the Council, the implementation process remained uncoordinated. The only effort towards a joint venture was made between Kenya police and the Voice of Kenya (present-day Kenya Broadcasting Corporation) radio to sensitize public members on road safety. Other efforts towards institutionalization of road safety policy implementation in the 1970s saw the establishment of district traffic committees in some districts such as Kericho and Nakuru. These committees were formed to advise the government on the road traffic needs in their areas of jurisdiction. However, these committees largely depended on the goodwill of the district commissioners and other stakeholders in the committee. They neither had a legal mandate nor a budget (Asingo & Mitullah, 2007).

Road safety policy implementation gained a new leaf of life in 1979 when the government received funding from Finland to implement a road safety programme (Odero et al., 2003). The programme was implemented in two phases. Phase one of the project supported activities relating to law enforcement, accident investigation, driver training, vehicle inspection, first aid training, data management, education and research on road safety. In contrast, the second phase implemented between 1989 and 1991 targeted five sectors, including engineering improvement of dangerous

road sections, traffic law enforcement, development of new road safety demonstration projects, and public education.

One of the outcomes of phase one of implementation was establishing the National Road Safety Council of Kenya in May 1982. The council was to be a lead agency in the road safety policy implementation process to reduce the number of road traffic fatalities from 1,515 reported in 1983 to less than 1000 by 1993. To achieve this goal, the organization was expected to champion the road safety policy formulation process, mobilization of resources, management of resources designated for road safety policy processes, and development of sustainable road safety programmes. Additionally, provincial Road Safety Councils were established to coordinate road safety activities in the provinces. Also established in 1981, the Road Safety Unit (RSU) was also established to act as a secretariat for the council. The unit was housed by the Ministry of Transport and Communication and located in the planning and coordinating department. The unit provided technical advice to the council, spearheaded studies on road safety, and analysed accidents data. It also advised the government on road designs, maintenance and aspects of town planning related to road safety.

Some of the activities implemented by the council included sensitization of the public on road safety through radio and television programmes. It constructed children's traffic parks in Nairobi and Kisumu to educate children on road safety. The organization also spearheaded the process of identification and modification of hazardous road sections. Road safety training was also included in the primary school curriculum. It also supported the processes related to legislative review, especially of the Traffic Act (1954) and Public Roads and Roads of Access Act (1951). The organization hosted the First African Road Safety Congress in Nairobi from August 27th to 30th, 1984. The Council also reviewed drivers training curriculum and licencing procedures (The Kenya Times Newspaper, 1985). In general, the organization gained tremendous achievement as far as policy formulation is concerned. As documented in the table below, however, it failed to reduce accidents effectively.

Table 2.1: The number of traffic crashes in Kenya from 1965 to 1998

Year	No. of accidents	No. Injuries
1965	3,562	4,698
1970	5,163	7,756
1975	6,535	9,621
1985	8,474	15,383
1990	10,306	181,930
1993	12,355	24,440
1994	11,785	22,960
1998	14,342	28,492

Source: Adapted from Odero et al. (2003)

Odero et al. (2003) attributed the programme implementation failure to lack of coordination mechanism, limited authority and responsibility, lack of resources, lack of qualified personnel and logistical support, and limited capacity to conduct research. Asingo and Mitullah (2007:18) corroborated these findings, who noted that the placement of various road safety implementation roles in different ministries complicated the implementation process.

In addition, NRSC was established through a gazette notice rather than an Act of Parliament. To this end, it could not be funded directly through the exchequer. Its functions, therefore, depended on the goodwill of the government of Finland. When the project ended, the NRSC collapsed (Asingo & Mitullah, 2007). With the collapse of NRSC, road safety policy implementation processes returned to the disjointed state of the 1970s and 80s. For instance, issues to do with car registration and licencing were being handled by the Kenya Revenue Authority. At the same time, the Traffic Police conducted issues dealing with law enforcement and driving tests. In addition to the foregoing, vehicle inspection units existed, which oversaw establishing whether a vehicle was roadworthy. On the other hand, the Ministry of Transport would oversee policy issues such as helping the process of drafting road safety policy bills. The Ministry of Cooperatives oversaw registering Public Service Vehicles to the SACCOs. Because there were so many government

departments involved in implementing various aspects of the road safety policy in Kenya, policy implementation had become cumbersome, and duplication of responsibilities was also widespread, making the implementation process a great challenge (Nyachieo, 2018).

The NTSA was established on 26th October 2012 to coordinate road safety policies by preventing duplication of duties and making road safety policies easier to implement (the Republic of Kenya, 2012). Today NTSA is the main institution responsible for the process of implementing road safety regulations. Since its establishment in the year 2012, NTSA has made reasonable progress concerning the collection of data related to road accidents and developing legislation to aid the implementation of road safety policy. The organization has also taken up most of the responsibilities related to road safety policy. These were initially undertaken by the police and other government agencies, including developing a driver's training curriculum, conducting road tests, vehicle inspection, and traffic checks for over speeding and drunk driving. However, it is worth noting that due to its limited capacity in terms of personnel, most of the traffic law enforcement responsibilities are still being undertaken by the police. In addition, NTSA does not have arresting and prosecutorial powers. To this end, it can only recommend the arrest and prosecution of road offenders (Aondo, 2019). Considering the reasons above, the main road safety policy implementing agency is the police.

2.4 The Traffic Department

Training of traffic police officers began in 1971, while the traffic police department was established in 1974 to deal with the rising cases of traffic accidents observed in the decade (Asingo & Mitullah, 2007). The principal objective of the traffic department is to ensure the smooth movement of vehicles and other road users on the roads. They are also tasked with enhancing road safety and minimising losses associated with road traffic accidents. Usually, the traffic police officers are the first to know whenever there are problems on the roads. Additionally, they are the best-qualified individuals to provide information and advice on road network planning. According to Section 24 of the National Police Service Act, 2011, the department is mandated to ensure a free traffic flow. This section further deals with the prevention of road accidents, investigating road accidents, enforcement of all Laws, Rules and Regulations with which the department is charged, and initiate road safety sensitization to the members of the public. To execute the above functions, the Kenya police service has established various traffic divisions across the country. The table below provides the number of traffic police divisions in the study area and their force strength:

Table 2.2: Number of traffic police officers in Nairobi County

No	Division	Total Number of Officers
1	Kabete	29
2	Mangongeni	30
3	Buruburu	41
4	Kilimani	52
5	Gigiri	28
6	Ongata Rongai	25
7	Embakasi	36
8	Kasarani	29
9	Central	43
10	Langata	49
11	Industrial Area	47
12	Pangani	44
13	Kayole	29
14	Kajiado North	18
	TOTAL	500

Source: Key Informant Interview 2016

The study established that while the traffic department has made tremendous efforts towards achieving its strategic objectives, discussions with traffic III in charge of the operations revealed that it had not achieved maximum productivity due to many challenges facing the department. Most of these issues relate to the scarcity of resources, performance monitoring and constabulary independence. These challenges and coping mechanisms that the police have developed to endure them are discussed in section 2.4

2.4.1 The Traffic Police Officers as Street Level Bureaucrats

As mentioned earlier, this study is premised on the assumption that traffic police officers exercise much discretion in their jobs which is done in a manner that undermines the policy implementation process. However, because the police organizational structure is hierarchical and the code of ethics requires a high level of discipline and obedience to the authority, the concept of police discretion is highly contested. Brown (1988) observed that the police are often regarded as the epitome of

highly professional and bureaucratic agencies. Police departments are typically described as quasi-military organizations in which command and control are centralized. The administrator emphasizes the legitimacy of hierarchical authority and rigid adherence to impersonal rules and regulations. However, it is also acknowledged that police wield broad powers of discretion and autonomy in carrying out their tasks. This paradox is rarely admitted and much less explained by most observers of the police.

Lipsky (2010) supports the above proposition, who observes that discretion is a critical element of the frontline workers' jobs in street-level bureaucracies. This is attributable to the fact that their duties involve interactions with people. The other observation is that work in these departments cannot meet high-quality standards due to a lack of time, information, and resources to respond to their client's demands. The frontline workers in these departments develop routine practices to conduct their jobs and psychologically simplify their clientele and environment through practices such as client profiling and domain discretion. The effects of their discretionary choices have profound effects on the work that they do. Because of these characteristics, Lipsky (2010) has termed the street-level bureaucrats as the ultimate policymakers.

Because of the above discussion, in this study, efforts have been made to establish if traffic police officers exercise a considerable amount of discretion in the course of their jobs, and the following observations are made. To begin with, the study observed that traffic police divisions in Kenya are chronically under-resourced for the kind of work the law expects them to perform. According to the National Council for the Administration of Justice (2017), there are 45,000 police offices in Kenya. Only a small fraction of these are traffic police officers and thus actively involved in road safety policy implementation processes. In Nairobi, for instance, there are only 500 traffic police officers. The total population of vehicles currently stands at 2,500,000 (Statistics Abstracts, 2016). Discussions with traffic III, who oversees operations at the traffic department, also noted a shortage of road safety implementation equipment such as speed cameras and Alco blow breathalyser. The DTEOs singled out this phenomenon interviewed as a major hindrance to the implementation of road safety policy.

The work of police officers is further complicated by the uncertainty and ambiguity of clients (Brown, 1998). Police work is done within the community where there are both bad people and good people: those the police desire to protect and those they are protecting against live side-by-

side. Additionally, the uncertainty of police work is further complicated because their work involves the threat to use or actual use of violence. The use of violence is meant to protect the life and property of the communities in which the patrol is taking place and the safety of those patrolling. In the circumstance of this study, among the road users, some are keen on observing the law while some are bent on making their lives on the road difficult by either overlapping or not giving way to pedestrians. Among the road users also, some treat the police respectfully while others are rude to them. Beyond these, there is also the challenge of insecurity, especially at the traffic checkpoints at night. While checking for road safety issues, the police also must be on guard for their safety.

One of the dilemmas faced by street-level bureaucrats relates to the fact that in street-level bureaucracies, rules are numerous and keep on changing all the time (Evans, 2010). However, in the criminal justice system, there exist strict rules guiding the behaviour of officers. Concerning police operations, such rules are called standing orders. Both the law and the traditions require strict observance of these standing orders. It was, therefore, not surprising that 92% of the respondents responded in the affirmative to the question as to whether there are laws guiding police operations. Concerning road safety policy in Kenya, the Traffic Act has been numerous defined by many legal notices. These have been issued by various transport ministers and permanent secretaries concerning the application of road safety rules and even issuing new rules, making it difficult for those in charge to implement and remember. To this end, when the police were asked about the main factors that determine which road users to stop for traffic checks and aspects of the road safety policy to check for compliance, 74% of the respondents noted that they conduct random inspections. In comparison, the remaining 26% noted that inspections are guided mainly by the officers' perceptions.

To overcome this challenge, the traffic police officers had to develop some coping mechanisms. The data generated from the FGDs, which was corroborated by scripts from the KII, indicated that the police do not conduct full enforcement. From time to time, they are forced to decide whether investigating a certain road user suspected of committing a traffic violation is worth using limited traffic law enforcement resources. The police must also prioritize when to conduct their various duties, including educating the public on road safety, ensuring an easy flow of traffic and maintaining law and order. Beyond making the decisions on cases that warrant their attention, the

traffic enforcement officer must also decide on enforcement tactics. For instance, whether they would caution and let go or arrest and charge in court.

Police discretion also stems from their autonomy from superior's supervision and public scrutiny created by the police culture. One of the prominent parts of the police culture is solidarity and loyalty to other officers. This stems from the fact that police are aware that they will need to use orthodox means to secure compliance from suspects from time to time. The study observed instances where the police could break side mirrors for *matatus* to force them to move. There were also instances where they caned the drivers. When the concerned drivers were asked why they did not take them to court, they noted that police always protect one another, and it will be challenging to prove the case in court. In the first instance, one would experience many difficulties in having the case recorded in the occurrence book at the police station.

Having established that traffic police officers exercise substantial discretion in their duties, the next question for the rest of the dissertation is whether police discretion undermines or promotes road safety policy implementation. According to Anderson (2010), public policy goals are loosely stated and imprecise. They should give general policy direction other than those precise targets for its implementation. The vagueness in public policies arises from the fact that policymakers are often unaware of the precise implementation details they want to implement. Therefore, they are much happier leaving such details to the specialists within various government agencies tasked with the policy implementation process to fill in the gaps. There are also cases where the policymakers are not able to resolve conflicts between them on policy objectives. In this case, the policy is adapted with conflicting objectives hoping that such conflicts would be resolved at the administrative level. In other instances, conflicts may occur between the current law and those that were enacted in the previous years. Lipsky (2010 p.41) summarizes the nature of conflicts in public policies being implemented in street-level bureaucracies as Client-centred goals conflict with social engineering goals. Client-centred goals conflict with organizational centered goals, and those goals conflict because street-level bureaucrat's role expectation is communicated generally through multiple reference groups.

Conflicts emerge when there are conflicts between the client's needs and the organisation's social goals. For instance, society may want instant justice and may end up burning a vehicle that has hit a pedestrian, while the police may want the person to go through the due legal process. As pertains

to conflicts between clients' centred goals and organization goals, in most street bureaucracies, tailoring services to the clients' individual needs in most instances goes against the organizational objectives of processing the most significant number of clients possible with limited resources. For cases of judges, for instance, tailoring decisions to individual client needs may not allow them to cope with the heavy caseloads. The other dilemma faced by street-level bureaucrats is how to meet the clients' role expectations with those of the peer groups. This is fundamental since the street-level bureaucrats need peer groups for support and to maintain morale. The matter is further complicated because clients are not the primary reference group to the street-level bureaucrats. They value what their peers say more than their clients' needs.

Arising from the goal conflict discussed above is the issue of performance management. Police officer's performance evaluation process is not centred on goal achievement. They do not sign the performance agreement form at the beginning of the year and are not evaluated on the same form at the end of the year. The promotions process is mainly dependent on discipline, community views on the officer, the number of firearms recovered by the officer from thugs and the date of appointment. With a lack of monitoring and evaluation of performance, bureaucratic executives have very few chances of controlling the street-level bureaucrats towards the organization's objectives. Data from the key informant interviews noted that police largely rely on calling gadgets to give directions to the patrolmen and confirm if they are present at their duty stations. The other performance monitoring strategy employed in the police department is to review daily work reports on citations. Brown (1998) noted that these methods are primarily used to check if the patrolmen are working rather than controlling their discretion.

2.5 Chapter Conclusion

This chapter sought to provide policy, legal and historical background to the study. The analysis has two contending goals. The first was to demonstrate that the observed road safety policy implementation failure is not caused by confounding factors such as insufficiency of the legal and policy framework. Secondly, it was to show that police are street-level bureaucrats and thus exercise a considerable amount of discretion. Regarding the policy and legal framework, it established that there are sufficient linkages between road safety policy objectives and the road safety policy problems in Kenya.

Concerning the institutional capacity of the implementing agencies, the study established that NTSA had shown tremendous commitment to reducing deaths on the Kenyan roads through research and policy advice. However, its capacity is limited concerning the number of personnel, monitoring equipment, and coordinating authority. Notably, its effectiveness is dependent on the goodwill of the police and the judiciary, which have the constitutional mandate for law enforcement. For instance, its officers complained about the low conviction rate of traffic offenders, which has hampered its ability to deter traffic law violations. Finally, the study observed considerable similarities between the behaviour and traffic police officers in Kenya and the street-level bureaucrats described by Lipsky (2010). This is evidenced by the fact that traffic police officers operate in an environment of resource scarcity. The personnel and equipment, including vehicles, speed cameras, and others, are much fewer than the department's mandate.

Moreover, the target of their operations is human persons whose behaviour cannot be standardized. As a result, they are forced to decide which road user categories to target for traffic law implementation, which policy domains to target for implementation, and what time of the day and day of the week to prioritize traffic enforcement duties. Having established that road safety policy implementation officers exercise much discretion in their jobs, the next three chapters examine its effect on road safety policy implementation outcomes.

CHAPTER THREE

TARGET DISCRETION BY TRAFFIC POLICE OFFICERS AND ROAD SAFETY POLICY IMPLEMENTATION IN KENYA

3.1 Introduction

This chapter addresses the first research question on how the target discretion by traffic police officers affects road safety policy implementation in Kenya. Therefore, the prime focus of this chapter is to test the relationship between traffic police officers' target discretion and road safety policy implementation outcomes. Target discretion is the independent variable, while policy implementation of road safety is the dependent variable. Target discretion is used in this study to refer to the choices made by police officers on which road users to prioritize for road safety. On the other hand, road safety implementation refers to the extent to which road safety policy is effectively implemented and is measured in terms of road safety policy violations and accidents by various categories of road users. The relationship between the independent variable and dependent variable is measured through Spearman's rank correlations between the indicators of the two variables. The chapter unfolds into five sections: after the introduction, section two examines the dependent variable, the third section examines the independent variable, and the fourth section discusses the relationship between the dependent and independent variables. Based on the outcomes of the tests conducted in section four, section five draws the study conclusions and verifies whether target discretion promotes or undermines road safety policy implementation.

3.2 The Level of Road Safety Policy Non-compliance in Nairobi

This section discusses the level of road safety policy compliance in the City of Nairobi with a specific reference to the type of vehicles and road users associated with the highest number of traffic violations, accidents and fatalities. Correspondingly, the first part of this section explores the prevalence of noncompliance by road user type, and part two examines noncompliance by vehicle type.

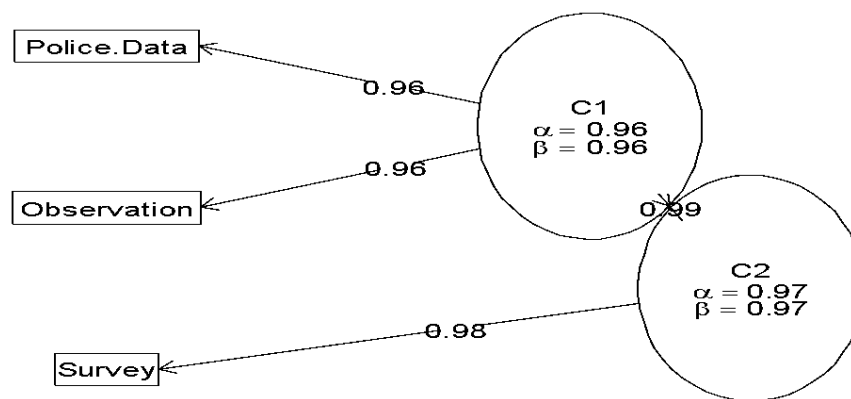
3.2.1 Non-Compliance by Road User Categories

The number of road safety violations measures road safety policy success, injuries and fatalities (WHO, 2018). Knowing absolute numbers is, however, never sufficient in crafting accident prevention strategies. Usually, one needs to understand which categories of road users are associated with the highest number of violations, accidents and fatalities. Thus, in this section, road safety policy outcomes are analysed by road user categories. The data employed has been extracted

from three main sources: police records, observation, and police perception survey. The study made efforts to test data stability from the three sources using Kendall's coefficient of concordance. The calculated Kendall of concordance figure is $W=0.77$. This indicates a good level of agreement among data collected from a variety of sources on the level of compliance among different categories of road users.

The consistency test between three data sources used in Table 3.1 was repeated in R using `inclust`, as shown in Figure 3.1. Since the calculated alpha value is higher than 0.05, it is deducible that there is consistency between the ratings of the level of notoriety to cause accidents by different road users. This assertion is further confirmed by the fact that the observed beta (β) values in both cluster one (C1) and cluster two (C2) is also higher than 0.5. β typically represent correlation in the worst-case scenario (Meyer, 2019). In terms of which two data sets have the most similar elements, Figure 3.1 shows a more remarkable similarity between data elements in the police records and observation compared to the survey data. This may be explained by the fact that survey data is susceptible to recall bias³, hence triangulation (Fischer & Miller, 2006).

Figure 3.1: Item Cluster Analysis for Various Data Sources



Source: Field data (2021).

³ A phenomenon in which the respondents remembers certain categories of past events and not others (Raphael, 1987)

Having tested the internal consistency of the data employed in the study, the data is now hereunder analysed. The first column of Table 3.1 shows road users' categories under which violations data have been categorized. The second column displays the number of violations which were observed under each of the paired categories. The third column show police's ratings of various road users. This is in line with their notoriety for road safety policy non-compliance. The rating is from 1 to 10, with ten being the most notorious. Finally, the fourth column has the number of reported accidents under each category as per the accident's registry.

Table 3.1: The Level of Policy Noncompliance by Road User Category

Road user category	Observation	Survey	Police records
	Frequencies	Ratings	Accidents
Pedestrians	207	9.6	998
Passengers	178	8.2	898
Motorcyclists	158	10	326
Trolleys	138	7	0
Handcarts	109	6	0
Tuk	79	7.9	0
Drivers	69	3.6	154
Pedal Cyclist	49	1	53
Conductors	102	2	0

Source: Field data (2021)

As shown in Table 3.1, violations of data collected through observation and survey indicate that motorcyclists and non-motorized road users such as pedestrians, pedal cyclists, trolleys and handcarts commit most traffic violations. The phenomenon is explainable by a variety of factors. According to the police officers interviewed, most motorcycle riders have never attended a driving school and thus lack professional riding skills, road signs and road safety rules. These sentiments by the traffic police officers are comparable to a study finding by WHO (2011), which established that only 3% of the motorcycle passengers wear helmets. Similarly, a study by Matheka et al. (2015) observed that motorcycle-related road traffic injuries predominantly occur among young people who, in most cases, lack RTI prevention education and are therefore negligent of road traffic rules. Often, when these injuries occur, the victims are not usually wearing any protective clothing gear as required by law.

This data is further compared to that generated from the police FGD transcripts, which indicated that pedestrians and other non-motorized road users are often careless with their road usage. It is a

commonplace to find them crossing at non-designated places, talking on phones or not observing other traffic rules. From the above discussions, it can be concluded that pedestrians and motorcyclists commit most road safety policy violations in Nairobi. Because not all violations lead to accidents, comparisons were made between the data extracted through the survey and those reported in the accident's registry.

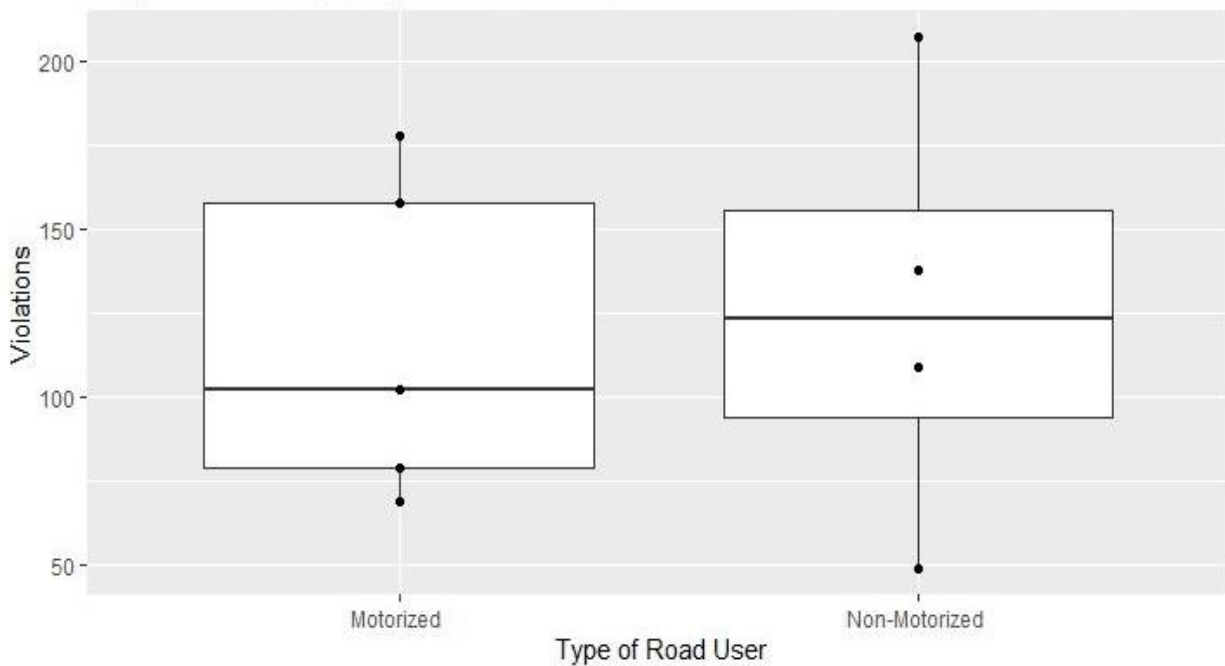
Accident data extracted from the police records indicate that most victims of traffic injuries are pedestrians, followed by passengers and motorcyclists. For instance, on 19th February 2020 at 7.30 p.m. along Kayole road, an accident occurred involving a motorcycle, a pavilion passenger and a pedestrian. The pedestrian was hit as she was crossing the road. As a result, the pedestrian sustained chest pains and bruises on her right leg, while the pavilion passenger sustained a deep cut on her right leg and bruises on her right hand. In 2019, a total of 2429 accidents were reported in Nairobi. Out of these, 998 passengers and 326 motorcyclists were involved.

The findings above are comparable to WHO (2018), which notes that more than half of global cases of RTI are vulnerable road users. Motorcyclists contribute to 23% of injuries reported, while pedestrians are 22% and cyclists 5%. Regarding RTI statistics in Kenya, a study by the same organization in Thika town noted that 38% of the motorcyclists surveyed during the study had experienced a traffic accident within the last three months. Out of these accidents, 62% were categorized as severe injuries.

Ogendi et al. (2013) made similar observations, noted that out of the 253 RTI patients admitted to Kenyatta National Hospital between June-August 2011, 59.1% were pedestrians and 24.4 were passengers, 9.7% motorcyclists, 5.1% bicyclists and 1% drivers. A similar study observed that Motorcycle trauma patients constitute 39.4% of all road traffic injuries. Among this, 58 % were not wearing a helmet at the time of the reported accident (Sisimwo & Onchiri, 2018). From the above discussions, more traffic accidents in Nairobi are associated with non-motorized road users than motorized road users.

To compare the level of violations between motorized and non-motorized road users in Nairobi, a two-sample t-test was applied. The result of this test is thus presented in the boxplots, as shown in Figure 3.2.

Figure 3.2: Comparing Violations between Motorized & Non-Motorized Road Users



Source: Field data (2021)

As shown in Figure 3.2, the crossbar for non-motorized road users' boxplot is higher than that of motorized road users. This means higher levels of violations were observed among the non-motorized road users during the study period than motorized road users. The high prevalence of RTI among vulnerable road users reported in the above paragraph is mostly attributable to negligence on their part. The enforcement officers attributed this phenomenon to inadequate road safety awareness among non-motorized road users. Unlike drivers who undergo training and competency tests before being given driving licences, no such training is required for pedestrians and pedal cyclists. These sentiments are comparable to a study in Uganda in which the behaviour of 13,064 pedestrians was observed. The study noted that only 35.4% of pedestrians used the overpass. It attributed this phenomenon to the fact that while 77.9% of the pedestrians were worried about their safety, only 6.6% felt that a footbridge was appropriate for avoiding accidents (Mutto et al., 2002). The number of accidents among pedal cyclists was low since most people no longer use them, especially in high traffic areas.

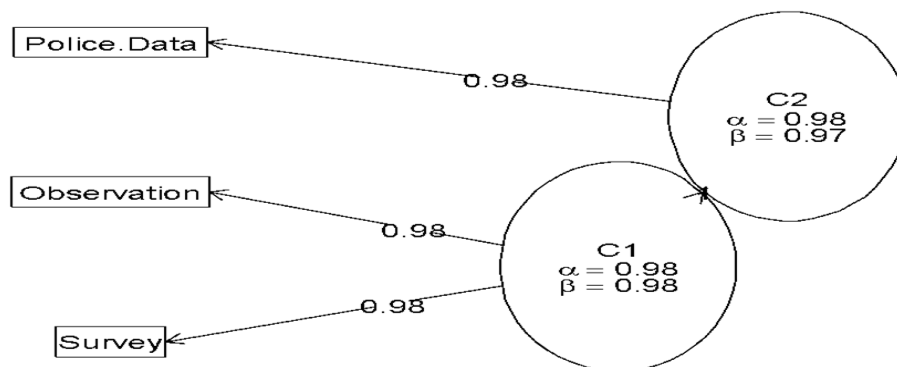
While looking at these statistics, it is easy to assume that vulnerable road users are simply victims of bad driving behaviours. However, the circumstances under which they acquired road traffic injuries point in a different direction. For instance, Ogendi et al. (2013) interviewed pedestrian

victims of RTIs in Nairobi. They noted that 72.6% of the RTI occurred while the victims were crossing the road, 11% standing on the road, 8.2% walking along the road, and 8.2% participating in other activities, including hawking. Similarly, a study in Thika town observed that 36% of RTI patients admitted in the emergency wards were motorcyclists. Among these, 75% reported that they were not wearing helmets at the time of the accident (Matheka et al., 2015). From the discussion above, it is noticeable that pedestrians and motorcyclists are responsible for a large proportion of violations in the city and accidents.

3.2.2 Road Safety Policy Compliance by Vehicle Types

It is important to explore any variations in the level of road safety policy compliance among various types of vehicles. The methodology used in extracting and analysing data is the same as in Table 3.1 above, in which the triangulation method was employed to increase data reliability. The stability of the data has been established through a test of Kendall's coefficient of concordance. The calculated Kendal coefficient among the three data sources is $W = 0.78$. This means a high level of agreement between the three data sources on the level of road safety policy compliance among the paired data sources. The consistency test between three data sources used in Table 3.2 was repeated in r using inclust. As shown in Figure 3.3, the level of consistency between observation data and police records is higher than between the two sets and survey data. The alpha value for correlation between police regards and observation data is $\alpha = 0.96$. On the other hand, the alpha value between survey data and the other two sets of data is $\alpha = 0.97$, which implies reasonable consistency between the three data sources.

Figure 3.3: Item Cluster Analysis for Various Data Sources



Source: Field data (2021)

Having analysed the internal consistency level between the three data sources above, the data is analysed below. The first column of Table 3.2 displays the types of vehicle categories used for data analysis. The second column documents the number of vehicle-related violations observed during the reporting period. The third column provides data on police rating of different vehicle categories as per their level of notoriety for road safety policy noncompliance. Finally, the fourth column reports on the accident data as per vehicle categories.

Table 3.2: Road Safety Policy Violations by Vehicle Types

Vehicle Category	Observation	Survey	Police records
	Frequencies	Ratings	Accidents ⁴
Matatus	47	7	202
Cars and utilities	45	9.7	422
Buses	35	6.4	137
Taxis	15	1	40
Lorries	7	2.3	67
College/school	25	5.7	25
Trailers	17	2.7	26
Tankers	20	4.6	17
Government vehicles	37	10	0

Source: Field data (2021)

From Table 3.2 above, it is discernible that most of the vehicles observed committing road safety policy violations were *matatus* (commuter minibuses and caravans). The KII transcripts indicate a plausible explanation for this phenomenon is that these are high profit-motivated users for whom speed is critical. By overlapping and speeding, they can overcome the traffic snarl-ups and make several rounds to the central business district and back to the estates. Graeff (2013, p. 6) observed that *matatu* drivers tend to drive recklessly, as their income and job security depend on daily passenger loads yielding the daily profit mark set by the *matatu* owners. To accomplish this, they break traffic laws, weave in and out of traffic, cut off other vehicles, use sidewalks to bypass traffic jams (putting pedestrians at risk). Similarly, Nyale et al. (2020) observed that most of the policy initiatives in Kenya have failed to curb safety violations among *matatus*. They are notorious for a wide range of issues, including careless driving, speeding, overlapping, corruption, theft and other

⁴ Derived from column A of 2019 accidents report as per form p69

criminal activities. Data from FGD transcripts have corroborated these sentiments. One of the respondents noted this: “If you look at the *matatus*, it is difficult to see one without a dent. This is a sign of their reckless driving behaviour” (Personal communication 18th November 2016). It has also been observed that the recklessness of *matatus* at times force other road users to take the law into their own hands. For instance, on 5th February 2017, the Langata OCPD Mr Elijah Maina Mwangi reported that the enraged public burned two 33-capacity *matatus* plying the Rongai route on the previous day. This happened after another *matatu* hit and killed a young cyclist in the area.

Furthermore, a *matatu* plying Kayole route hit and killed a rider along Jogoo road as it sped towards the city centre. When the motorbike riders noticed he had killed one of their own, they decided to burn it down. In December, members of the public burnt another *matatu* along Ngong Road after it hit a pedestrian. The cause of the accident in the two scenarios was over speeding towards the city centre (Mbao & Mwangangi, 2017). These findings have been corroborated by an earlier study by Mitulah and Asingo (2014), which observed that *matatu* drivers are generally careless and are frequently involved in malpractices, including speeding, driving on pavements, not giving way, obstruction, among others. They observed that when *matatus* are about to reach a bus stage, two *matatus* will occupy both lanes. They would then move at a snail speed side by side until they reach the next stage ostensibly to ensure that faster moving *matatus* do not overtake them and pick passengers at that bus stop (ibid p.17).

The second-highest number of violations observed during the study period were committed by private cars and buses. The study observed a significant variation between those that are owned by individuals or small SACCOs and those that large companies owned. The level of road safety policy compliance among long-distance drivers employed by established companies was much better than those employed by individuals or small SACCOs. One of the possible reasons for this phenomenon is the differences in working conditions and regulations in large companies that are not available in smaller companies.

To begin with, workers in large companies are employed permanently and therefore, and their earnings are not pegged on their daily collections. Drivers and other PSV operators working for smaller companies are paid wages and commissions. Their income is, therefore, dependent on their daily collections (Shaw et al., 2017). As a result, they must rush and be first at certain stages to get more customers. Secondly, large companies have customer-driven compliance mechanisms. For

instance, it was observed that each of the buses owned by large companies had customer care phone numbers where aggrieved customers would call to report misbehaviour observed among the drivers. Discussions with the customer care officials in one of the companies noted the following:

We take the views of customers very seriously. The text messages usually sent through the complaints line are read by our chief executive officer regularly. The messages are an important part of the performance monitoring system for our staff members. Given that they are employed on a contractual basis, staff promotions are dependent on the feedback given by the customers on their behaviour. On the other hand, persistent negative feedback on a driver's behaviour may lead to a disciplinary procedure including dismissal being taken against him (Personal Communication, 18th Nov 2016).

The other distinguishing feature among buses owned by large companies that were not observed in smaller companies is internal regulations and behaviour codes. For instance, while there is a maximum weight limit luggage that a passenger can travel with while boarding with buses owned by large companies, the same were absent among buses owned by small companies. Therefore, it was commonplace to see long-distance buses, especially in Kibera and Kawangware, overloaded with luggage. Typically, this luggage is placed on the top of the bus, thereby increasing the risk of overturning due to the force of gravity. These sentiments are shared by Orero et al. (2012), who observed that *matatus* that are part of well-run SACCOs tend to have better customer relations, working conditions, and relations with the authorities.

Government vehicles were also observed to be notorious for traffic law violations. Some of the offences observed among them were speeding, careless overtaking, overlapping and failure to observe traffic lights. Some of the government vehicles were also noted to be poorly maintained. One of the plausible reasons for their notoriety for traffic law noncompliance is that the police rarely caution them for law violations. One of the respondents noted as follows, “I am nowadays very hesitant to move away from the road whenever I hear a siren since I am aware of a certain governor whose mistress has outriders. The sirens are highly misused by government officials in Kenya” (Personal communication, 25th Nov 2016).

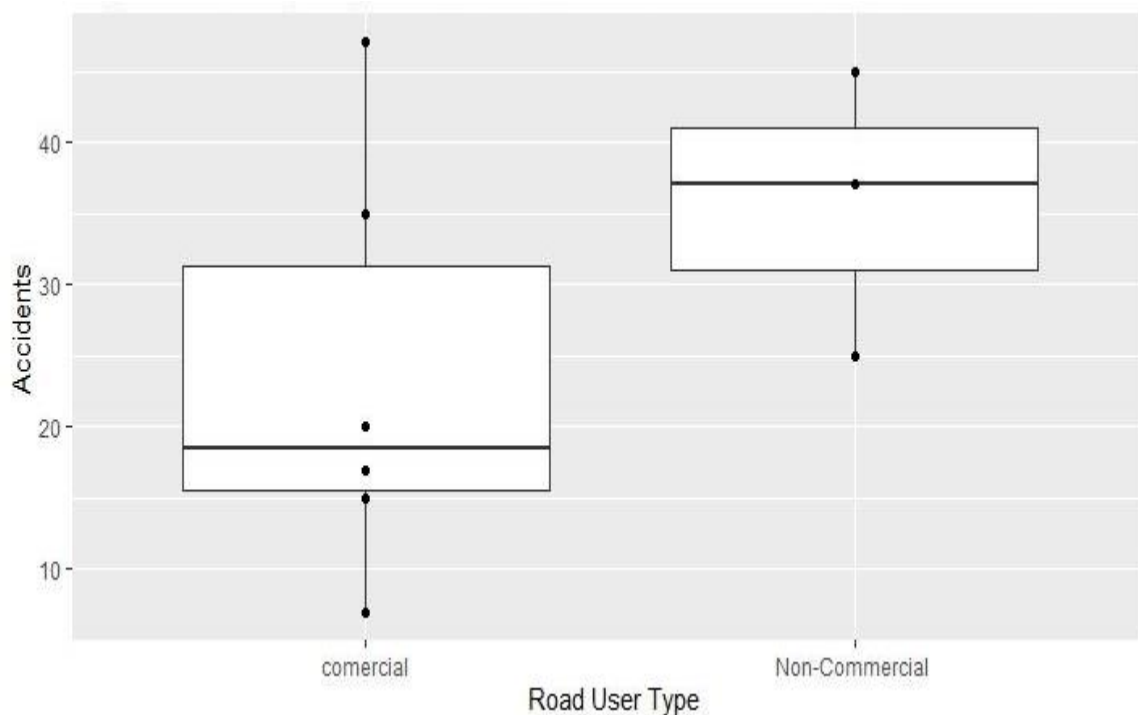
As shown in the last column of Table 3.2, data from form P69 for 2019 under column on persons responsible indicates that traffic accidents associated with cars and utilities are 422 against 202 associated with *matatus*. KII transcripts indicated that this is attributable to the fact that most of them are poorly trained and ill-experienced. They noted that some of them simply go for a driving test without going through driving school once they buy new cars. Part V and VI of the Traffic Act requires that drivers for private cars and PSVs be provided under different conditions (the Republic of Kenya, 2012). Consequently, PSVs drivers are generally better trained than private vehicle drivers.

KII transcripts further noted that, unlike PSV vehicles that must be inspected at least once per year, private cars rarely go for such inspection. As a result, most of them are poorly maintained. A review of the individual signals at the registry indicates that most cause-code associated private car accidents are due to loss of control and failure to give way for pedestrians at a pedestrian crossing. For instance, on 15th February 2020, an accident occurred at 3 pm along Thika Superhighway. The vehicle was moving towards Kastimil. The driver lost control of the vehicle on reaching the accident location, thus hitting a rail guard on the right. As a result, the vehicle was extensively damaged, and occupants sustained serious injuries (Nairobi Traffic Command Accident Registry, 30th March 2020).

During the same period (December 2019 to February 2020), 137 buses were involved in road accidents. Among these, 40 were country buses, and 97 were urban buses. Among the other commercial vehicles, 67 accidents were attributed to Lorries and 40 to taxis. Other vehicle categories, including College/school, Trailers, Tankers, and Government vehicles, contributed to less than 30 accidents. KII transcripts also indicate that the drivers of these vehicle categories also tend to be better trained than private car drivers, thus the low number of accidents.

From the above discussion, there seems to be variations in the number of violations, accidents and fatalities among different vehicle types. To make sure if these variations were significant, the study compared means between violations observed among commercial vehicles and non-commercial vehicles using the two-sample t-test method in r software hereunder, visualized are the test results.

Figure 3.4: Comparing Violations between Commercial & Non-Commercial Road Users



Source: Field data (2021)

As can be observed in Figure 3.4, the crossbar in the non-commercial vehicle's boxplot is higher than the one on commercial vehicles. This implies that on average more violations were observed among non-commercial vehicles than commercial vehicles. This finding seems to negate the asserting by some scholars that all violations are driven by commercial interests (Sidha, 2017).

Taken together, the data in sections 3.2.1 and 3.2.2 indicates that road traffic law violations are not random. On the contrary, some road user categories and some vehicle types have a higher level of marginal propensity to commit traffic offences and cause traffic accidents than others. Because of this finding, the next section discusses how various road users are targeted for traffic law enforcement with a view of finding out if road users' categories notorious for traffic law violations are targeted more for traffic law enforcement.

3.3 Discretion over Road Users Targeted for Road Safety Policy Implementation

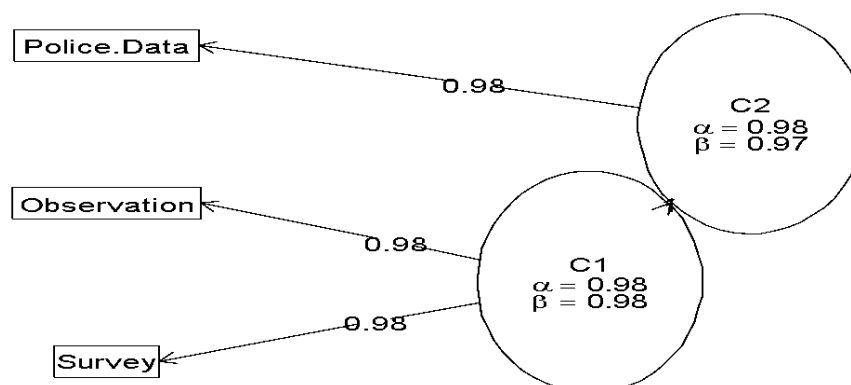
Having established the categories of road users responsible for the highest number of violations, accidents, and fatalities, this section explores how different road users are targeted for road safety policy implementation. Just like in the case of compliance, the data on targeting has been organized in terms of road users in general and the type of vehicles.

3.3.1 Targeting by Road User Type

This section presents data on the number of safety checks and arrests disaggregated by road users' category. The data reported has been generated from a variety of sources. Thus, a Kendall test of concordance was conducted to determine the level of agreement between the different ranks assigned by different data sources. The test revealed a concordance coefficient of $W=0.8$. This means that there were agreements on targeting ranks by three data sources employed 80% of the time.

The consistency test between three data sources used in Table 3.3 was repeated in R using `inclust`. As shown in figure 3.5, the consistency between observation data and police records is higher than between the two sets and survey data. The alpha value for correlation between police regards and observation data is $\alpha = 0.96$. On the other hand, the alpha value between survey data and the other two data sets is $\alpha = 0.97$. Similarly, the beta values in both cluster one and two are higher than 0.5. All these taken together imply that there is a high level of consistency between the three data sources.

Figure 3.5: Item Cluster Analysis for Various Data Sources



Source: Field data (2021)

After analysing the internal consistency level between the three data sources above, the data is now hereunder presented. The first column of Table 3.3 displays road user categories employed for data analysis. The second column documents the number of safety searches observed during the reporting period. The third column provides data on the number of road users who reported having been subjected to safety search by road user category. Finally, the fourth column reports on the number of road users arrested under each of the categories.

Table 3.3: Targeting of Road Users for Traffic Searches

Road User	Observation	Survey	Police records
Drivers	118	157	1248
Conductors	59	40	560
Passengers	51	35	1223
Motorcycles	27	32	314
Tuk Tuk	21	19	0
Pedestrians	19	5	634
Pedal cyclists	0	27	0
Trolley	0	19	0
Handcart	0	0	0

Source: Field data (2021).

From Table 3.3, it appears that traffic police officers do not equally target road users for traffic law enforcement. Some are checked more frequently than others. The observation data indicates that drivers’ conductors and passengers are frequently targeted for traffic law enforcement compared to other road users. The researcher discussed traffic police officers and road users to understand the data collected from the observations outlined above. In these discussions, the researcher asked the traffic police officers about the categories of road users that are frequently stopped by the police at traffic checkpoints. The road user’s category most targeted during law enforcement is drivers, conductors, passengers, and motorcyclists in response to this question. Further probing on this issue revealed that these categories of road users are highly responsible for most accidents in Nairobi. They are mainly known for traffic disruption behaviours such as obstruction and overlapping.

Concerning the reason why other road users such as tuk-tuk, pedestrians, and other non-motorized road users are rarely stopped at traffic checkpoints, they reported that traffic accidents associated with these categories of road users do not have spill-over effects on other road users. For instance, “if pedestrians cross the road in a non-designated place and are crushed by an oncoming vehicle,

s/he is the only one who will die. On the contrary, if two vehicles are involved in a head-on collision, the drivers of the two vehicles will die plus their passengers. It is, therefore, better to stop a vehicle collision than struggle with pedestrians who are only risking their lives”. From this observation, it may be assumed that the police discretion over which category of road users to target for policy implementation is mostly influenced by the amount of harm caused by failure to prevent violations committed by members of such a category. As a result, vehicles are targeted because they are responsible for the highest number of traffic injuries.

Regarding the determinants of road user targeting, the explanations put forward by the road users were slightly different from arguments that were advanced by the police. One of the study respondents noted that:

The police go to the road with two main objectives; their number one objective is to collect money. The other objective is to control traffic given that if this is not done there will be a public outcry. Drivers and motorcyclists are targeted because they are perceived to have money to give as bribes if the same is demanded. They are also the number one culprit when it comes to causing traffic jams. The pedestrian, on the other hand, is most likely walking home because he does not have bus fare. They also do not have an impact on the traffic police officers perceived as the main job, which is that of controlling traffic. Arresting such a person is therefore not helpful to the police. They will just fill up the prisons (Field Notes, 2020).

The above observation is like the one traffic police officers advanced during a consultation meeting in the accident records office. When the researcher inquired from the officer on the time of day that they monitor traffic violations, the officer retorted: “how do you monitor traffic violations, we go to the road mainly to control traffic, and if we happen to observe a violation, we record it down”. This assertion was later confirmed at the office of traffic III (one of the senior traffic police officers in charge of operations). The study observed that typically Traffic III calls out for the divisional traffic police officers to ask their officers to go to the field in the morning and at 3.30 pm in readiness to clear up traffic jams. From this observation, the police discretion over which road users should be targeted for policy implementation is influenced by their contribution to piling up traffic jams.

The second analytical question is why the police would be more concerned with freeing up the road than saving lives that would have otherwise been lost to traffic accidents. The answer to this question can be found in Lipsky (2010) claim that street-level bureaucrats prioritize clients and activities that, if they fail to execute, may bring about a public outcry. This is further elaborated in Lichtenberg (2003), who observes that road users rarely complain to the police. This may be occasioned by the fact that most road users violate the traffic law, thereby lacking the moral authority to question those violating the same law.

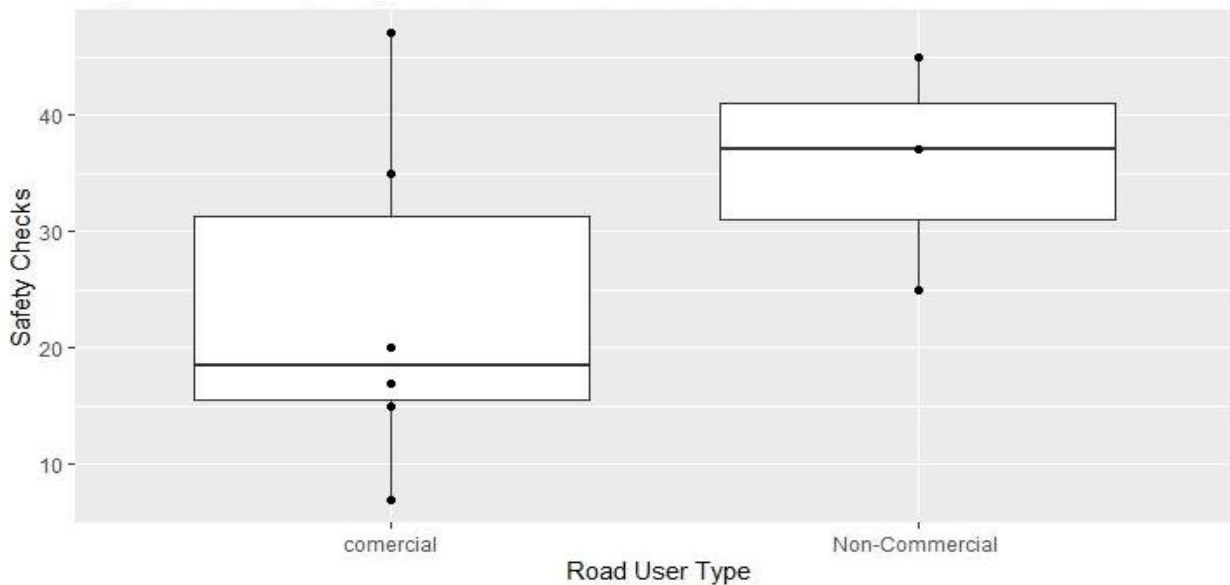
As pertains to the road users' assertion that police discretion over whom to stop at the traffic checkpoint is mainly influenced by the road user's characteristics, of interest is how much money the road user is travelling with, which, if they are threatened, can be given out as a bribe. Evans (2015) has also observed that street-level bureaucratic activities are driven by their venal concerns as well as self-interest. This is related to the findings of an earlier study by Chitere and Kibua (2004). They reported that Kenya's road safety policy implementation process is significantly undermined by corruption and conflict of interest among traffic police officers. It has also been observed that the Kenya police is the most corrupt institution in Kenya (Transparency International-Kenya, 2018). From the above discussions, it is clear that there are disagreements between the traffic police officers and road users over factors that mainly influence policy decisions over which category of road users to target for policy implementation and, therefore, whether such targeting is good or bad. With this discussion in mind, this study examines the utility of road users targeted by correlating data on indicators of target discretion and policy implementation. Beyond making discretionary decisions on whom to stop at traffic checkpoints, the traffic police officers also must make decisions over the traffic offenders that should be given a verbal warning and allowed to go and those to process for further questioning and prosecution in court. This is necessary since most road users are always in conflict with the law (Lewis, 1999). Arresting all the traffic offenders is, therefore, practically impossible.

Consequently, the study also took note of the categories of road users that are being arrested more. Accordingly, data on the number of people who were arrested during the study period was disaggregated by road user category. As shown in the last column of Table 3.3 above, drivers of motor vehicles are more likely to be processed for prosecution if they are found capable of wrongdoing compared to other road users. The other categories of road users who are also frequently arrested for traffic law violations are passengers, conductors and motorcycle riders. No

pedestrians and other non-motorized road users were arrested for traffic offences during the observation period. This phenomenon is attributable to several factors: to begin with, the probability of arrest is dependent on the police view of the seriousness of the offence (Constantinou, 2016). During the police FGDs, it was noted that the police officers do not consider the actions of non-motorized road users as serious offences. This is because those actions only impact them instead of motorized road users whose actions imp on both passengers and other road users. "We rarely stop pedestrians for questioning even when we see them violating traffic rules such as crossing the road while talking on the phone. There are a few occasions where we can caution them for being involved in risky road users' behaviours," reported a police officer during the focus group discussions.

The probability of arrest by traffic police officers is also dependent on the availability of evidence (Carter, 2006). This may explain why traffic police officers target vehicle occupants in comparison to non-motorized road users. Over the years, a variety of equipment, including speed guns and breathalysers, have been developed for purposes of monitoring road safety policy compliance among drivers. No such equipment has been developed for non-motorized road users making it difficult to monitor non-compliance among them. To this end, it is deducible that the probability of arrest among various categories of road users is influenced by the ease of generating evidence to support the police claim in a court of law. This finding is comparable to that of Evans (2006), who observed that faced with a scarcity of personnel, heavy workload, and much public pressure, street-level bureaucrats prioritise activities that are easy to perform and delay those that are difficult to conduct. Consequently, because the law requires that before one is arrested, there should be reasonable evidence to support his arrest. Therefore, instead of searching for proof of capability among the pedestrians and other road users, which is difficult to extract, the traffic officers opt to focus on motor vehicles whose evidence of capability is easy to generate. Generation of evidence of culpability has further been made easier by the use of technology such as alcohol breathalysers and speed cameras. A comparative analysis of the frequency of observed traffic checks among motorized and non-motorized road users is hereunder visualized through boxplots in Figure 3.6.

Figure 3.6: Comparing Safety-Checks between Motorized & Non-Motorized Road Users



Source: Field data (2021)

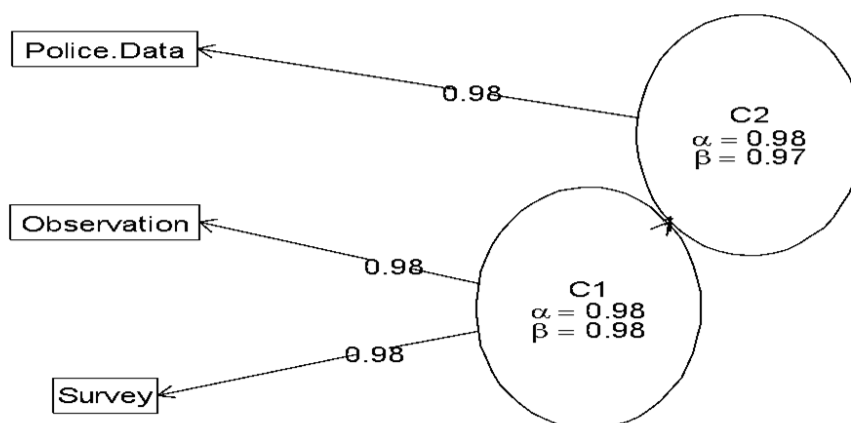
As shown in Figure 3.6 above, the crossbar in non-motorized road user's boxplot is lower than that of motorized road users. This implies that more traffic checks were observed among motorized road users than non-motorized users. All the data from Table 3.3 and Figure 3.6 read together suggest that traffic police officers do not equally target road users for law enforcement. Vehicle occupants and other motorized road users are stopped more often at the traffic checkpoints. If found capable of road safety law violations are more likely to be arrested than non-motorized road users.

3.3.2 Road user targeting by Type of Vehicle

From the analysis in Figure 3.6 above, it is noticeable that drivers are commonly targeted more than other types of road users. With this understanding in mind, the study separately analysed data on vehicles with a view of finding out if there are any differences in the way in which they are targeted for traffic law enforcement. The indicators of discretion in this section include the number of vehicles stopped, and the number of drivers arrested disaggregated by vehicle type. The classification of vehicles employed was derived from the standard accidents report by the traffic division of the Kenya police service. Because data reported in this section was extracted from various sources, consistency tests were conducted to evaluate its internal consistency. The test of concordance revealed a coefficient value of $W=0.97$. This means there is a great level of agreement between different data sources on how traffic police officers target different types of vehicles for road safety policy implementation.

The consistency test between three data sources used in Table 3.4 above was repeated in R using `inclust`. As shown in Figure 3.6, the level of consistency between observation data and survey is higher than between the two sets and police records. The alpha value for correlation between survey and observation data is $\alpha = 0.98$ and $\beta = 0.98$ on the other hand, the alpha value between police records and the other two sets of data is $\alpha = 0.98$ and $\beta = 0.97$. β typically represents correlation in the worst-case scenario. Altogether, the observations imply that there is a high-level consistency between the three data sources.

Figure 3.7: Item Cluster Analysis for Various Data Sources



Source: Field data (2021)

Table 3.4 below provides a summary of data on traffic checks disaggregated by vehicle type. Thus, the first column provides the vehicle categories employed for analysis. The second column provides data on the number of stops. The third column provides data on the number of road users who reported being arrested during the reporting period. Finally, the last column provides data on the number of people arrested during the reporting period.

Table 3.4: Targeting by Type of Vehicle

Vehicle category	Observation	Survey	Police records ⁵
Matatus	14	33	362
Tankers	10	27	200
Trailers	11	20	187
Lorries	9	26	162
Taxis	7	16	121
Cars and utilities	4	13	75
Buses	2	10	71
College/school	2	9	40
Government vehicles	0	3	30

Source: Field data (2021)

From the observation data, the top five most targeted vehicle categories for enforcement include *matatus* (14 observations), trailers (11 observations), tankers (10 observations), Lorries (9 observations) and taxis (7 observations). On the other hand, buses (2 observations), college/ school buses (2 observations) and government vehicles (0 observations) are rarely subjected to traffic checks. Regarding the frequency of safety arrests, the highest number of drivers who reported to have been arrested in Nairobi during the last 30 days before the study were *matatu* drivers (33 cases). The other vehicle categories commonly targeted for safety arrest are tankers (27 cases), Lorries (26 cases), trailers (20 cases), taxis (16 cases). The driver categories who reported the least number of traffic arrests in Nairobi during the last 30 days to the time of the study were cars and utilities (13 cases), buses (10 cases), college/school (9 cases), government vehicles (3 cases). As noted in Figure 3.7 elements in the survey data and police records are to a large extent and indicate that safety arrests among *matatu* drivers are most frequent and government vehicles least frequent.

From these findings, it is noticeable that vehicles used for commercial purposes such as *matatus*, Lorries, and taxis are more frequently flagged down at the traffic checkpoints compared to those used for non-commercial purposes such as school buses and government vehicles. This finding confirms Asingo and Medullas (2007) assertion that the police are biased against commuter minibuses (*matatus*) during the road safety policy implementation process. Discussions with the road users during the FGDs revealed that the main reason for targeting commercial vehicles for

⁵ Cases reported in Nairobi Area Traffic as from 28th November 2019 to 11th March 2020

traffic law enforcement is that vehicles used for commercial purposes frequently travel with cash compared to non-commercial vehicles.

While I am a taxi driver, I cannot brand my vehicle PSV because once you do that then you become part of the police target list. They will always be stopping you at the roadblocks even for simple mistakes so that you can share with them the money you have been given by the customers"(Extracted from road users FGD transcripts conducted at shell near Yaya centre, May 2016).

In another FDG with a lorry driver, it was reported as follows:

When I bill my customers, I normally include the money for giving the police both at the traffic roadblocks and the weighbridges. If you do not give out money, they disturb you. They will be looking for every opportunity to frustrate you" (Extracted from road users FGD transcripts conducted in CBD, May 2016).

These observations show that the police perception can partly explain the vehicle targeting observed among the commercial vehicles that normally carry money with them. Moreover, since the primary motivation for the police officers going to the road is to earn more income, their focus is on vehicles that can readily pay bribes if threatened. This data is comparable with that collected through structured observation, which indicated that commuter buses belonging to big companies and shuttles that collect bus fare at the booking offices are less frequently stopped than those that charged their customers along the way. A similar finding is generated by a study in DRC Congo, which established a symbiotic relationship between traffic police and taxi drivers, whereby taxi drivers regularly give the police some money to get their protection from being arrested for traffic offences (Alexandre, 2018).

This phenomenon was, however, explained differently by the police during their FGDs and in-depth interviews. All the road users are targeted equally during the road safety policy enforcement as the Traffic Act expects it. However, some types of vehicles may be stopped more frequently than others depending on the police suspicion that they have violated the Traffic Act and therefore need to be investigated. They further observed that *matatus* are mainly known for traffic law violations, and that is why they usually are frequently stopped by the police at the traffic checkpoints. On the other hand, Lorries are frequently stopped to check if they are overloaded and therefore likely to destroy

the roads. They can also be stopped on suspicion of carrying illegal items such as timber without the required permit, charcoal or even stolen goods.

Government vehicles, school buses, and commuter buses are rarely stopped at the traffic checkpoints because, in general, the police believe their level of road compliance is high. Thus, from the police officer's perspective, the probability of being flagged down at the traffic checkpoints is influenced primarily by two fundamental factors: previous contacts with the police officer and the seriousness of the offence. Put differently, one is more likely to be stopped on the road for traffic searches if they are driving a vehicle which, according to police records and experience, is frequently involved in traffic law violations and accidents.

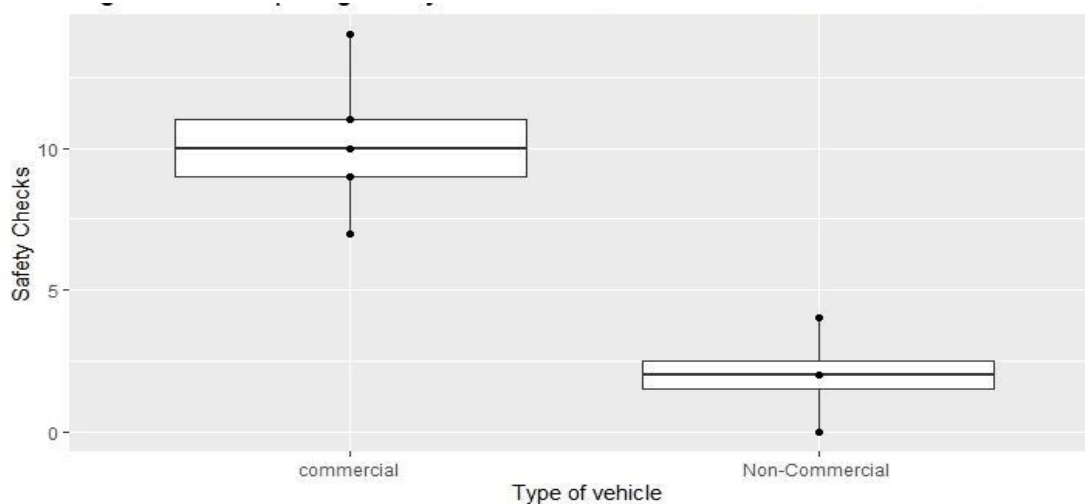
Apart from the frequency of traffic stops, the study also counted the kind of vehicles normally targeted for further investigations and prosecutions. As shown in column 4 of Table 3.4, most of the people arrested during the observation period were *matatu* drivers followed by drivers of personal cars. To understand this data, the police were asked to state reasons that determine who to arrest and who not to. In response to this, the police officers noted that the seriousness of the offence mainly determines their arrests. In cases where a death has been recorded, the person responsible for the traffic accident is automatically arrested. However, in cases of violations without injuries and fatalities, the decision to arrest is dependent on how the suspect talks to the police. Consequently, suspects who are rude to traffic police officers are more likely to be arrested than those who are polite to them. For instance, women are rarely arrested not because they are never involved in traffic offences but they are diplomatic in dealing with the officers. The same case applies to older drivers. They tend to be very polite when talking to police officers and are therefore rarely arrested. They also noted that sometimes the tribe of the officer and that of the suspect might play a role in deciding on whether one will be arrested or not.

The other reason mentioned for arresting some categories of drivers as opposed to others is past criminal records and repeated offences. During the FGDs, enforcement officers noted that sometimes they felt insulted by some road users. "You warn someone about doing something, and he does the same thing the next minute", reported one of the traffic police officers. This finding relates to that of Carter (2006), who observed that records of previous contacts with police increase the probability of arrest. This may explain the high frequency of arrests among *matatu* drivers and private car owners to a small extent. Because *matatus* use the same route every day, it is easier for

the police to know who the troublemakers are. This is in contrast with other types of vehicles which use different routes on different days.

The same question was posed to road users during their FGDs. In response, they noted that the most important determinant of whether one will be arrested for a traffic offence or not is the driver's characteristics. For instance, if one is driving an expensive car, the probability that they will be arrested is much lower than when they are driving a poor man's car. To this end, private car owners and *matatu* drivers are more likely to be arrested than drivers of government vehicles and heavy commercial vehicles and school buses. The other reason why some drivers are arrested more frequently than others is the desire to make more money on the part of the enforcement officers. The FGDs observed that "if the police suspect that you have money and you refuse to part with it, you will be taken to the station so that you can even pay a bigger bribe", reported one of the road users during the FDG discussions. Therefore, from the road users' point of view, road users' characteristics are a much more vital explanatory factor than the previous contact. Two sample t-test visualized in figure 3.8 below reveals that the enforcement officers do more safety checks on commercial vehicles than non-commercial ones.

Figure 3.8: Comparing Safety Check between Commercial & Non-Commercial Vehicles



Source: Field data (2021)

From Figure 3.8, it is noticeable that the crossbar for non-commercial vehicles is lower than that of commercial vehicles. This suggests that more commercial vehicles were stopped at the traffic checkpoints as compared to non-commercial vehicles. Taken together, Table 3.4 and Figure 3.8 reveals that the police do not equally target vehicles for traffic law enforcement, some targeted

more than others. Tests of correlations were conducted to test the relationship between vehicles and road users targeted for policy implementation and those notorious for safety law violations. Section 3.4 below discusses those test results.

3.4 Correlating the Dependent and Independent Variables

This section discusses the relationship between the two. The two sections above also start its analysis of the independent and dependent variable using data on road users and those on vehicles.

3.4.1 Correlating Targeting and Compliance by Road User Category

In Table 3.5 below, ranks for enforcement and ranks for road safety policy outcomes are paired. In column one, observed ranks derived from the number of violations by each road user category during the study period are paired by the ranks derived from the number of safety checks encountered by road users in the same category. In the second column, ranks assigned to police ratings of traffic violations by road user category and those assigned to frequency by which road users in each category reported that they are subjected to safety checks are paired. In the final column, ranks are assigned to the number of people arrested, and the road user category pairs the number of reported accidents. Each of these tests of correlations is after that visualized using scatterplots in Figures 3.9, 3.10 and 3.11.

Table 3.5: Correlating Violations and targeting by road user categories

Observation			Survey			Police records		
Road users' type	Rank T ⁶	Rank C ⁷	Road user Type	Rank ⁸	Rank C ⁹	Road user Type	Rank ¹⁰ T	Rank C ¹¹
Pedestrians	6	1	Pedestrians	8	2	Pedestrians	7	1
Passengers	3	2	Passengers	3	3	Passengers	3	2
Motorcycles	4	3	Motorcycles	4	1	Drivers	1	3
Trolley	8	4	Handcart	9	5	Motorcycles	4	4
Handcart	9	5	Trolley	6	6	Pedal cyclists	7	5
Tuk	5	6	Drivers	1	4	Conductors	2	7.5
Drivers	1	7	Tuk	7	7	Trolley	7	7.5
Pedal cyclists	7	8	Pedal cyclists	5	9	Handcart	7	7.5
Conductors	2	9	Conductors	2	8	Tuk	7	7.5
Correlation Value	rho -0.17		Correlation Value	Cor.-0.33		Correlation Value	0.28	

Source: Field data (2021)

The observation data in Table 3.5 shows discrepancies between the type of users targeted for law enforcement and those notorious for traffic law violations. For instance, pedestrians were ranked first in terms of notoriety for violating traffic laws and sixth in terms of how frequently they are subjected to safety checks. Similar results were observed among other non-motorized road users, including trolleys, handcarts, and pedal cyclists. In general, they are notorious for violating traffic laws but are rarely subjected to safety checks. A different set of observations among motorized road users, especially drivers and conductors- the numbers of violations observed among them was relatively lower than other categories of road users. Nevertheless, they were subjected to safety checks more frequently than those road users.

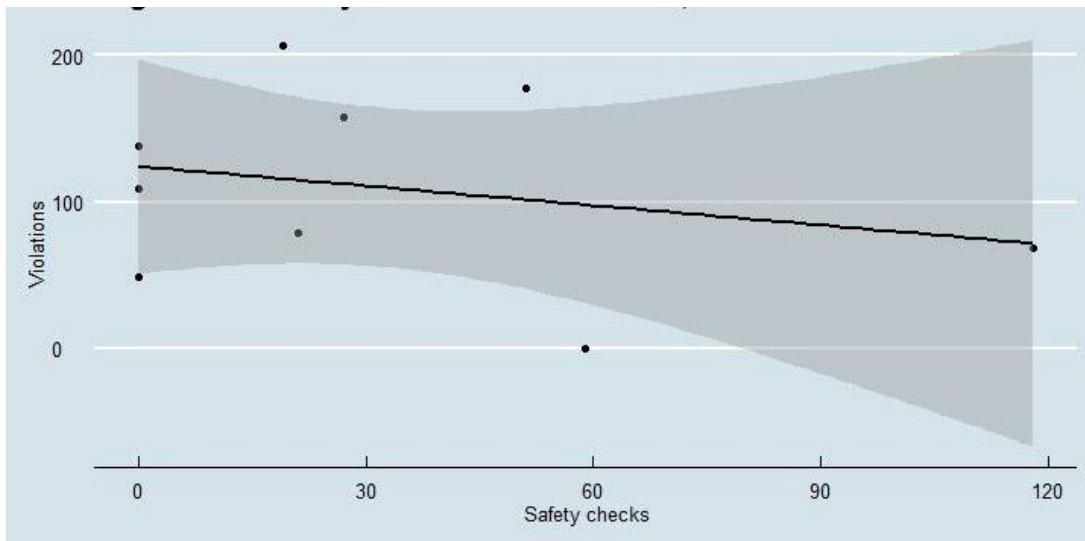
The study did not find significant discrepancies between the level of targeting and notoriety to violate traffic laws and the level of enforcement among motorcyclists and passengers. The findings from the observation data were corroborated with those of survey and police records. For instance, in the survey data, pedestrians were ranked second in terms of notoriety for violating road safety

⁶ Rank of Targeting by road user type as per observation data
⁷ Rank of level of Compliance by road user type as per observation data
⁸ Rank of Targeting by road user type as per survey data
⁹ Rank of level of Compliance by road user type as per survey data
¹⁰ Rank of Targeting by road user type as per police records
¹¹ Rank of level of Compliance by road user type as per the police records

laws and eighth for road user targeting. On the other hand, conductors are ranked eighth in terms of violations and second in terms of traffic checks. Similarly, in the police records, pedestrians were rank first in terms of violation and eighth in terms of frequency of traffic checks.

Spearman's correlations test was conducted to measure the strength of correlations between road users targeting and road safety policy implementation. As can be seen from Table 3.5, Spearman's rank of correlation between indicators of targeting and compliance among the paired categories of road users revealed a negative correlation figure of rho -0.17. This means that a certain categories of road uses were targeted for enforcement more than their share of traffic violations. However, the p-value = 0.6628 is higher than 0.05, the acceptable p-value at the 95% confidence interval. The observed relationship occurred by chance and thus the study fails to reject the null hypothesis¹². The study conclude thus that there is no significant relationship between observed violations and enforcement efforts among various categories of road users. This means that contrary to the expectation¹³, enforcement officers do not target road users who are notorious for traffic law violations for enforcement. The test of correlations observed violations and observed safety checks is hereunder visualized in a scatter plot developed using ggplot2 r package¹⁴:

Figure 3.9: Safety Checks and Violation; Observations



Source: Field data (2021).

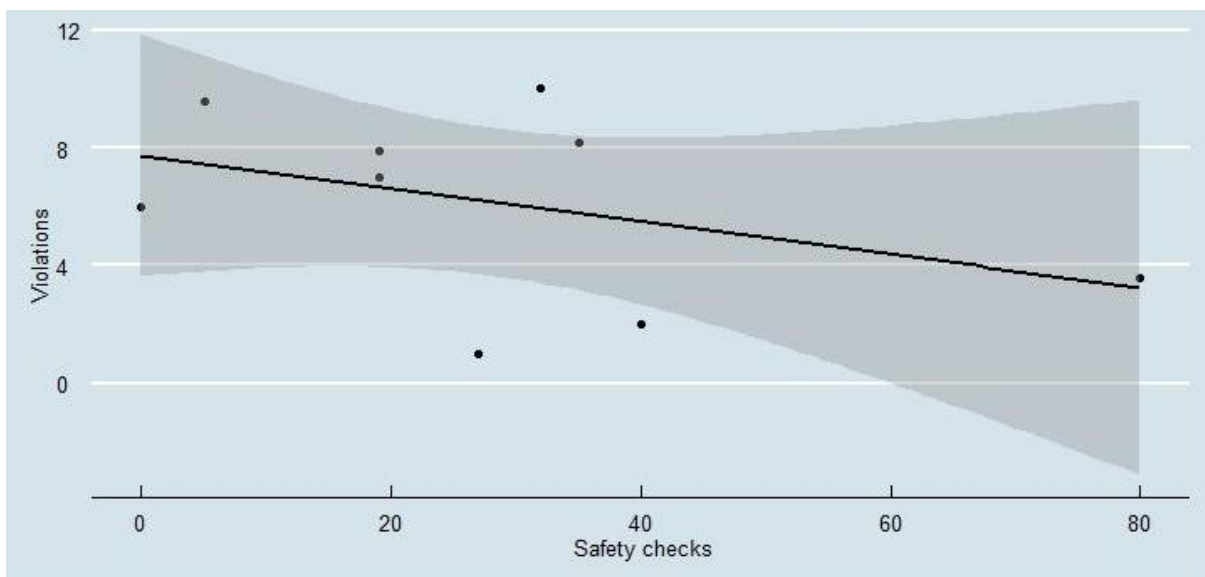
¹² Target discretion by traffic police officers do not influence road safety policy implementation in Nairobi Traffic Command Area

¹³The expectation is a positive significant relationship

¹⁴An r package for data visualization

An additional correlation test was conducted using responses generated from road users' surveys, and the study observed a negative correlation figure of rho -0.33. This implies that for difference in perception between road users and traffic enforcement officers on how road users are targeted for traffic enforcement and prevalence of violations. However, the p-value = 0.5003 which is higher than the 0.05 level of confidence and thus implies that the observed relationship may have occurred by chance and thus the H_0^{15} is not rejected. For instance, while the police rated motorcyclists as the most notorious for road safety policy non-compliance, a more significant proportion of drivers, conductors and passengers reported being subjected to more traffic searches than them. The Spearman's correlation between indicators of target discretion and those of road safety policy compliance are here under visualized using a scatter plot (Figure 3.10).

Figure 3.10: Safety Checks and Violations; Survey



Source: Field data (2021)

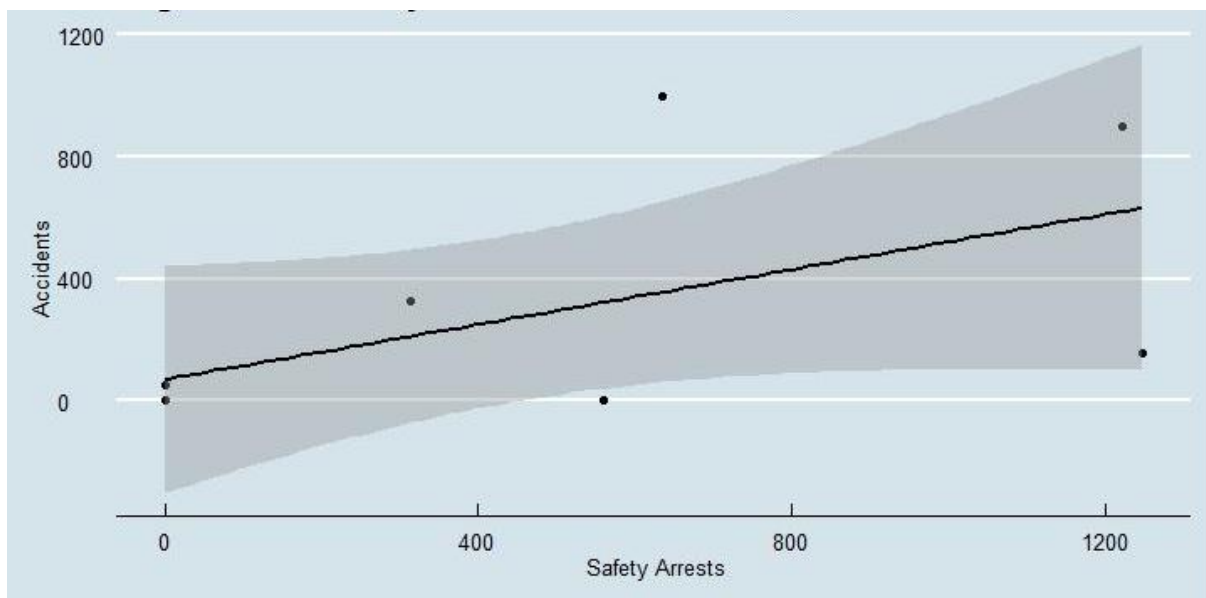
About data collected from police registries, Spearman's test of correlations revealed a positive correlation figure of rho 0.28. This indicates that in certain cases, the magnitude of targeting was proportionate to the magnitude of RTI associated with the paired. However, the observed p-value = 0.6674. This implies that the observed relationship may have occurred by chance and thus the study fails to reject the H_0^{16} . Therefore, traffic police officers' decision to arrest a traffic offender is not primarily informed by the desire to deter future accidents. This phenomenon is associated

¹⁵ Target discretion by traffic police officers do not influence road safety policy implementation in Nairobi Traffic Command Area

¹⁶ Target discretion by traffic police officers do not influence road safety policy implementation in Nairobi Traffic Command Area

with the police tendency to process most of the accidents reported to them for prosecution. Therefore, it is highly likely that most of the road users recorded in the accident's registry are the same as those who appeared in the enforcement registry. The relationship between the frequency of arrest and frequency of accidents as per police records is hereunder visualized (Figure 3.11).

Figure 3.11: Safety Arrests and Accidents; P-Records



Source: Field data (2021).

From the above three tests of correlations, several observations can be made, beginning with the discrepancies between the types of road users being targeted for road safety policy implementation and those who are notorious for road traffic policy violations. This behaviour goes against the expectation that the police should use their discretionary powers to maximize implementation resources. Given that Kenyans only observe road safety policies whenever imminent sanction is associated with non-compliance, it is deductible. Therefore, targeting by type of road user responsible for the biggest proportion of accidents would fail to deter road safety policy non-compliance and the resultant accidents.

It can also be observed that there is a discordance between the severity of traffic enforcement sanctions and the severity of non-compliance. The study findings indicate the police rankings of road users in terms of their notoriety to cause accidents being negatively correlated with ranks generated from road users' reports on if they had been involved in an accident one month before the survey. Overall, road user categories, frequently involved in accidents, were targeted less for traffic

arrest. More motorized road users, including drivers, conductors and passengers, were arrested for traffic offences. In contrast, motorcyclists and non-motorized road users, including pedestrians, pedal cyclists and handcart pushers, were more frequently involved in traffic accidents.

Additionally, as noted earlier, police are more likely to arrest you if they believe you have money, but you are refusing to give them. It can be deduced that the targeting of motorized road users may be explained by the fact that they travel with cash more often than non-motorized road users. In addition to the foregoing, as was noted by the road users during their FGD, the probability of arrest is highly influenced by the road users' characteristics instead of a record of previous violations. The data suggests that police conduct social profiling of road users and decide whom to target for road users' policy implementation based on their perception of whether they are travelling with cash. Therefore, if threatened, such cash can be used to bribe them or not.

As a result, the study concludes that the decision to either arrest a road user or not is dependent on police perception of the road user's ability to pay a bribe or not. The other probable reason for road user targeting is the ease with which evidence of culpability can be extracted during traffic searches. To this end, motorized road users have been targeted more because speed cameras make it easy to decode evidence of wrongdoing among them. This view is shared by Evans (2010), who believes that street-level bureaucrats prioritize activities that are easy to execute over those difficult to undertake.

3.4.2 The correlating targeting and compliance by vehicle type

Beyond examining the relationship between the road users who were targeted for road safety policy enforcement and those with the highest propensity to cause accidents in general, efforts were made to document the relationship between the type of vehicles that are frequently stopped at the traffic checkpoints and those responsible for the largest number of road traffic violations. The table below provides an analysis of data from a variety of sources concerning the relationship between road safety policy compliance and road user targeting among paired types of vehicles. The data has been organized according to the sources from which they were extracted. Correspondingly, the first column displays analysis derived from observation data, the second column is on survey data, and finally, the third column is on extractions from police records.

Table 3.6: Correlating Violations and Targeting by Type of Vehicle

Observation			Survey			Police records		
Road users' type	Rank T ¹⁷	Rank C ¹⁸	Road user Type	Rank T ¹⁹	Rank C ²⁰	Road user Type	Rank ²¹	Rank C ²²
Matatus	1	1	Matatus	1	1	Matatus	1	1
College/school	6	2	Cars and utilities	6	2	Cars and utilities	6	2
Cars and utilities	7	3	Buses	7	3	Buses	7	3
Government vehicles	9	4	Government vehicles	9	4	Taxis	5	4
Buses	8	5	College/school	8	5	Lorries	4	5
Tankers	2	6	Tankers	2	6	College/school	8	6
Lorries	3	7	Lorries	3	7	Trailers	3	7
Taxis	5	8	Taxis	5	8	Tankers	2	8
Trailers	4	9	Trailers	4	9	Government vehicles	9	9
Correlation figure	rho -0.1		Correlation figure	rho -0.1		Correlation figure	rho 0.25	

Source: Field data (2021).

As indicated in Table 3.6 above, there are negative correlations between those vehicles targeted by the traffic police officers for road safety and those with the lowest road safety policy compliance. This is evidenced by the fact that a test of correlations between indicators of targeting and road safety policy implementation on the paired types of vehicles revealed a correlation figure of -0.1. This indicates that in certain instances police decisions on which kind of vehicles to stop or not at the traffic checkpoints were informed by other considerations besides reducing the number of traffic violations on Kenyan roads.

¹⁷ Rank of Targeting by road user type as per observation data

¹⁸ Rank of level of Compliance by road user type as per observation data

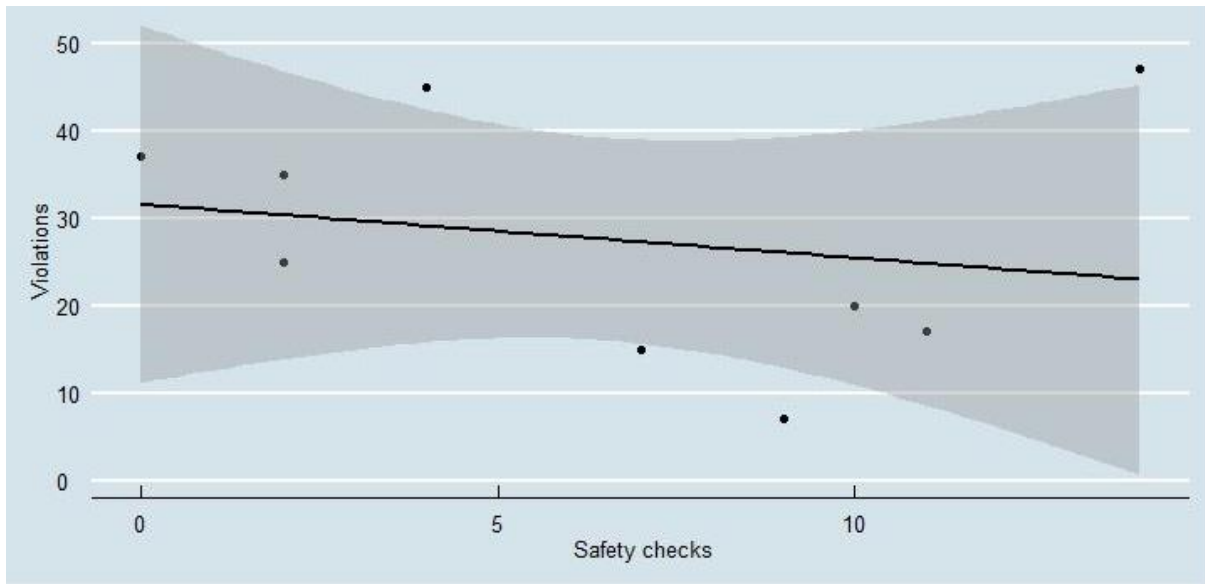
¹⁹ Rank of Targeting by road user type as per survey data

²⁰ Rank of level of Compliance by road user type as per survey data

²¹ Rank of Targeting by road user type as per police records

²² Rank of level of Compliance by road user type as per the police records

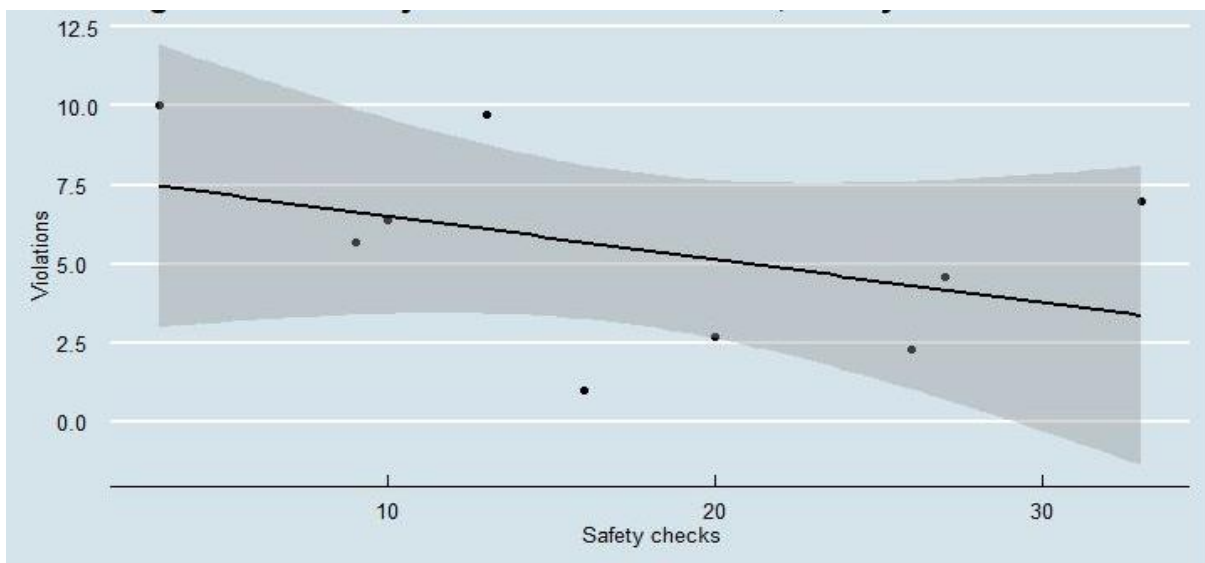
Figure 3.12: Safety Checks and Violations; Observations



Source: Field data (2021).

A repeat of Spearman's Correlation test with data collected through the survey method yielded the same results. To this end, the police decisions to either stop or not to stop certain kinds of vehicles are informed by other considerations besides the desire to cut down the number of traffic law violations. One of the plausible explanations for this phenomenon is that the police go to the roads to make money other than to prevent traffic accidents. This is evidenced by the fact that the level of targeting for commercial vehicles is higher than that of non-commercial vehicles.

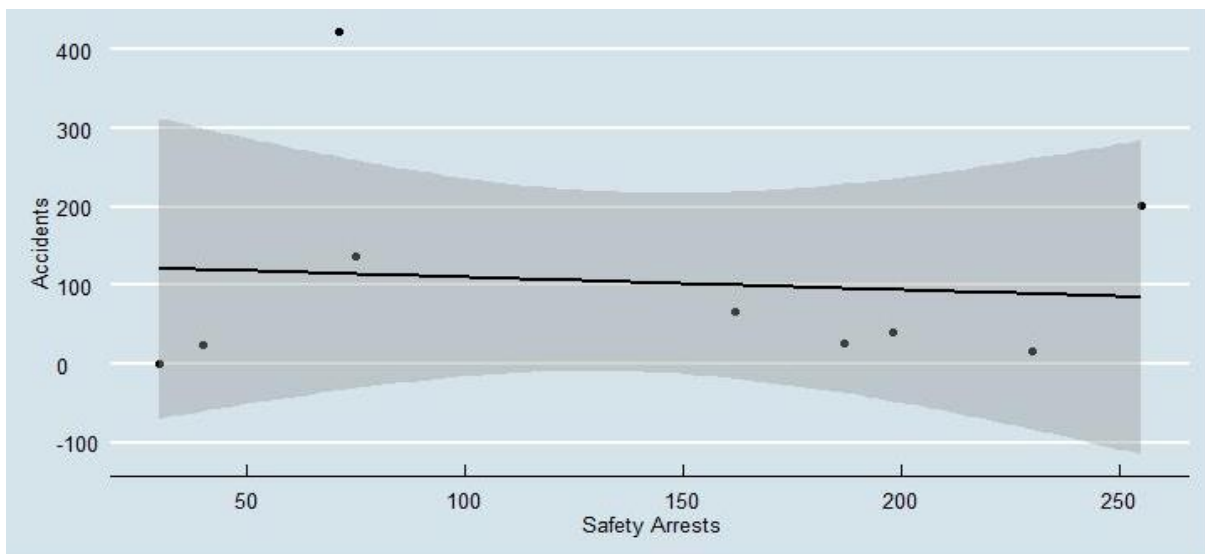
Figure 3.13: Safety Checks and Violations; Safety



Source: Field data (2021).

As can be seen from the last column of the table above, the test of correlations between the propensity to cause accidents by various vehicle categories and frequency of checks for the same road users revealed a positive correlation figure of 0.25. The difference in correlation figures between survey data and police records may be attributed to the fact that most police accidents are recorded in the enforcement registries as enforcement data. This notwithstanding, the correlation figure is very low, suggesting that only in a few cases are vehicles types targeted for traffic arrests like those responsible for most of the violations.

Figure 3.14: Safety Arrests and Accidents; P-Records



Source: Field data (2021).

From the above three correlations tests, the following observations can be made; the police decision to flag down at a traffic checkpoint and their decision to arrest such a driver if found capable of wrongdoing is neither dependent on the repeatability of the offence or seriousness of the offence. This is evidenced by drivers notorious for traffic law violations who were rarely stopped at the traffic checkpoints during the study period. On the same code, those responsible for the highest number of accidents were not necessarily those frequently arrested during the study period. Finally, police records do not inform enforcement efforts since only few instances were those arrested for a traffic offence like those responsible for the highest proportion of RTIs. In line with this, therefore, the study agrees with previous studies that indicate that police enforcement behaviours are guided by personal interests instead of those of policymakers (Chitere & Kibua, 2004).

3.5 Chapter Conclusion

In this chapter, the first research question on how traffic police officers' selective targeting of road users affects road safety policy implementation in Kenya was answered by testing the relationship between the indicators of target discretion by traffic police officers and road safety policy implementation. On the one hand, road safety indicators measured in this chapter included the frequency of traffic violation disaggregated by both types of road users and type of vehicles and the frequency of traffic accidents disaggregated by both types of road users and type of vehicles. On the other hand, traffic police officers' discretion indicators were identified as the frequency of safety checks and the frequency of arrest. The chapter is based on the assumption that if the road safety policy were implemented, it would mean that there would be fewer traffic violations and accidents. However, from the study findings discussed above, there is an indication that implementation is greatly affected by traffic officer's discretion and the choices they make in the implementation of the policy. For instance, contrary to expectation, the traffic police officer decides which category of road user, type of vehicle to target. However, they do not target those that cause most violations but use their discretionary powers for personal reasons. Thus, road safety policy is thus not effectively implemented.

CHAPTER FOUR

DOMAIN DISCRETION BY TRAFFIC POLICE OFFICERS AND ROAD SAFETY POLICY IMPLEMENTATION

4.1 Introduction

This chapter investigates the effect of domain discretion on road safety policy implementation. It is concerned with the second research question on how domain discretion influences road safety policy implementation in Kenya. The independent variable is domain discretion, while the dependent variable is policy implementation. The domain discretion is measured in the various aspects of the Traffic Act that are mostly monitored at the traffic checkpoints and the traffic offences for which road users are frequently arrested if found in violation. The relationship between the independent and dependent variables is measured using Spearman's rank correlations. The chapter is separated into five sections. After the introduction, part two explores the frequency of violations of various road safety policy domains and the frequency with which such violations lead to traffic accidents and fatalities. Section three examines how various road safety policy domains are prioritized for road safety policy implementation. The fourth section correlates the prevalence of safety checks and violations among the paired road safety policy domains to decipher whether domain targeting promotes or undermines road safety policy implementation in Kenya. Finally, section five summarises the chapter's argument, provides its conclusions and a bridge to the next chapter.

4.2 Road Safety Policy Violations

The study measures road safety policy implementation outcomes in terms of the prevalence of traffic law violations, accidents and fatalities. This section is therefore divided into two, with the first part looking at the prevalence of violations by policy domains and the second part causes of accidents by policy domains.

4.2.1 The level of compliance by different policy domains

Previous studies have indicated that road safety policy violations are prevalent in Kenya (Kasau, et al., 2017; Manyara, 2016). However, these studies fail to explore which road safety policy domains are frequently violated. Against this background, this study seeks to document the aspects of the Traffic Act that road users in Kenya frequently violate. Table 4.1 shows data collected through observation and survey of the categories of traffic offences commonly violated in Kenya. For

purposes of uniformity, the offences observed and terminologies used were generated from the accident records report. The two data sets were separately collected and separately analysed. The first column displays the paired policy domains, while the second column documents the frequencies of violations by policy domains as captured during the study period. The third column displays the average police rating of the prevalence of violation per documented traffic offence. The scales range from 1 to 10, where 1 is the least prevalent offence, and 10 is the most prevalent traffic offence. The use of two data sources was informed by the fact that, on the one hand, some violations such as speeding and drunk driving cannot be observed without specialized equipment, which is only available to the traffic police. As can be observed in Table 4.1, data on such offences do not have frequency values. On the other hand, survey data could not be solely relied upon due to its susceptibility to recall bias.

Table 4.1: The Level of Compliance by Road Safety Policy Domain

S/N	Policy domain	Observation	Survey
		Frequencies	Rating
Motorists			
1	Drunk driving		2.26
2	Vehicle defects	50	2.13
3	Speeding ²³		5
4	Use of mobile phone	92	8.35
5	Drivers without Seatbelt	76	8.16
6	Careless overtaking	135	6.23
7	Overloading	33	1.35
Passengers			
1	Alighting at the wrong place	62	5.2
2	Seatbelt	622	8.16
Motorcyclists			
1	Puts on a helmet	107	6.23
2	Presence of passenger helmet	463	10
3	Wears a reflective jacket	499	6.39
4	Presence of passenger Jacket	285	3.61
5	Transport more than passenger at a time	428	2.87
6	Simultaneous transport of passengers and luggage	285	7.5
7	Riding at more than 50Kilometers per hour	463	9.8
8	Receive phone calls while driving	356	6.7
9	Overtake from the left side of the road	435	7.8
10	Overtake near a bend	321	4.3
11	Overlaps when traffic is congested	549	10
12	Respect traffic lights	499	9
13	Protective Boots	542	3,8
14	Wears protective gloves	545	8.6
Pedestrians			
1	Respect for traffic lights	456	8.9
2	Crossing at an inappropriate place	242	7
3	Crossing while on phone	109	8.7

Source: Field data (2021)²⁴

²³ Data on speeding was not corrected because it requires a speedometer.

Table 4.1 reveals that from structural observation transcripts, the most common violations observed during the study period were overlapping, use of mobile phones while driving and non-compliance to seat belt rules. It further reveals that there were higher levels of compliance to seat belt rules by private car owners than *matatu* drivers. Transcripts from structural observation also indicated that some *matatu* owners bring unworthy vehicles to the road at night once the police have left. Similarly, overloading was observed to be common among *matatu* drivers, especially at night. These observations were not radically different from the police rating on the prevalence of violations per paired road safety policy domains. The police observed that use of mobile phones and non-adherence to seat belts laws as the most common violations. Other traffic offences reported as being rampant among drivers included drunk driving and speeding.

The most common violations among passengers were the non-usage of seat belts. Concerning low usage of seat belts among passengers, it was observed as follows, “*Kenians only use safety belts when police are around. Since Muchuki died, no one cares about seat belts anymore*” FGD transcript, 7th January 2020. A further discussion with a passenger during the study period noted that seat belts are often not well-taken care of. Many of the commuter minibuses were found to be lacking seat belts. Those who had them fitted were not well maintained, with some being soiled, thus making it difficult to use them. It was also noted that passengers commonly alighted at non-designated PSV stages.

The study observed various violations among motorcyclists, with the most common ones being non-adherence to wearing reflector jackets for both the passenger and the rider, ferrying more than one passenger, careless riding and non-usage of helmets. The study observed that there were variations in the level of compliance in the variety of study locations. The adherence level among motorcyclists operating in towns was much higher than those among motorcyclists operating in the estates. Discussions with their leaders revealed higher levels of enforcement in Nairobi's Central Business District compared to other parts of the city. The in-depth interviews revealed that some passengers refused to use helmets, citing health concerns given that multiple passengers wear the helmets. However, most of the motorcyclist violations are associated with their ignorance. “*What do you expect? These guys are school dropouts. Some of them do not even know how to read and write,*” noted one of the KII respondents. The FGDs transcripts also reported that most residents of Nairobi do not like riding on motorcycles and only use them when in a hurry. “*Most often they are*

either late for the airport or work. To stay relevant, motorcyclists are therefore forced to overlap and ride faster so that their clients are not late” (Enforcement FGD transcript, 17th January 2020).

The violations observed among the pedestrians included crossing at non-designated areas and crossing while talking on the phone. During the FGD session with enforcement officers, one of them noted this, *“Kenyans like shortcuts.... even where a footbridge is just meters away, you find someone just crossing with no regard for the oncoming vehicles”*. *“This high level of non-compliance is largely attributable to ignorance and limited enforcement given that we cannot have enforcement officers at all footbridges to arrest those risking their lives”* noted one of the KIIs.

All the above read together, it is noticeable that the level of non-compliance varies from one policy domain to another. Some aspects of road safety policies tend to be violated more commonly than others. As per the study respondents, the reasons for their violations range from ignorance of the law to perceived benefits of shirking. Later in this study, discussions are done on whether there are any relationships between shirking and road safety policy implementation practices. Because all road traffic violations result in traffic accidents, section 4.2.2 below the most common causes of accidents in Nairobi are documented.

4.2.2 Causes of Accidents

Nairobi has the highest number of RTIs in Kenya (NTSA Annual Report, 2015). This section narrows down to the categories of violations responsible for the high level of RTI in the city. Data extracted from the accident registry indicate that in 2019, there were a total of 2,429 accidents reported in 14 divisions in Nairobi. Out of these, there were 510 fatalities, 1,317 serious injuries and 602 slight injuries. The official traffic accident data capture form, commonly referred to as P69, further divides accident data between people who are primarily involved (part A) and those otherwise involved (part B). A total of 1,629 people were responsible for traffic accidents that took place during the reporting period. Among these, 951 were drivers. Form P69 had 98 accident cause codes and those related to drivers bear codes 1 to 30. For analysis, these cause-codes have been categorised into various traffic offences presented in Figure 4.1.

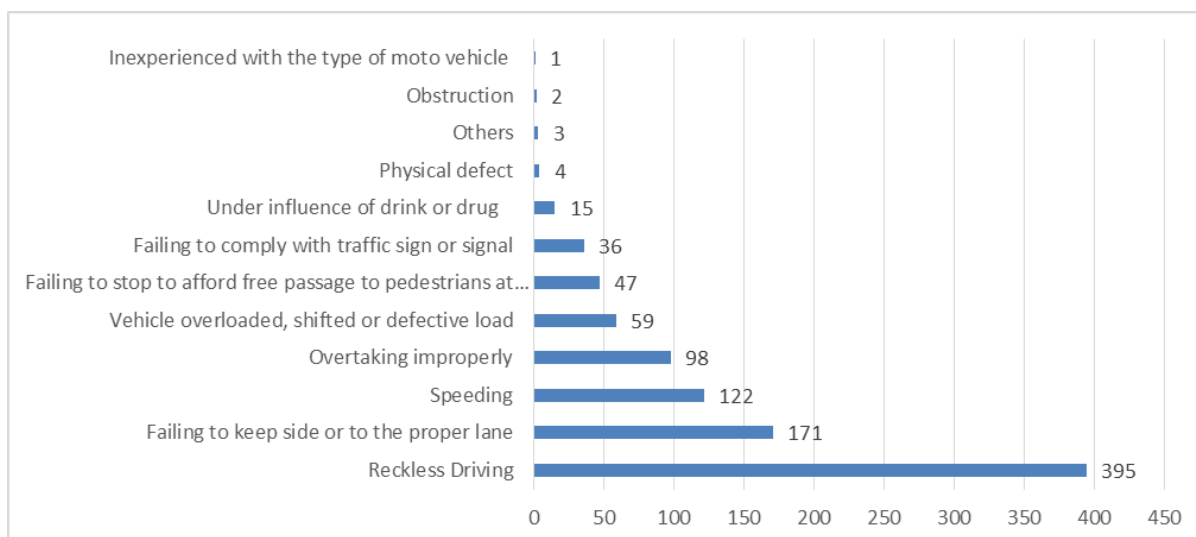


Figure 4.1: Traffic Accidents as Per Police Records

Source: Computed from form p69 on accident records

Most (395) of the accidents were attributable to reckless driving. The accident cause codes included in this offence category as perform p69 on accident records are misjudging clearance, the distance or speed of vehicle or object (191), loss of control (145 cases), crossing without due care at a road junction (21), forcing a way through persons boarding or alighting omnibus (21), turning around on the road negligently (4) and reversing negligently (13)²⁵. A review of the traffic signals ²⁶ indicates that while a large proportion of accidents were associated with misjudging clearance, the distance or speed of vehicle or object commonly known as not keeping distance, most of these accidents were not fatal. A large proportion of fatal accidents are associated with loss of control. For instance, on 27th February 2020, a 31-year-old man was involved in a serious accident along Thika Superhighway. The said motor vehicle was moving from the City Centre and reaching the location of the accident lost control. As he tried to pull off to the right, he hit a wall, thereby sustaining a leg fracture, among other injuries leading to his admission at Guru Nanak Hospital in a serious condition (Nairobi Accidents Registry, 31/3/2020).

The second-largest proportion of accidents includes failing to keep to the side or stay on the right lane (171 cases). The cause code classified under this offence category includes: Failing to keep side or to stay on the right lane (94 cases); pulling out near side or from one traffic lane to another

²⁵ The cause codes are derived from form p69

²⁶ Single accident reports from every station to the data registry

without due care (19 cases); turning right without due care (52) and turning left without due care (6 cases). Figure 4.1 also shows that a significant number of accidents in the city are attributable to speeding and overtaking improperly. The cause code related to this is: overtaking improperly (62), swerving (21), skidding (5), and 'cutting in' (10). The other high contributors to high RTI figures in the city are overloading (59 cases), lack of respect for pedestrians crossing (47 cases) and impaired driving (15). Notable; on 15th February 2020 at 3.45 pm, an accident occurred on Thika road near the Kastamil area. In this accident, the vehicle driver had lost control, thus hitting the rail guard and sustaining head and chest injuries. The alcohol breathalyser test indicated that the driver was drunk (Nairobi Accidents Registry 31/3/2020). During the study period, only four (4) cases were associated with physical defects, two (2) cases with obstruction and one (1) with lack of driving experience on the part of the driver.

The traffic police department also recorded several accidents and fatalities that fall under accident cause-codes associated with motorcycles during the study period. This stems from the fact that motorcycles are increasingly becoming a popular mode of transport in Kenya. With this increase, there has also been an upsurge of motorcycle-related accidents in the last decade (Gachohi & Ngure, 2019). The behaviour of motorcyclists is regulated by Section 60 (1) of the Traffic Act on restrictions on pavilion riding (Government of Kenya, 2012). Additional regulations are provided for by the National Transport and Safety Authority Operation of Motorcycles Regulations, 2014. In the year 2019, a total of 326 RTI occurred in Nairobi because of motorcycle accidents. Among these, 82 were fatal, 210 serious and 34 moderates. The total number of riders accountable for these accidents were 122. These accidents mainly were attributed to reckless riding (43 cases), changing lanes (22 cases), careless overtaking (21 cases), speeding (12 cases) and failure to comply with traffic signals (8 cases). The other causes were associated with lack of experience (3), failing to accord passage for pedestrians (3 cases), impaired riding (1 case) and monocycle defects (1 case). These findings corroborate a previous study that indicated that right-of-way violations or losing control contribute to more than half of serious motorcycle crashes (Li, et al., 2018)

Discussions with traffic enforcement officials indicated that most motorcycle accidents are attributed to ignorance of traffic rules and signs. Unlike vehicle drivers, cyclists are not required by law to have a rider's license. Subsequently, most of them lack training in their trade. The motorcyclists interviewed opined that their survival instincts mainly inform their reckless behaviour. For the most part, passengers hire them whenever they are in a hurry and need to

overcome traffic build-ups on city roads. Therefore, it would defeat the reason they were hired if they were to respect traffic lights and other rules, thereby moving at the same pace as vehicles. Discussions with KII also revealed that while it may appear from both the accident records that alcoholism is not a big problem among the riders, this is not the case. On the contrary, the behaviour is rampant. The low number is only associated with the fact drunk riding is rarely tested at the traffic checkpoints. A similar study in Kampala, singled out, alcohol consumption, competition for passengers, negligence of road safety rules, drug use and inadequate helmet usage as the main risk factors (Siya et al., 2019). Other common causes of motorcycle-related accidents are hereunder documented in Figure 4.2

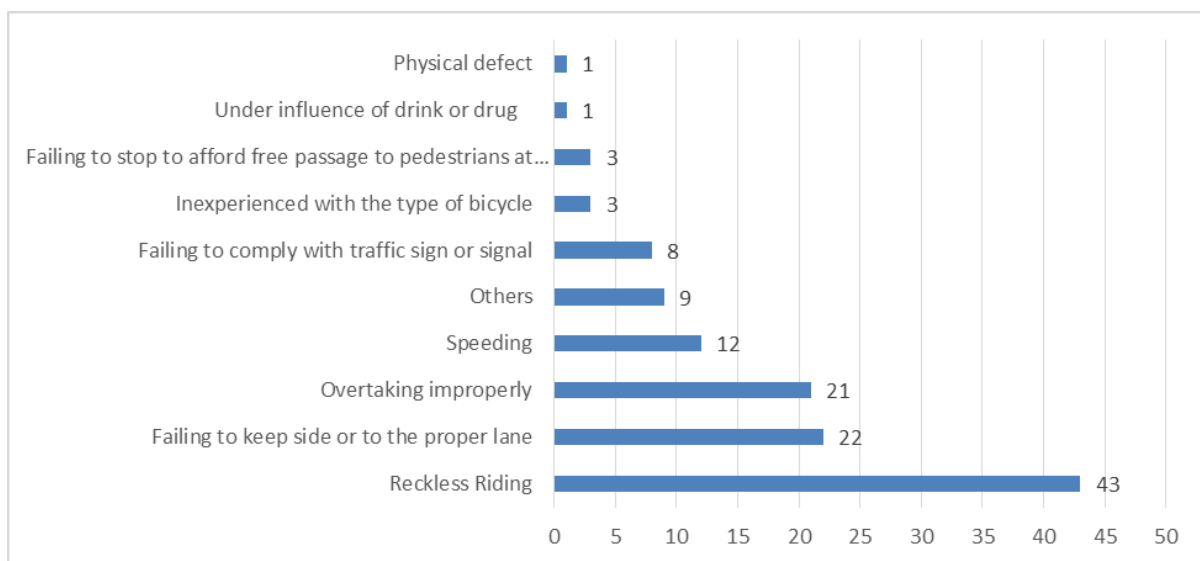


Figure 4.2: Motorcycle Accidents by Offence Type

Source: computed from form p69

It has been observed that most victims of road traffic fatalities in Kenya are pedestrians (Iaych & Khayesi, 2019). In 2019, a total of 1,896 RTIs reported in Nairobi involved pedestrians and passengers as victims. Out of these, 382 were pedestrians, and 69 passengers were reported as traffic offenders. Table 4.2 provides data on accidents associated with pedestrians (code 59-68): passengers (69-73), animals (74-75), obstructions (76-77), and vehicle defects (78-89). In most instances, pedestrian instigated accidents in 2019 were related to the following cause-codes: stepping, walking or running off a footpath or verge into the road (83), crossing the road not masked by stationary vehicles (63) and walking or standing on the road (46). Among the passengers, on the other hand, the most common causes of accidents were boarding or alighting from a vehicle without

due care (39) and negligence on the part of the conductor or goods vehicle attendant (10). Table 4.2 categorizes these accidents by offence type.

Table 4.2: Other types of accidents

Pedestrian	Total accidents
Crossing road while drunk	7
Crossing at no designated places	207
Others	175
Passenger related offences	59
Conductor related offences	10

Source: Field data (2021).

In addition to accident data extracted from the accident’s registry, road users were also asked if they had an accident the month before the interview and what caused that accident. The graph below provides data on the causes of accidents reported by road users during the survey.

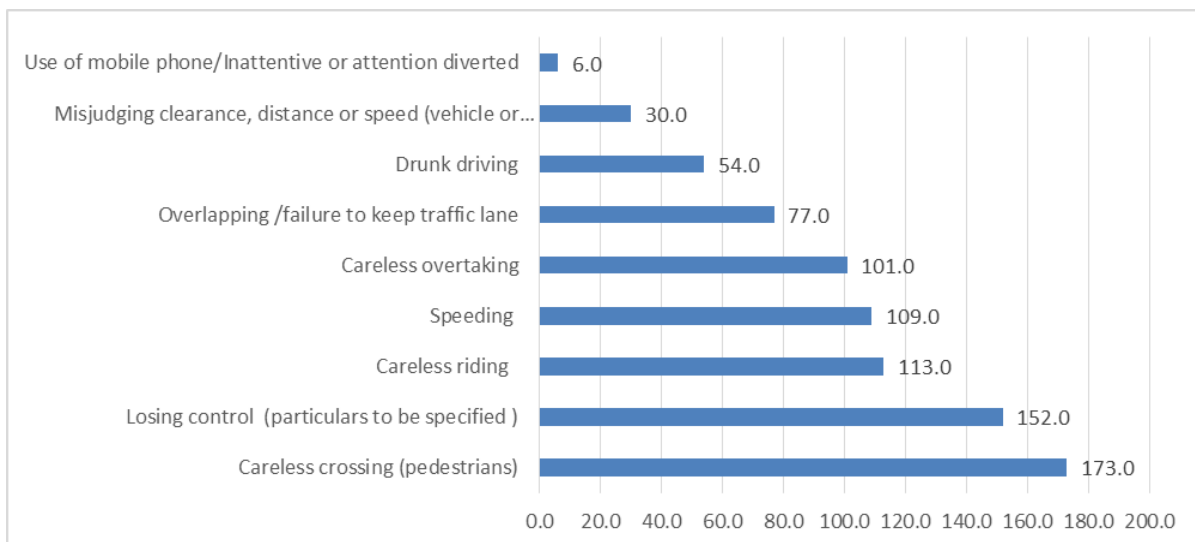


Figure 4.3: Causes of accidents as reported by road users

Source: Field data (2021).

From Figure 4.3 above, it is noticeable that careless road crossing and loss of control were the most prevalent causes of accidents reported by road users. Some of the road users interviewed reported that.

I was headed home at night on Mombasa road when suddenly a motorcycle appeared at the Katani Junction, as I was trying to avoid hitting it, I lost control and ran into a ditch” (Personal communication 17th January 2020).

Others reported that their last accidents were occasioned by the sudden appearance of a pedestrian on the road. They applied brakes and suddenly rolled, given that they were speeding. In other incidents, the road users reported trying to avoid a head-on coalition with an oncoming vehicle that was trying to overtake without due regard to the road conditions.

From the above discussions, it can be observed that some traffic offences are more prevalent than others. The prevalence range from road user’s ignorance of the impact of such violations to the benefits associated with shirking safety rules. Regardless of the case, enforcement efforts play a significant role in creating deterrence for traffic offences (Mitullah & Asingo, 2014). With this discussion in mind, the next session explores types of traffic offences that are frequently targeted for enforcement by enforcement officers.

4.3 Traffic police officers’ Discretion over which Policy Domain to Prioritize for Implementation

Having discussed the dependent variable in this section, the study discusses the independent variable, after which it examines the road safety policy domains prioritized during the implementation processes. According to Schafer et al. (2006), police employ three types of discretion at traffic stops. First, the officer must choose whether to stop a road user at the traffic checkpoint; the second decision is on what to search for. In this regard, an officer may decide to search the driver alone, or search the driver and the vehicle or search the driver, the vehicle, and passengers; lastly, the third decision factor is what to do with the outcome of the search. An officer may decide to issue a warning, a citation or make an arrest. This section concerns itself with road safety policy domain discretion indicators, namely, the number of safety searches and safety arrests by traffic offence type. Correspondingly, this section is organized into two subsections, with section one dealing with safety searches and section two with safety arrests, all disaggregated by offence type.

4.3.1 Discretion over Policy Domain to Target for Traffic Searches

Given that road users in Nairobi mainly comply with traffic regulations in the presence of the police (Mitullah & Asingo, 2014), efforts were made to find out which types of violations are commonly checked by the police at the traffic checkpoints. In this regard, enforcement officers were asked to rank the offences listed in Table 4.3 below by the frequency with which they target them during the road safety policy enforcement process. The data collected through the police perception survey was triangulated by thus structured observation. Thus, in the first column of Table 4.3, the paired traffic offences are serialized. The offence categories are listed, in the third category, the number of observed safety checks in each of paired offence categories are documented, and the last police rating of how they prioritize safety checks by offence category is provided.

Table 4.3: Domain Targeting at the Traffic Checkpoints

S/N	Policy Domains	Observations	Police Ratings
Motorists			
1	Driver licence	181	9.7
2	Insurance	166	9.5
3	Drunk driving	113	9.2
4	Careless overtaking	110	6.32
5	Use of mobile phone	78	1.1
6	Vehicle defects	38	4.81
7	Overloading	10	3.23
8	Speeding	0	9.5
Motorcyclists			
1	Puts on a helmet	67	5
2	Presence of passenger helmet	40	8.7
3	Wears a reflective jacket	62	8.3
4	Presence of passenger Jacket	52	1.2
5	Transporting more than 1 passenger at a time	40	6.2
6	Simultaneous transport of passengers and luggage	25	7.8
7	Riding at more than 50Km/hour	0	0
8	Receive phone calls while driving	0	0
9	Overtake from the left side of the road	0	0
10	Overtake near a bend	0	0
11	Overlaps when traffic is congested	0	1
12	Respect traffic lights	0	2
13	Protective Boots	0	0
14	Wears protective gloves	0	0
Passengers			
1	Seatbelt	0	3.81
2	Alighting at the wrong place	125	8.2
Pedestrian			
1	Crossing while on phone	0	0
2	Crossing at an inappropriate place	0	1.3

Source: Field data (2021).

The observation data reveals that most scenarios, motorists were stopped at the traffic checkpoints to evaluate their compliance to traffic laws relating to presence and authenticity of driver's license

(181 cases), insurance (166 cases), drunk driving (113 cases), careless overtaking (110) and use of mobile phones (78). The structured observation transcripts show that vehicle defects (38) and overloading are rarely checked (10 cases). The study could not measure excessive speed, and thus its column was marked zero.

The data from structured observation were compared with those from police perception surveys. Just like in the case of structured observation, the survey data ranked driver licence (mean rating 9.7) as the most frequently checked traffic offence at the traffic checkpoints. Other traffic offences commonly checked include speeding (mean rating 9.5), insurance (mean rating 9.5), drunk driving (mean rating 9.2) and careless overtaking. The police reported that they rarely check vehicle defects (mean rating 4.81), Overloading (mean rating 3.23), Use of mobile phones (mean rating 1.1).

Among motorcyclists, the observation data indicated that the most checked for violations are wearing of a helmet (67), whether the rider and his/her passenger are wearing a reflective jacket (62 and 52 respectively), the presence of passenger helmet (40) and overloading (25). No safety checks were recorded for several violations. This includes riding at more than 50Km/hour, receiving phone calls while riding, overtake from the left side of the road, overtake near a bend, overlaps when traffic is congested, respect traffic lights, and use protective measures. The study observed marginal differences between the data extracted through observation and those extracted from the survey data. On average, the police reported that a passenger helmet (mean rating 8.7) is a most checked traffic offence at the safety checkpoints.

Other commonly checked offences among the motorists as per the survey data include: wears a reflective jacket (mean rating 8.3), simultaneous transport of passengers and luggage (mean rating 7.8), overloading (mean rating 6.2), presence of riders helmet (mean rating 5), respect traffic lights (mean rating 2), overlaps when traffic is congested (mean rating 1). The following offences were rated a never checked by the police, riding at more than 50km/hour, receive phone calls while driving, overtake from the left side of the road, overtake near a bend, protective boots, wears protective gloves.

The study also observed that enforcement officers occasionally check for road safety policy compliance among passengers and pedestrians. Based on the structured observation data no passengers were checked for seatbelt usage during the study period. However, there were 125

passengers cautioned for alighting at the wrong place. No pedestrian was stopped or cautioned for road safety policy violation during the study period. Based on the survey data, the frequency of traffic checks among passengers for alighting at the wrong place was rated at 8.2 and seatbelt usage at 3.81. The police reported that they did not stop a pedestrian from crossing the road while on the phone. They however occasionally caution them about footbridge usage.

The principal investigator interviewed the police, managers and chairpersons of road users' associations to find out why some traffic violations are targeted at traffic offences rather than others at checkpoints. The KII transcripts from the police managers indicate that the choice of policy domains to focus on during the implementation process is mainly guided by the seriousness of the offences. Consequently, more prevalent police domains are more likely to be checked than those that are not prevalent. One of the respondents noted as follows, “underage driving is very prevalent in the upmarket estates of Nairobi such as Westland and Karen. Many of these young guys end up causing unnecessary accidents” (Personal Communication, 31/3/2020). The data from road user leaders, on the other hand, indicated that police target violations based on personal interest. One of them noted that:

Every Friday the OCPD releases a vehicle to go for an operation. Everyone who is found with a drunk driving case pays a bribe of KES: 20,000. Because of this, drunk driving is the most monitored traffic offence in Nairobi (Personal Communication, 3/4/2020).

From the discussions above, important issues arise; first, the police do not investigate a violation of all domains of the road safety policy. Some are prioritized over others in terms of frequently investigated and those that are first to be checked at the traffic checkpoints. The decisions concerning the aspects of the Traffic Act to target traffic searches are determined by both the legislative objectives and non-legislative considerations such as personal biases, values, self-interest, and the organizational culture. There are disagreements between the police and the road users over factors that primarily inform the decisions on the policy domains to focus on more during the traffic searches. While the police insist that the repeatability informs prioritization of domains for traffic searches of the offence, road users insist that personal police interests primarily inform these decisions. The police, therefore, primarily investigate those policy domains that are easily detectable. The next session moves the discussion further to discuss the nature of sanctions applied on road users in terms of warnings, instant fines, citations, and arrests.

4.3.2 Discretion over which policy domains to target for traffic arrests

The second level of discretion practised by traffic police officers is choosing the policy domains that should be targeted for traffic arrests and the ones to be forgiven. According to the police data, 41,686 cases were processed during the reporting period. Among these, the highest number of people arrested for a single offence were those suspected of obstruction (6,786). This was followed by drivers arrested for not having uniforms or PSV driving licence (3,385) and conductors for lack of uniforms (1,344), vehicles without seat belts (987), and passengers without seat belts (907) and over speeding (689). Other reasons for arrest included excess passengers, lack of reflective materials, lack of helmets, speed governors, contravention of road service licence. Table 4.4 provides data on various offences that lead to various road users' arrests during the observation period as per the enforcement registry.

Table 4.4: The Numbers of Traffic Offenders Arrest during the Reporting Period

#	Violation	Fines	Cases
1	Drivers	2,248,000	389
2	Conductors	1,850,000	560
3	Passengers without seat belt s	1,568,000	1223
4	Pedestrians	1,008,000	634
5	Touts	0	0
6	Motor vehicles with road license	1,500,000	138
7	Vehicles that contravene road license	1,155,000	145
8	Speed governors	260,000	7
9	Vehicles without seatbelts	15,000	3
10	Speeding	1,154,000	129
11	Drinking	1,039,000	134
12	Excess passengers	563,000	57
13	Defective motor vehicles	954,400	327
14	Load music	0	0
15	Obstruction	4,045,000	2759
16	Motorcycles	1,234,000	314
17	Double packing	0	1
18	Reflective Materials	32,000	5
19	Insurance	710,000	34
20	Accident	3,041,000	147
21	Other offences	4,478,000	3535
	Grand Total Cases	26,854,400	10,541

Source: Police Records. November 2019 to February 2020

Beyond the data collected from the enforcement registry, road users were also asked if they had been stopped at a traffic checkpoint. Figure 4.4 below provides data on offences for which road users are frequently arrested.

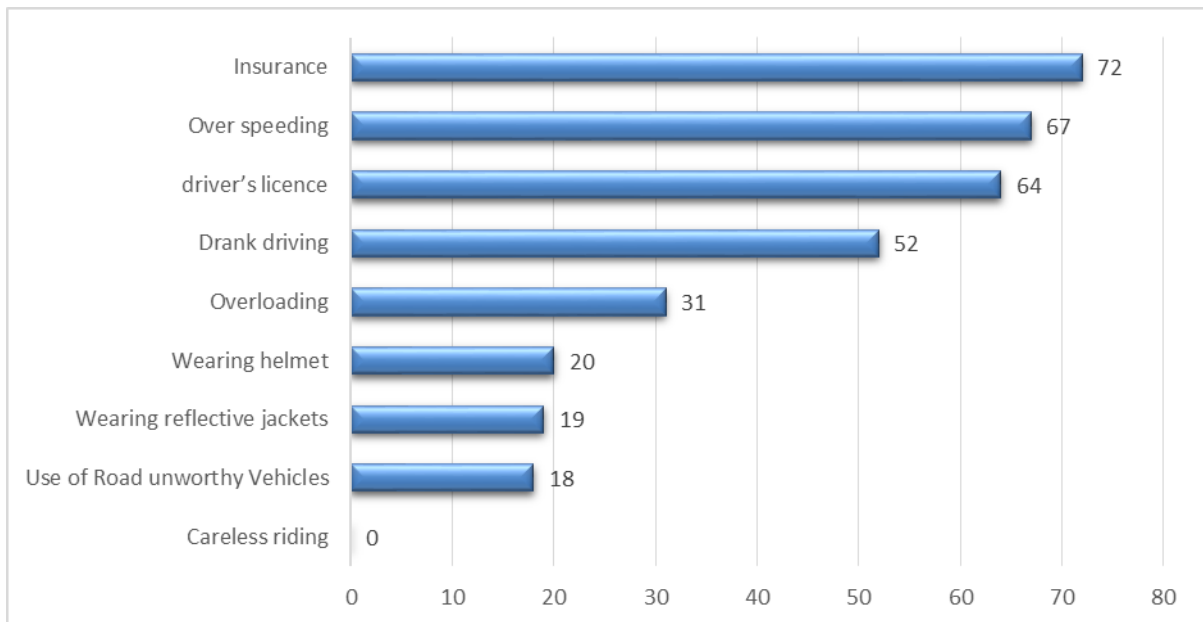


Figure 4.4.: Traffic Offences which led the Road Users to be arrested

Source: Field data (2021).

As shown in Figure 4.4, most road users were arrested for lack of valid insurance stickers (72). These other violations frequently led to road users arrest included speeding (67), lack of a valid driver's license (64), drunk driving (52), overloading (31), presence of the rider's helmet (20), presence of the riders reflective jacket (19) and vehicle defects (18). None of the respondents was arrested for careless riding. A review of Figure 4.4 and Table 4.4 indicates a strong agreement between data collected from police records and surveys. The marginal differences noticed may be related to both lacks of records biases in police records and recall bias in survey data. However, a test of concordance through Kendal or inclust was not conducted because these tests require more than two data sources.

To explain the variation in strictness of enforcement for various traffic offences, qualitative information from FGDs with police officers revealed that the decision to arrest or not arrest a traffic offender depends on various factors. To begin with, road users who contravene road safety policy domains responsible for the highest number of traffic fatalities are more likely to be arrested than those involved in minor offences. Consequently, since most traffic accidents occur because the driver is speeding and therefore unable to control their vehicle, the police service has heavily invested in equipment to detect speeding. Every effort is made among the motorists and whenever one is caught speeding to ensure that such a person is charged in court. Similarly, because many

avoidable deaths occur on roads due to the poor attitude among road users concerning the use of seatbelts, the police officers randomly check for compliance to seat belt laws and punish those who are found in violation of the same. Overloading and use of non-roadworthy vehicles are also targeted for the same reasons.

Concerning the targeting of obstruction for arrest, the traffic police officers noted that most offenders of this road safety policy domain are arrested mainly due to disrespect to the police and other road users. Because not all traffic offenders can be arrested, most traffic offenders are simply warned and allowed to go. However, there are cases where the same offender repeats the same mistake repeatedly. For instance, a matatu driver warned against picking passengers at a non-designated area then leaves that area and goes to the next one where there is no police officer. Suppose the officer in the course of his traffic enforcement duties finds him again. In that case, the person will likely be arrested not because the officer thinks that the offence committed is grave but because s/he thinks the road user does not respect his job. These sentiments corroborated the observation data. In places such as Ghurai and Kibera slum, *matatu* drivers would simply stop on the road to pick up passengers with complete disregard to other road users. During the observation period, unstructured interviews were conducted with selected road users to explain the observed phenomenon. One of the respondents reported the following:

On several occasions, my clients have missed morning flights due to the traffic jam created by matatu drivers. This kind of deviant behaviour can only be dealt with if some of these people are arrested and charged in court to create a sense of deterrence (Personal Communication 17 January 2020).

The respondents also reported that the decisions to arrest are dependent on the boss's preferences. Discussion with traffic police officers revealed that there are usually police officers in the rank of corporal and their team leader who is a sergeant or a more senior officer at each traffic checkpoint. The preference of these team leaders concerning the kind of road safety policy domains to be targeted for traffic law enforcement is what is implemented. This view is shared by Buvik (2016), who argues that one of the most critical determinants of police discretion is whether the activity was initiated internally or referred to the force from someone else.

Finally, the study respondents noted that taking some offenders to court requires strong evidence of wrongdoing. There are instances where police may observe violations, but such cases are ignored due to difficulties with producing evidence of culpability. In cases such as drunk driving and speeding, technology has made it easy to adduce evidence, and one is likely to see more cases concerning such offences being processed in court. However, there are several provisions of the Traffic Act (2014), the legal notice 161 of 2003 and other relevant laws that are much difficult to adduce in a court of law. More often, therefore, the police just caution the offenders and let them go.

Data from the police FGDs was further triangulated with that from the road users FGDs. This was done for purposes of clarification of facts as well as gaining new insights into the observed phenomenon. During these discussions, one of the road users noted that:

It is very easy to get arrested for lack of insurance; normally insurance gets expired at a time when you are broke. The chance that the police will not get hold of you and that is the day you get caught. The other issue that is sometimes a problem is the PSV licence. Just like insurance sometimes you can get work when your PSV expires and then you get caught. In this case, however, we are a little lucky. The former chief justice said that if you were caught by the police driving without a driver's licence then you should be given 48 hours to produce it to the police. The police cannot, therefore, arrest you for not having a driver's licence.

Another respondent in the same group discussion reported that one of the areas where taxi drivers suffer is a lack of a seat belt.

One day, I was taking my customer to Woodley; little did I know that they had not worn their seat belts because they were at the back. Reaching Ngong road we were stopped by the police after which the lady and a gentleman in the back seat were asked to come out. They quickly did as were instructed and the police said they had been arrested for not wearing seat belts. I had to plead with the police to forgive them. When I plead you know the police language, you must part with something small.

The road users further noted that police decisions to either arrest or not to arrest are also dependent on the public perceptions of the seriousness of the offence as implied by the amount of pressure they mount on the police to have the offenders arrested. For instance, when there is a car obstructing the way, and everyone is complaining about it, then there is a likelihood that such a person will be arrested compared to situations where no complaints are made. This explains why obstruction is the most targeted traffic offence. These sentiments are comparable to those of Buvik (2016) in whose view police tend to be more vigilant in enforcing traffic laws if the public is watching them than if they are left alone. He notes that it is in the interest of the police to create a good image of their service. This evidence is further corroborated by the data gathered through the KII conducted in the office of Traffic III.

According to Traffic III, the police officers are currently very keen on portraying a good relationship with the public and the media's presence. This is because police-citizens relations are one of the key performance indicators for police officers. Since everyone is looking for promotions, the police will try to behave very well where the media cover their actions. This probably explains that traffic accidents reported in the media are most likely to be processed as compared to those that are not reported.

From the above discussions, it appears that targeting road safety policy domains for implementation is mainly determined by the seriousness of the offence, repeatability of the offence and bosses' preferences, and ease of adducing evidence in court. This is because road safety policy implementation is intended to impact violations, accidents, and fatalities. The next section discusses the relationship between domain discretion and road safety policy implementation outcomes.

4.4 Domain Discretion and Road Safety Policy Implementation

This section now delves into the discussion on the relationship between the dependent and the independent variables. The dependent variable is road safety, and the independent one is domain discretion. As has already been mentioned, the dependent variable is measured by the number of violations and the number of accidents. On the other hand, the independent variable is measured through the study of police discretion over the policy domains to prioritize during the traffic searches and traffic arrests.

4.4.1 Correlating Violations and Safety Checks

To examine the relationship between the independent and dependent variables of the study, Spearman's test of correlations was conducted between indicators of the two variables: the level of compliance and targeting among the paired policy domains. The data collected through different sources were separately analysed. Subsequently, the first test was done using data collected through observation and after that, a repeat test was conducted using data collected through the survey. Subsequently, the first column of Table 4.5 outlines the paired road safety policy domains. The second column compares the ranks of violations and ranks of targeting as per observation data. The third column displays the same comparison using survey data. The same data is visualized using scatter plots in Figures 4.5 and 4.6. The correlations figures are hereunder presented:

Table 4.5: Correlation Compliance and Domain Targeting

#	Policy Domains	Observation		Survey	
		c	t	c	t
1	Driver licence	27	1	1	21
2	Speeding	20	22	2	5
3	Insurance	28	2	3	22
4	Drank driving	23	4	4	7
5	Presence of passenger helmet	7	7	5	16
6	Wears a reflective jacket	5	8	6	17
7	Seatbelt	1	22	7	18
8	Drivers without Seatbelt	17	14	8	14
9	Simultaneous transport of passengers and luggage	15	13	9	23
10	Careless overtaking	24	5	10	2
11	Transport more than passenger at a time	11	10	11	20
12	Puts on a helmet	19	11	12	24
13	Vehicle defects	25	12	13	9
14	Alighting at the wrong place	22	3	14	15
15	Overloading	26	15	15	25
16	Respect traffic lights	6	22	16	26
17	Respect for traffic lights	9	22	17	6
18	Crossing while on phone	18	22	18	8
19	Presence of passenger Jacket	14	9	19	13
20	Use of mobile phone	21	6	20	27
21	Overlaps when traffic is congested	2	22	21	28
22	Overtake near a bend	13	22	22	19
23	Protective Boots	4	22	23	11
24	Riding at more than 50Km/hr	8	22	24	3
25	Wears protective gloves	3	22	25	4
26	Overtake from the left side of the road	10	22	26	10
27	Crossing at an inappropriate place	16	22	27	12
28	Receive phone calls while driving	12	22	28	1
	Correlations figures	rho -0.6140171		rho -0.6140171	

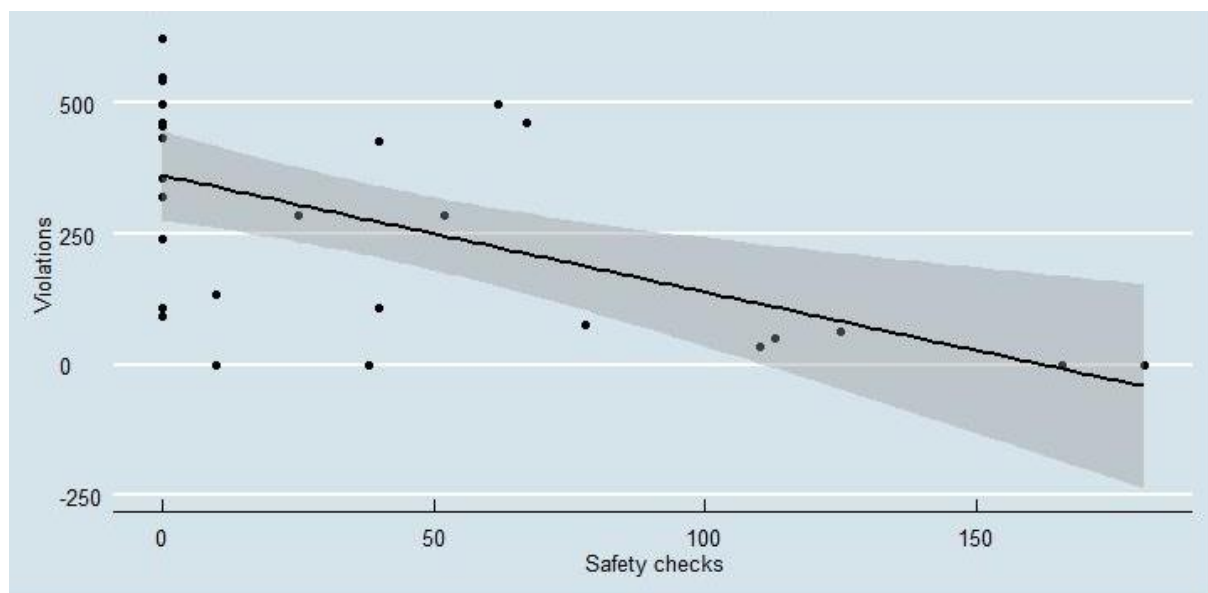
Source: Field data (2021).

As seen in Table 4.5, traffic offences that are frequently violated are not the same as those targeted for safety checks. For instance, from the observation data, drivers' licence and insurance are some of the most frequently targeted traffic offences for implementation but are also the least violated. Similar observations were noted in the survey data. The traffic offences which appeared in the list

of five most frequently violated policy domains also appeared as the top five least started offences for traffic law enforcement. To test the strength of the relationship between the above indicators of independents and dependent variables, they were subjected to a spearman's rank of correlations.

The test of correlation between the frequency of safety checks and frequency of violations among the paired traffic offences as per observation data revealed a negative correlation coefficient. The observed correlation coefficient is rho -0.6140171. The observed P-value is 0.005099. Since the observed P-value is less than 0.05 then the observation relationship did not occur by chance²⁷ and H₀²⁸ is thus rejected. According to the findings, in most instances, the traffic police officers checked for non-compliance with road safety policy domains that are rarely violated. The correlations above are hereunder visualized using a scatter plot:

Figure 4.5: Safety Checks and Violations; Observations



Source: Field data (2021)

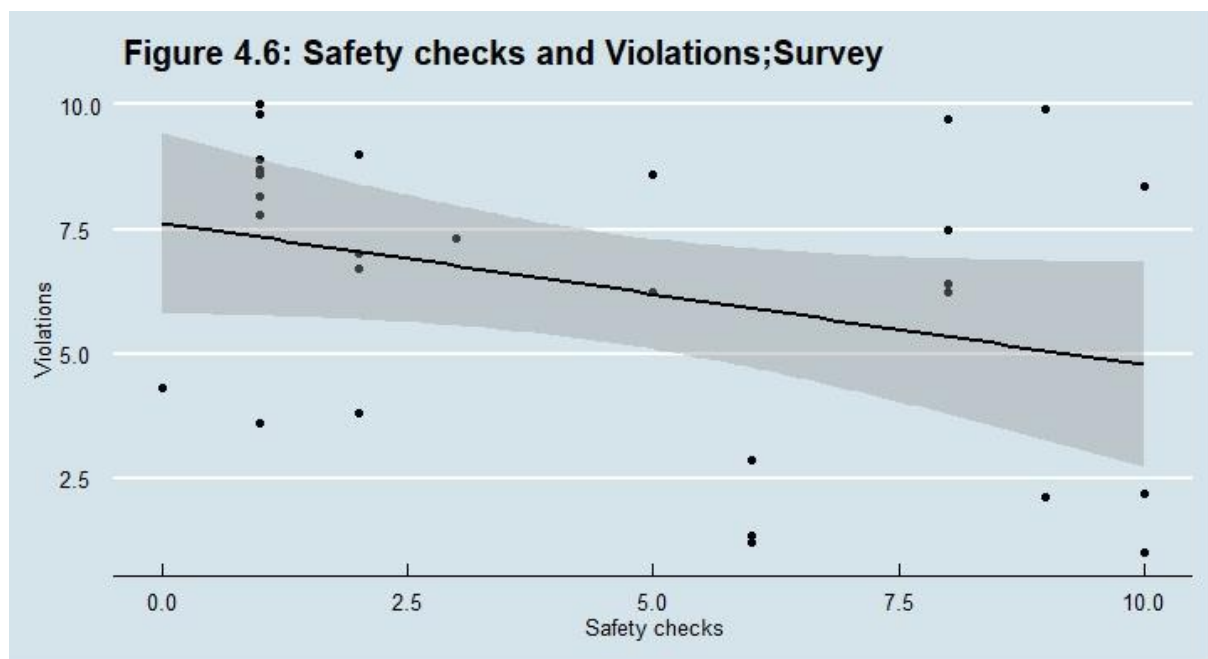
The repeat test using survey data revealed the same correlation figure. This shows that the police are aware that they do not necessarily target traffic offences that are commonly violated. During one of the police FGDs, one of the participants noted as follows, “most of those offences you are looking for are committed by motorcycles, but how do you catch them”. This implies that police

²⁷A statistician's way of saying it is significant

²⁸ Domain discretion by traffic police officers does not influence road safety policy implementation in Nairobi Traffic Command Area

decision to arrest is more dependent on the road user characteristics than the repeatability of the offence. It also indicates that the police prioritize traffic offences that are easy to enforce compared to those that are difficult. These sentiments explain why the presence of insurance documents, licenses, reflective materials and other violations which are readily visible once the road user has been flagged down are checked more than others. The other category of frequently checked violations can be detected through automated methods such as speed guns and breathalysers. The above correlations are hereunder visualized using a scatter plot.

Figure 4.6: Safety Checks and Violations; Survey



Source: Field data (2021).

Altogether, several observations can be made. Because police have a heavy workload, they cannot check all the violations at the same point in time. Therefore, they randomly select what to check at the traffic checkpoints, with the decisions on what to check largely dependent on each traffic enforcement officer. However, there are selected instances when they can be requested to focus on a specific aspect of the road safety policy, such as speeding or drunk driving. These cases are, however, rare. To this end, the decisions on what to check for or not largely depend on their intuition. The discussions further revealed that these biases are, in most cases, informed by both the police culture and previous encounters with road users. If one officer checks one vehicle and finds out that the vehicle does not have a lifesaver, he is more likely to check for the same thing in the next vehicle.

The discussions further revealed that traffic police officers rarely read traffic laws. They simply take cues from other officers on what to check for during the traffic law implementation process. In other words, when a new officer who has been transferred to the department sees another officer checking for things at the traffic checkpoints, then s/he will simply wait for his turn to do the same. The observations also confirm the findings of Brehm and Gates (1999), who offers that the most important determinant of administrative discretion is the organizational culture. In other words, faced with a decision-making situation, the administrative officials will react to the problem the way they have always done it. These decisions are further informed by practical expediency. Because they want to check as many vehicles as possible, they do not want to waste time with any vehicle. They will, therefore, look out for only those policy domains that are easy to check.

The above findings are comparable to the data extracted from the road users FDG transcripts. A discussion with the *boda-boda* operators revealed that the police always stopped them whenever they transported more than one passenger at a time or if they did not have a helmet. On the contrary, they are rarely stopped and asked questions about mechanical issues. To this end, most motorcyclists rarely take good care of their motorcycles, leading to a high rate of motorcycle-related accidents. A similar observation was made during the FGDs with private car owners at Geese pub in Umoja estate²⁹. The respondents noted that it is better to drive without driving licences because if you are found without one, the law requires that you be given 48 hours to produce one.

On the contrary, if one is driving a car without valid insurance, the person is cited for a violation. In the same discussion, one respondent noted that "the other thing the police target on the road is lifesavers because I know they will always ask for it I have decided to buy one". These observations corroborate an earlier finding by Asingo and Mitula (2007) that road users in Kenya only comply with road safety policy provisions that they are forced to comply with. It is rare to find a road user obeying traffic laws because it is right. This way, whenever there are no traffic police officers on the road, the city experiences overwhelming traffic snarl-ups.

In summary, the street-level bureaucrats do not necessarily target road safety policy domains that are commonly violated. On the contrary, they prioritize policy domains that are easy to investigate

²⁹One of the FGD locations

during traffic searches. Secondly, the traffic searches are not random. Over time the police have developed a behaviour code on what to look out for during enforcing traffic laws. According to the data obtained through the survey and observation, these include driver's licence and insurance and sometimes lifesavers if one travels in the evening. Given the fact that road users have observed these behaviours over time, they thus comply with policy provisions that are frequently checked for by enforcement officers and ignore those that are rarely checked. Consequently, the traffic enforcement officer's wrong usage of discretionary powers is responsible for road safety policy failure in Nairobi.

4.4.2 Correlating Safety Arrests and Traffic Accidents

This section takes the discussion further to examine the relationship between safety arrests and traffic accidents. In doing this, data on traffic accidents in sections 4.2.2 and 4.3.2 on traffic arrest were paired, and Spearman rank of correlations applied. The data used in this section has been extracted from two sources, namely: survey and police records. Data from each source was separately analysed. Correspondingly, Table 4.6 below has two Spearman correlations figures. On the left is data extracted from survey data and the correct data from accident registries. These data are further visualized using scatter plots in Figures 4.7 and 4.8

Table 4.6: Correlation the Frequency of Accidents and Traffic Arrests

Survey				Police records		
	Policy domain	t ³⁰	a ³¹	Policy domain	a	t
1	Insurance	1	12	Reckless Driving	1	5
2	driver's licence	2	12	Others pedestrian accidents	2	3
3	Speeding	3	4	Failing to keep side or to the proper lane	3	17
4	Drunk driving	4	7	Speeding	4	10
5	Overloading	5	12	Overtaking improperly	5	17
6	Helmet use	6	12	Vehicle overloaded, shifted or defective load	6	11
7	reflective jackets	7	12	Crossing at non designated places	7	17
8	Overlapping /failure to keep traffic lane	8	6	Passenger related offences	8	2
9	Careless riding	9	3	Failing to stop to afford free passage to pedestrians at a pedestrian crossing	9	17
10	Losing control	10	2	Failing to comply with a traffic sign or signal	10	17
11	Use of mobile phone/Inattentive or attention diverted	11	9	reckless riding	11	7
12	Careless crossing (pedestrians)	13	1	Under the influence of drink or drug	12	9
13	Careless overtaking	13	5	Other moto vehicle accidents	13	8
14	Keeping distance	13	8	Conductor related offences	14	4
15				Crossing road while drank	15	17
16				Physical defect	16	6
17				Inexperienced with the type of moto vehicle	17	17
				Obstruction	18	1
				Insurance	20	12
				Reflective Materials	20	13
rho -0.5395914				rho -0.1185546		

Source: Field data (2021)

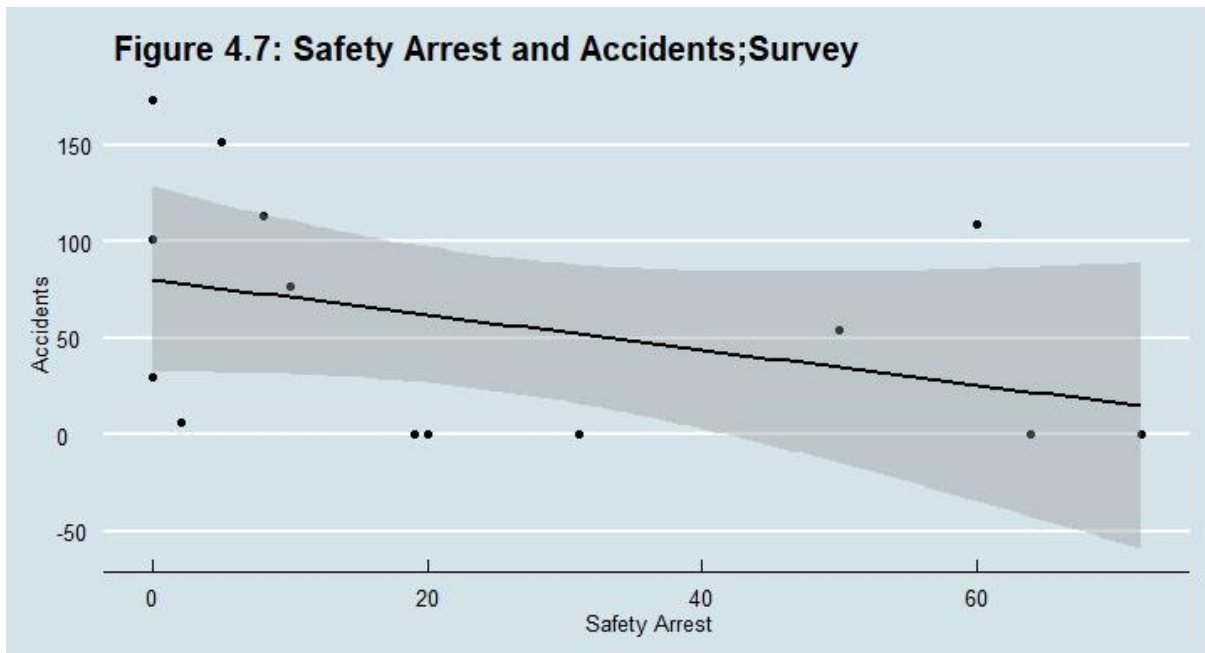
As shown in the first column of Table 4.6, on the one hand, most of the road users reported that their accidents resulted from careless riding, losing control, careless crossing, speeding and

³⁰ Ranks of frequency of arrest by offence type

³¹ Ranks of frequency of Accidents by offence type

overlapping/failure to keep on the right traffic lane. On the other hand, most of them were arrested due to insurance, speeding, vehicle defects and overloading. Similar observations are visible from the police records. Most accidents are attributable to reckless driving on the one hand and ranked 5th in terms of targeting. Similarly, while most people get arrested for obstruction, it was ranked 18 in terms of accidents. Spearman's correlations were applied to test the strength of the relationship between the above indicators of discretion and implementation outcomes. The resulting correlation figure rho -0.5395914 and the p-value = 0.04643. Given that the observed P-value is less than 0.05, the value of the correlation is significant and therefore did not occur by chance and the H₀³² is rejected. The correlation figure imply that there is a discrepancy between road user perception on which traffic offences frequently lead to road users arrest at traffic checkpoints and enforcement officers rating of how different traffic offences are associated with traffic injuries and accidents. Because of the significant negative correlation value, it can be deduced that an enforcement officer's decision over which traffic offences to target for safety arrests undermines road safety policy implementation. The rank of correlations between the paired indicators of the independent variable and those of the dependent variable is here under visualized.

Figure 4.7: Safety Arrest and Accidents; Survey



Source: Field data (2021).

³² Domain discretion by traffic police officers does not influence road safety policy implementation in Nairobi Traffic Command Area

Because most traffic enforcement activities are done during rush hours, the police would not want to engage in activities that may interfere with their primary responsibility, which in their assumption is traffic control. Therefore, they are forced to arrest a few road users for creating deterrence for future violations and let others free with just a warning. In line with this thought, the police are inclined to arrest road users who violate traffic offences associated with traffic control activities compared to those accused of violating traffic offences relating to accident prevention. They are also more likely to zero in on offences which are easy to provide evidence in court. These findings are relatable to previous findings, which observed that street-level bureaucrats respond by rationing their services faced with high workload and limited resources (Lipsky, 2010). In doing this, they prioritize those activities which are routine and easy to accomplish (winter, 2017).

The KII transcripts further indicate that the police have an informal expectation to make money for themselves and their bosses during traffic enforcement operations. Making money for their bosses is important in ensuring the release of traffic enforcement equipment such as patrol vehicles, breathalysers, and speed guns. It also ensures that their tenure as traffic police officers is protected. Failure to prove themselves as useful may lead to their transfer to another less lucrative department. One of the participants noted that “when you go for an operation, you must take a few offenders to the station so that the boss can also eat”. To ensure that police stations are not crowded, it is better to arrest a few offenders who can pay more bribes. These findings are comparable to SLBT assumptions that when street-level bureaucrats are faced with a conflict between their interests and those of the policymakers, their interests take precedence (Lipsky, 2010).

4.5 Chapter Conclusion

The main objective of this chapter was to address the second study research question: How does domain discretion influence road safety policy implementation in Kenya? To answer this question, tests of correlations between two indicators of road safety policy implementation and two indicators of street-level bureaucratic discretion were tested. The indicators of road safety were the prevalence of road traffic policy violations and the prevalence of accidents. The indicators of street-level bureaucratic discretion were frequency of traffic checks per a specific aspect of the traffic act and the number of people arrested for violating the aspects of the Traffic Act under observation. The study observed that some aspects of the road safety policy were frequently violated than others.

Similarly, some cause codes in the accident registry have more entries than others. Therefore, one would expect that the road safety policy domain associated with the highest number of traffic violations and accidents would be the ones targeted for enforcement. This is not the case; however, none of the tests of correlation between indicators of domain discretion and those of the corresponding road safety policy outcomes reveals a significantly positive correlation figure. It is deducible therefore, that domain discretion undermines road safety policy implementation. There was overwhelming evidence that traffic police officers' choices over which road safety policy domain to implement, and which not to implement were not informed by a research on frequency of occurrence and severity of impact of such occurrence in terms of loss of lives and property. The evidence from the police records and road user's survey indicate that police decisions on the domain to implement were informed by their desire to increase income, make their jobs easier and comfortable, and reduce risks as opposed to the law of efficiency and effectiveness.

CHAPTER FIVE
CHRONOMETRIC DISCRETION BY TRAFFIC POLICE OFFICERS AND ROAD
SAFETY POLICY IMPLEMENTATION IN KENYA

5.1 Introduction

This Chapter presents findings on objective three, in which the study aimed at establishing the effect of chronometric discretion on road safety policy implementation. Chronometric discretion, as used in the study, refers to choices made by traffic police officers on how to allocate time for their various responsibilities. It arises from the fact that the roles assigned to them by both the Traffic Act, 2014 and the National Police Service Act, 2011, by far outweigh their organizational capacity in terms of personnel, finance, and equipment. Some of their roles include crime prevention, traffic control, being witnesses in the prosecution of traffic offenders, and investigation of traffic offences, among others. Given the voluminous nature of their duties and responsibilities, they must, therefore, decide at what time of the day, the day of the week and week of the month to conduct road safety policy enforcement and what time to attend to other duties. While time planning is an acceptable practice within the civil service, evidence from previous studies suggests that street-level bureaucrats may use their discretionary powers on time allocation to pursue their interests as opposed to the interests of their organizations. According to Lipsky (2010), these interests include the desire to make more income, make their work environment more comfortable, and reduce risks associated with their work.

With the above discussion in mind, the study examines whether the traffic police officers' decisions on the timing of road safety policy implementation affect its outcomes. Therefore, Spearman's rank of correlations was conducted between indicators of the independent variable and indicators of the dependent variable. On the one hand are indicators of the timing of implementation, frequency of safety checks at arrests during the paired hours of the day and days of the week. The indicators of policy outcomes include the number of violations, accidents and fatalities during the paired hours of the day and days of the week.

The indicators of discretion that were examined include the frequency of traffic stops at different times of the day and week. Indicators of road safety policy implementation examined include violations, accidents, and fatalities. The chapter is delineated into three sections; after the introduction here, the following section examines discretion over time of implementation; the prevalence of road traffic violations and injuries by the different time of the day and days of the

week and the relationship between the timing of implementation and prevalence of road traffic accidents. The first section deals with whether the police officers' conduct full enforcement of road traffic policies at different times of the day and days of the week. The second section concerns the variations in the number of violations, accidents, and fatalities at different times of the day and days of the week. In the final section, a comparison is made between all the indicators of road safety and those of public policy implementation.

5.2 Traffic Violations by Time of Day and Day of the Week

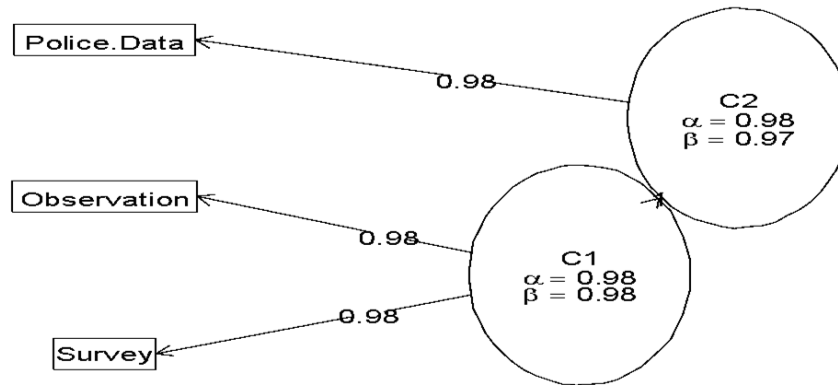
This section analyses road traffic violations, accidents and fatalities by the time of their occurrence. The data is presented in two subsections, with section one presenting data on the time of the day and section two on the day of the week.

5.2.1 Violations by Time of Day

This section documents data on the frequency of violations by the time of the day. In consultation with traffic police managers, the times of the day in this study have been divided into the following spectra: night, after midnight (midnight to 3 am), dawn (4 to 6 am), morning (7 to 10 am), noon (11 to 1 pm), afternoon (1 pm to 2 pm) evening (3 to 7 pm) and the night before midnight (8 to 11 pm). According to the accident registry, these divisions were informed by road users' behaviours and the resulting road accidents trends in the city.

The data discussed in this section were collected from structural observation field notes, enforcement officer's perception survey and accident registry. Subsequently, efforts were put into establishing the level of agreement among these ratings. The calculated Kendall of concordance figure is $w = 0.67$. This indicates a good level of agreement among data collected from a variety of sources on the frequency of violations by different data sources. A repeat reliability test using Cronbach's alpha indicated an Alpha value of $\alpha = 0.66$, which is more than 0.05, the acceptable Alpha value for the reliability test (Allen, 2017). The test also indicated that the similarity between police records and observation data is higher than between the two sources and survey data. The reliability test is hereunder visualized in Figure 5.1.

Figure 5.1: Item Cluster Analysis for Various Data Sources



Source: Field Data (2021).

Data collected is presented in Table 5.1. The first column has hours of the day during which observation was conducted; the second column has the frequencies of violations observed. The third column has data on police rating of violations. The rating ranges from 1 to 10, with 1 being the least number of violations per hour. The fourth column contains data obtained from the accident’s registry. Given that form 69 divides data by day and night, the NTSA report on fatalities was used as an approximate indicator.

Table 5.1: Frequency of violations by times of the day

Time of the day	Observation		Survey		Accidents registry	
	Observations	Frequencies	Ratings	Rank	Fatalities	Rank
Before midnight	319	1	10	1	172	1
Dawn time	199	2	3.6	5	99	5
Afternoon	176	3	1.3	7	81	6
Noon	165	4	2.8	6	100	3
Evening	132	5	8.6	2	158	2
After-midnight	66	6	6	4	71	7
Morning	55	7	7.3	3	99	4

Source: Field Data (2021).

From Table 5.1 above, it is noticeable that traffic violations are higher during some hours of the day than others. From the observation data, it is noticeable that most of the violations occur at night before midnight (319 observations), dawn time (199 observations) and in the afternoon (176 observations). Other time spectra when observed violations included noon (165 observations) and evening (66 observations). The least number of violations were observed at night after midnight (66 observations) and morning time (55 observations). Considering the police ratings of violations by the day, the most violation occurs at night before midnight (Mean Rating 10). Other notable cases were reported in the evening (Mean Rating 8, 6). Morning (Mean Rating 7.3) and night after-midnight (Mean Rating 6). The time spectres listed as having the least number of violations were dawn, noon and afternoon, with a mean rating of 3.6, 2.8 and 1.3, respectively. The data extracted from the accident's registry did not deviate much from those collected through observation and police perception surveys. The highest number of accidents was the night before midnight (172 cases) and evening (158 cases). Many accidents also occurred at noon (100 cases), dawn time (99 cases), and in the morning (99 cases). The least accidents were reported in the afternoon (81 cases) and night after midnight (71 cases).

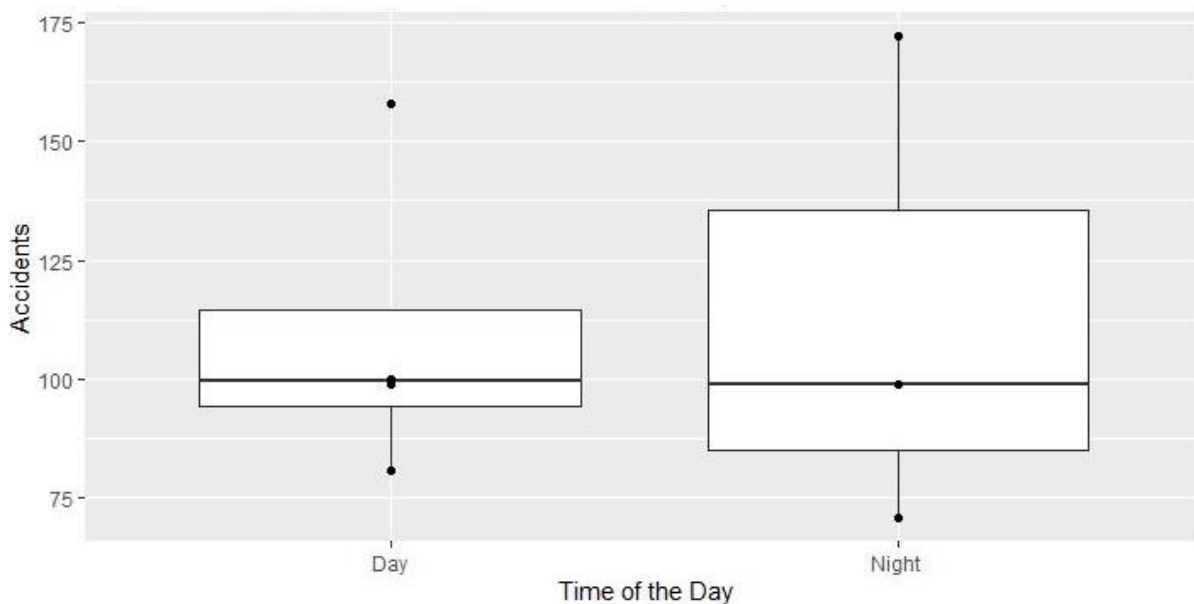
The variation in the number of violations and accidents during different time of the data is explainable by several factors. To begin with, the study observed that at this time of the night, PSV workers operated without uniforms. These findings were collaborated by data extracted from the KII transcripts. The traffic police shifts start in the morning and end at 2 pm. The second shift begins at about 3 pm and stops at 9 pm. In general, enforcement efforts are stiff at the beginning of the shifts and relaxes as the day goes by. This data can be contrasted with Mitula and Asingo (2014) which reported that traffic violations occur during rush hours when the police are busy with traffic control duties and therefore unable to monitor road safety policy violations. The least number of violations were observed in the morning and night after midnight. The low number of violations in the morning is attributable to a high level of police presence, and observations made at night after midnight relates to the fact that there are fewer vehicles on the road at that time of the day.

Qualitative data from key informant interviews further indicates that the time spectra categorized in this study as the night before midnight are also associated with several risky driving practices, including speeding and drunk driving. Because speed guns do not work at night, more road users are emboldened to violate speed laws because they will not be caught. Similarly, it was reported that more people drink after work, leading to increased cases of drunk driving at night. The field

notes also indicated that there is general negligence among road users at night. For instance, on 24th February 2020, an accident was reported in Eastleigh at the first avenue junction involving a motorcycle and passenger. The passenger fell off from a motorcycle in motion, thereby sustaining serious head injuries (Accident registry 30th March 2020).

Another possible cause of a high level of violations observed is fatigue. A previous study on the severity of accidents arising from fatigue observed that night-time drivers are more predisposed to causing accidents (Zhang, et al., 2016). A review of the accident registry also indicated a high tendency among pedestrians to ignore footbridges leading to a high level of pedestrian fatalities. Discussions with the NTSA officials also indicated that more accidents are likely to occur at night due to low visibility. A comparison of means between violations reported at night and those reported during the day is hereunder visualized.

Figure 5.2: Comparing Accidents between Day and Night



Source: Field Data (2021).

As can be seen in the chart above, the crossbar in the boxplot visualizing the distribution entries on the prevalence of violation during various night hours is the same as that which represents violations during the day. This implies that, on average, there is no difference between the number of violations taking place at night and during the day. However, because there are fewer cars on the road at night than during the day, thus the number of accidents per road user is much higher at night

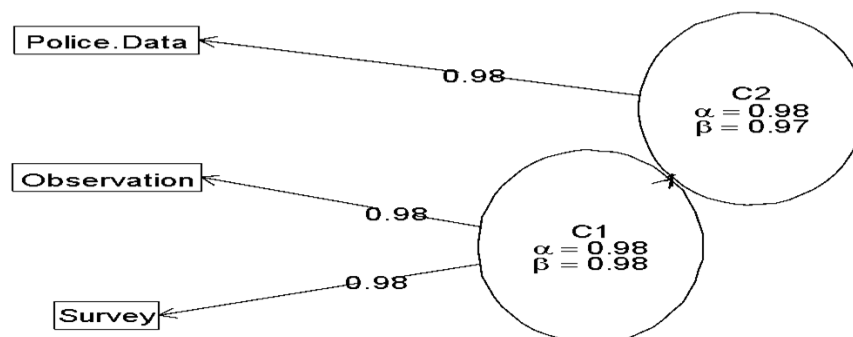
than during the day. In sum from the analysis in Table 5.2 and Figure 5.2 it is conclusive that road safety policy non-compliance varies during different hours of the day.

5.2.2 Violation by Day of the Week

In addition, the study sought to find out the nature of road safety policy failure on different days of the week. Put differently, are there days of the week with more violations than others. The prevalence of road traffic policy violations, accidents, and fatalities disaggregated by days of the week is discussed underneath. The data presented has been generated from different sources for triangulation. It is therefore organized as per the source from which it was extracted. Because different sources ranked the level of compliance among road users differently, efforts were made to find the level of agreement among these ratings.

The calculated Kendall of concordance figure is $w = 0.87$. This indicates a good level of agreement among data collected from a variety of sources on the level of compliance among different categories of road users. The internal consistency among the three data sources was further tested through Cronbach's Alpha analysis. The observed Alpha in the final cluster is 0.96, which indicates a strong level of internal consistency between the three data sources. The test also showed elements in the survey and observation data in comparison to police records. The cluster analysis test is hereunder visualized.

Figure 5.3: Item Cluster Analysis for Various Data Sources



Source: Field Data (2021)

Having established the level of concordance between the ranks assigned to the level of nonconformity to road safety policies by different study respondents, these ranks are discussed hereunder. The data employed were generated from a variety of sources. In subsequence, the first column of Table 5.3 outlines days of the week on which data has been paired. The second column provides data on the number of accidents by different days of the week as per police records, the third column documents data on the number of violations on the day of the week when the observation was made and finally, the last column documents police rating of violations by day of the week.

Table 5.2: Frequency of traffic violations by day of the week

Day of The Week	Accident Registry		Observation		Survey	
	Accidents ³⁴	Rank	Frequency	Rank	Frequency	Rank
Saturday	290	1	267	2	8.6	2
Sunday	258	2	293	1	9.4	1
Friday	234	3	215	3	10	3
Thursday	226	4	52	7	1	7
Wednesday	219	5	121	4	7	4
Monday	215	6	61	6	3.1	6
Tuesday	187	7	104	5	3.6	5

Source: Field Data (2021).

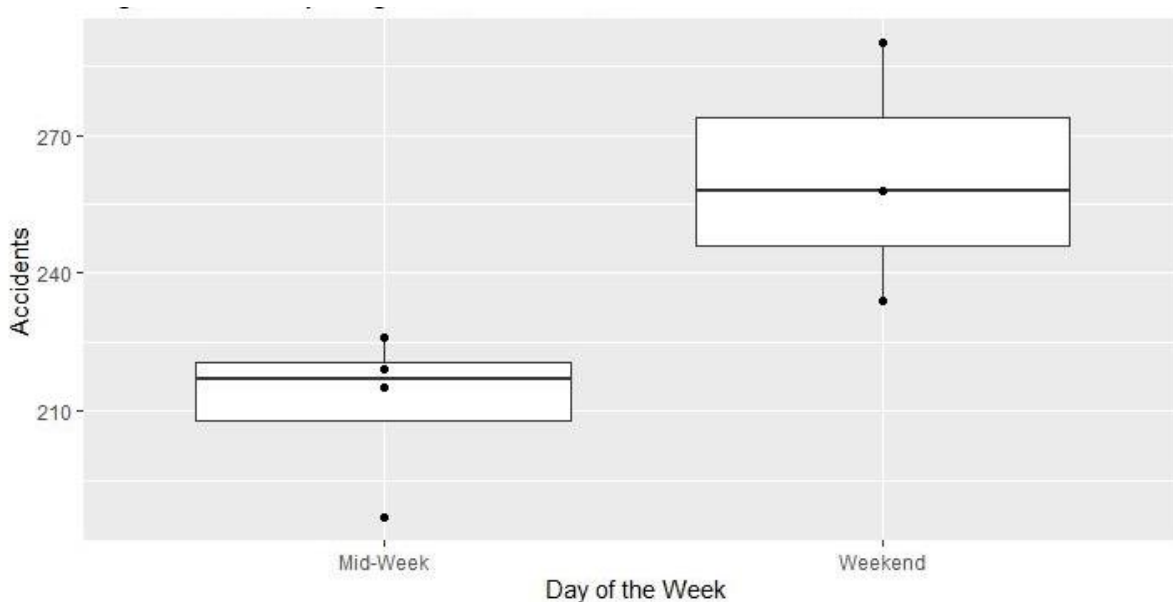
As can be seen in Table 5.2 above, the uppermost number of fatalities take place on Saturday (290 cases) followed by Sunday (258 cases) and Friday (234 cases), respectively. Many fatalities were also recorded Thursday (226 cases) and Wednesday (219 cases). The lowest number of fatalities occurred on Monday (215 cases) and Tuesday (187 cases). Concerning observation data, the most violation was observed Sunday (293 observations), Saturday (267 observations) and Friday (215 observations). Other days with a relatively high number of violations were Wednesday (121 observations) and Tuesday (104 observations). The least number of violations were observed on Monday and Thursday, with 61 and 52 observations made, respectively. The police perception survey did not deviate much from the other two data sets. In their view, most violations are reported on Friday (mean rating 10) followed by Sunday (mean rating 9.4) and Saturday (mean rating 8.6).

³⁴ Derived from accidents registry 2019

The number of violations on Wednesday (mean rating 7) was rated as average, while Tuesday (mean rating 3.6), Monday (mean rating 3.1) and Thursday (mean rating 1) being the days with the least number of violations.

This data in Table 5.2 is explainable by several factors: to begin with, during weekends, there is a low rate of police presence on the roads, and therefore, there is little deterrence for non-compliance with road safety policies. The lack of deterrence makes violation more profitable than compliance. This stems from the fact that people can speed and reach their destinations earlier and overlap or ignore traffic lights without being held accountable for their offences. Weekends also tend to be associated with drunk driving since people do not go to work. Data from the police also indicated that weekends were also characterized by underage driving since parents are home and not using their cars. Since there were observed variations in several deaths recorded during different days of the week, the study sought to find out if this phenomenon is by any way associated with the timing of road safety policy execution. A comparison of means between violations observed during the weekend's ad weekdays is under visualized

Figure 5.4: Comparing Accidents between Midweek and Weekends



Source: Field Data (2021).

From Figure 5.4 above it is clear that the crossbar for midweek boxplot is lower than that of the weekend. This implying that on average road safety compliance is lower during weekends than

weekdays. From the analysis presented in Table 5.2 and figure 5.4, the level of road safety policy compliance varies from one day of the week to another. While various factors explain these variations, this study seeks to find out the relationship between the frequency of safety checks and violations on different days of the week. Correspondingly, having discussed the frequency of violations in the last section, the sections below now document the frequency of traffic checks by the time of day and day of the week.

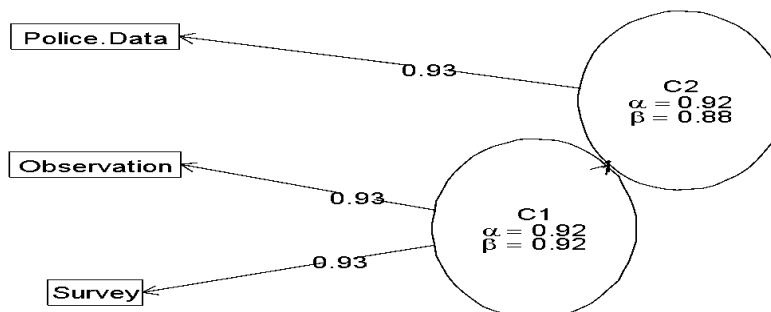
5.3 Road Traffic Safety Checks

This section presents data on the frequency of road traffic safety checks. The data is disaggregated by both times of the day and days of the week. Subsequently, it is divided into two subsections. Section 5.3.1 concerns enforcement data disaggregated by the time of day and 5.3.2 enforcement data disaggregated by day of the week.

5.3.1 Safety checks by Time of Day

This subsection deals with how the traffic police officers make discretionary choices on the time of the day to conduct more traffic searches and perform other duties. It also seeks to unearth how detailed such traffic searches are done during different times of the day. To deal with both lack of records and recall biases, the data was collected from three different sources. Subsequently, efforts were made to find the level of agreement among these ratings. The calculated Kendall of concordance figure is $w = 0.92$. This indicates a good level of agreement among data collected from a variety of sources on the level of compliance among different categories of road users. To be sure, a consistency test between data sources was repeated using intern cluster analysis. As shown in Figure 5.5 below, the calculated alpha is greater than 0.05, which means there is a high level of consistency between data from the three sources.

Figure 5.5: Item Cluser Analysis for Various Data Sources



Source: Field Data (2021)

Table 5.3 shows the time spectra in which the data has been analysed, frequencies of safety checks during these time spectra as per the road user survey, observation and police records.

Table 5.3: Frequency of safety checks at various times of the day

Time of the day	Survey		Observation		Police records	
	Frequency	Rank	Frequency	Rank	Frequency	Rank
Morning	427	1	72	1	2761	1
Noon	295	3	53	3	1691	2
Afternoon	344	2	41	4	564	3
Evening	248	4	66	2	254	4
After-midnight	163	5	31	5	135	5
Before midnight	51	7	19	6	118	6
Dawn time	62	6	13	7	0	7

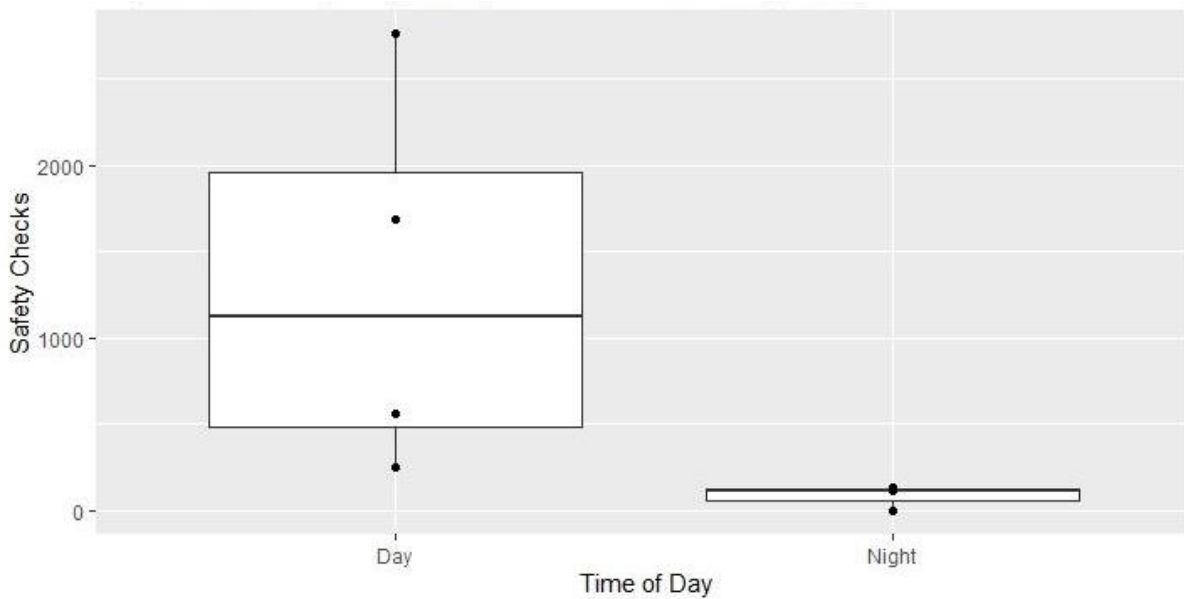
Source: Field Data (2021).

As per Table 5.3, most of the road users reported that their last encounter with the traffic police at the safety checkpoints was during the day. Most of these encounters were in the morning (427 cases) followed by afternoon and noontime (344 cases). The other time spectres with many traffic checks were noon (295 cases) and evening (248 cases). The time spectres with the lowest number

of safety checks were night -before midnight (51 cases) and downtime (62 cases). As per the observation data, most safety checks occurred in the morning and the evening, with the record observations 72 and 66, respectively. A significant number of checks were conducted at noontime (53 observations). In the afternoon (41 observations), the least number of safety checks were observed at night After-midnight (observations), the night before midnight (19 observations) and dawn time (13 observations). The data on traffic arrests did not deviate much from the observation and survey data. It indicates that most safety arrests occur in the morning, and the numbers go down as the day progresses. Correspondingly, few arrests were made at night and none at downtime. From the preceding discussions, it is noticeable that there are generally more enforcement activities during the day than at night.

In one KII transcript, police mainly conduct road safety checks during their regular traffic control duties. In general, traffic police officers operate in two shifts. The first cohort begins their shift in the morning during rush hours and ends at 2 pm; the next team starts at about 3 pm and stops when the evening rush hour ends, around 9 pm. At night, unless there is a special operation such as those intended to stem out drunk driving, traffic police officers do not operate. However, normally, there are regular police officers on the road mainly to check on criminal activities such as transportation of illegal drugs, wood, and such activities. These officers at times conduct traffic safety checks. However, these checks are occasional. FGD transcripts indicate that the police officer takes more time doing safety checks in some hours of the day than others. In general, safety checks are more detailed during off-peak hours in comparison to peak hours. This is explainable because, during rush hours, enforcement officers are preoccupied with traffic control duties, therefore having little time to investigate road safety issues. Figure 5.6 below provides a comparison between safety checks during day and night.

Figure 5.6: Comparing Safety Checks between Day and Night



Source: Field data (2021)

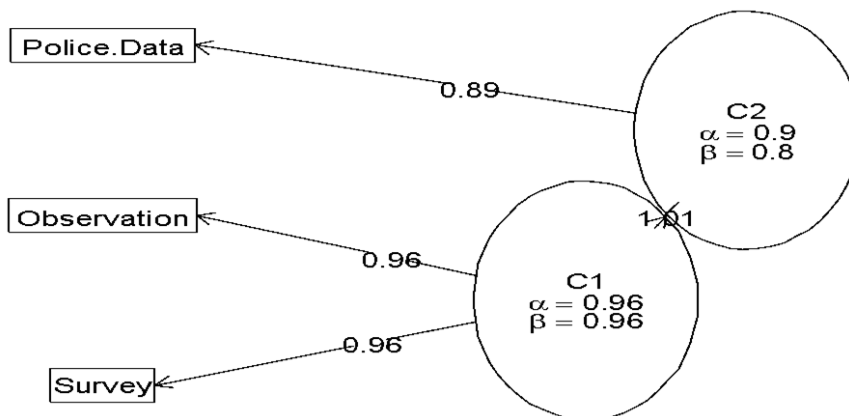
From 5.6 above it is noticeable that the crossbar for the day boxplot is higher than that of night. This indicates that, on average more safety checks take place during the day as compared to night-time. These data read together with analysis in Table 5.3.1, indicates that enforcement officers do not equally enforce traffic laws 24 hours a day. There are some hours when safety checks are more frequent than others.

5.3.2 Safety checks by Day of the week

To determine if there is any variation in the number of safety checks by day of the week, enforcement data from the registry were analysed according to the day of arrest. These data were further compared to frequencies generated from structured observation and road users' surveys. Because different sources ranked the level of compliance among road users differently, efforts were made to find the level of agreement among these ratings. The calculated Kendall of concordance figure is $w = 0.78$, this indicates that there is a good level of agreement among data collected from a variety of sources on the level of compliance among different categories of road users.

The consistency test was further repeated using item cluster analysis in Fig. 5.6 shows a higher level of similarities between the items in observation and police data than between those two sets and survey data. Overall, the alpha value for item cluster analysis is higher than 0.5, which implies a high level of consistency between the three data sources.

Figure 5.7: Item Cluser Analysis for Various Data Sources



Source: Field Data (2021)

The data is now hereunder discussed in Table 5.4.

Table 5.4: Timing of Traffic Check by Day of the Week

Time of the day	Survey		Observation		Police records	
	Frequency	Rank	Frequency	Rank	Entries	Rank
Monday	393	1	72	4	1175	1
Tuesday	279	2	53	2	973	2
Wednesday	246	3	41	5	899	3
Thursday	229	4.5	66	1	808	4
Friday	229	4.5	31	3	697	5
Saturday	181	6	19	7	569	6
Sunday	33	7	13	6	514	7

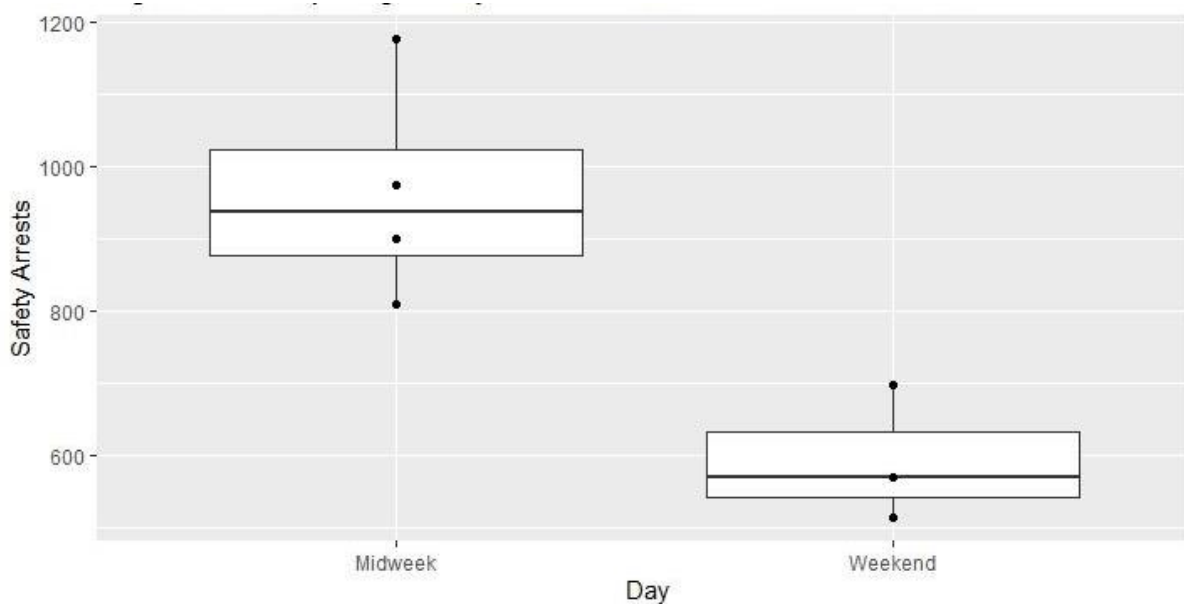
Source: Field Data (2021).

The table above shows that most road users were subjected to safety checks on Monday during the study period and were least checked on Sunday. A similar trend was established from the observation data. Most of the safety checks were observed on Monday and Thursday and at least

on Sunday. In terms of the day of the week when one is more likely to be arrested for traffic law violations, the study established that more people were arrested on Monday and least on Sunday.

From this data, it appears that there are more traffic searches during weekdays than during weekends. Even on weekdays, it is noticeable that more checks occur at the beginning of the week and tend to slow down as one moves closer to Friday. Discussions with road users indicated, on the other hand, that while safety checks are rare during weekends, those that take place are more detailed in comparison to those conducted during the week, given that the police are not engaged in traffic enforcement responsibilities and therefore more available for safety checks. Figure 5.8. Below is a comparison of means between the number of traffic checks during weekdays and weekends.

Figure 5.8: Comparing Safety Checks between Midweek and Weekends



Source: Field Data (2021).

As shown in Figure 5.8 above, the crossbar for midweek data is higher than that of weekends. This implies that, on average more safety checks occur during midweek as compared to weekends. Table 5.4 and Figure 5.8 read together reveals that traffic police officers do not equally enforce traffic laws from Monday to Sunday. There are days of the week when safety checks are more equal than others. To determine if these variations affect road users' behaviour in any way, the test of correlations between the timing of enforcement and frequency of violations is discussed hereunder.

5.4 Tests of Association between Chronometric Discretion and Policy Outcomes

Having established that the police do not conduct full enforcement of road traffic laws and have noted that there are variations in the level of prevalence of traffic violations, accidents, and fatalities at different times of the day and days of the week, in this section of the study, efforts are made to find out if there is any relationship between the timing of implementation and road safety policy failure. To ascertain the foregoing, two main tests of correlations are conducted, namely, test of correlations between violations and chronometric discretion at different times of the day and test of correlations between violations and chronometric discretion at different days of the week. The results of these tests are presented hereunder.

5.4.1 Violations and Chronometric Discretion by Times of the Day

To find out if police enforcement actions are targeted at the times of the day when violations are more likely to occur, the ranks on the prevalence of violation were compared to ranks of the frequency of safety checks. To ascertain that the observed relationships between observed ranks of violations and observed ranks of the frequency of enforcement a Spearman's test of correlations were applied using r statistical software. Table 5.5 shows the results of Spearman's rank of association between timing of enforcement and road safety compliance by the time of day. The data has been organized as per data sources.

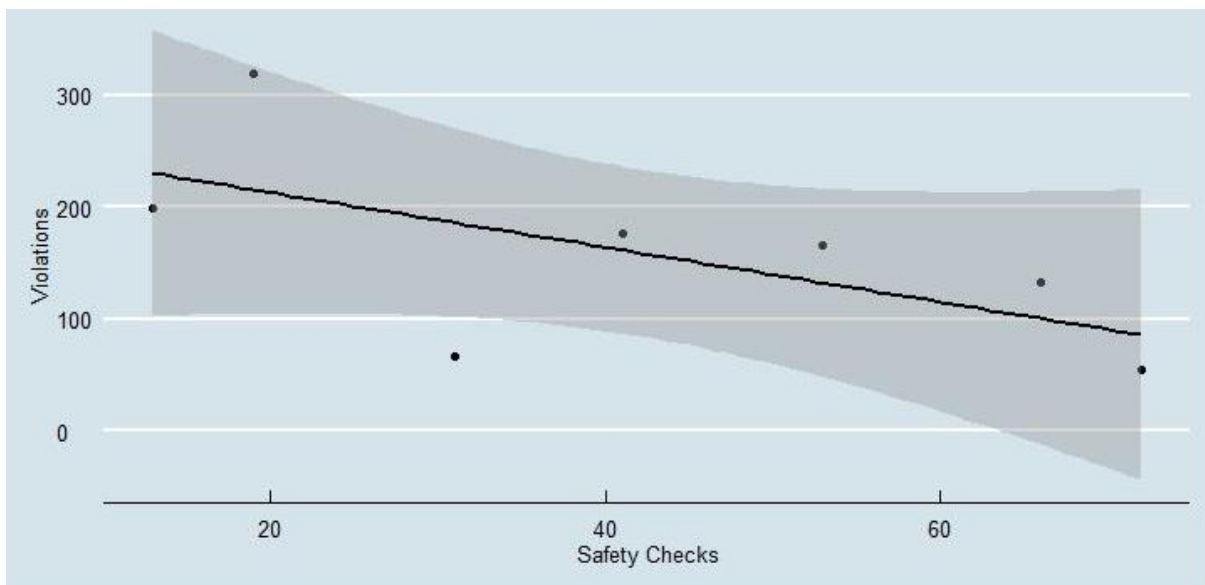
Table 5.5: Correlations Violations and Enforcement by Time of Day

Time of the day	Survey (Ranks)		Observation (Ranks)		Police records	
	Enforcement	Violation	Enforcement	Violation	Enforcement	Violation
Morning	1	3	1	7	1	4
Noon	3	6	3	4	2	3
Afternoon	2	7	4	3	3	6
Evening	4	2	2	5	4	2
Before midnight	7	1	6	1	6	1
After-midnight	5	4	5	6	5	7
Dawn time	6	5	7	2	7	5
Cor	-0.4285714		-0.75		-0.4285714	

Source: Field Data (2021).

As shown in Table 5.5 above, there is a discordance between the timing of implementation and road safety policy outcomes. While on the one hand, most road users reported that they were mostly subjected to traffic checks in the morning and the afternoon and noontime, on the other hand, police ratings of violations by the time of the day indicated that most violations take place at night before midnight and in the evening. Similar discrepancies were noticed between ranks created from observation data on enforcement timing and violations. While most traffic checks were observed in the morning, evening and noontime, most safety violations were observed at night before midnight, dawn time and in the afternoon. On the same code, data from the accident's registry indicate most accidents occur in the night before midnight, in the evening and noontime. On the contrary, most road users get arrested in the morning and at noon. In sum, most road users are subjected to safety checks at the time when traffic law violations are not at their peak. To test if there is any relationship between time of safety check and road safety policy outcomes a Spearman test of correlations was applied on indicators of chronometric discretion and road safety policy outcomes. The Spearman's tests are here under visualized:

Figure 5.9: Violations and Timing of Safety Checks: Observations

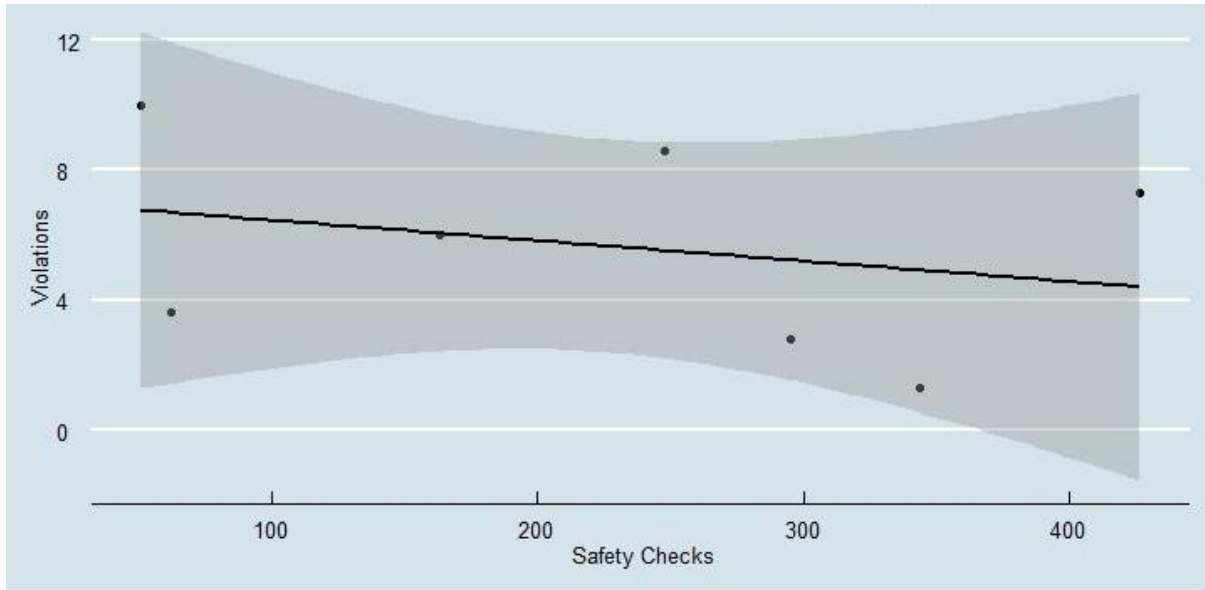


Source: Field Data (2021).

As shown from Table 5.5, correlations test between road users' ranks of violations and enforcement revealed a negative correlation figure of -0.4285714 . This suggests that in certain circumstances traffic enforcement actions are not done at the time when violations are expected to be high. The observed p-value for this test is 0.3536 , which is more than 0.05 . It can be said that the observed

relationship occurred by chance. Therefore, there is no significant relationship between the police ratings of violations by the time of day and road users' perception of when they are most subjected to safety checks. Given that resource maximization is represented by a significant positive correlation between indicators of discretion and those of implementation, a non-significant value of any kind denotes failure to maximize implementation resources.

Figure 5.10: Violations and Timing of Safety Checks; Survey

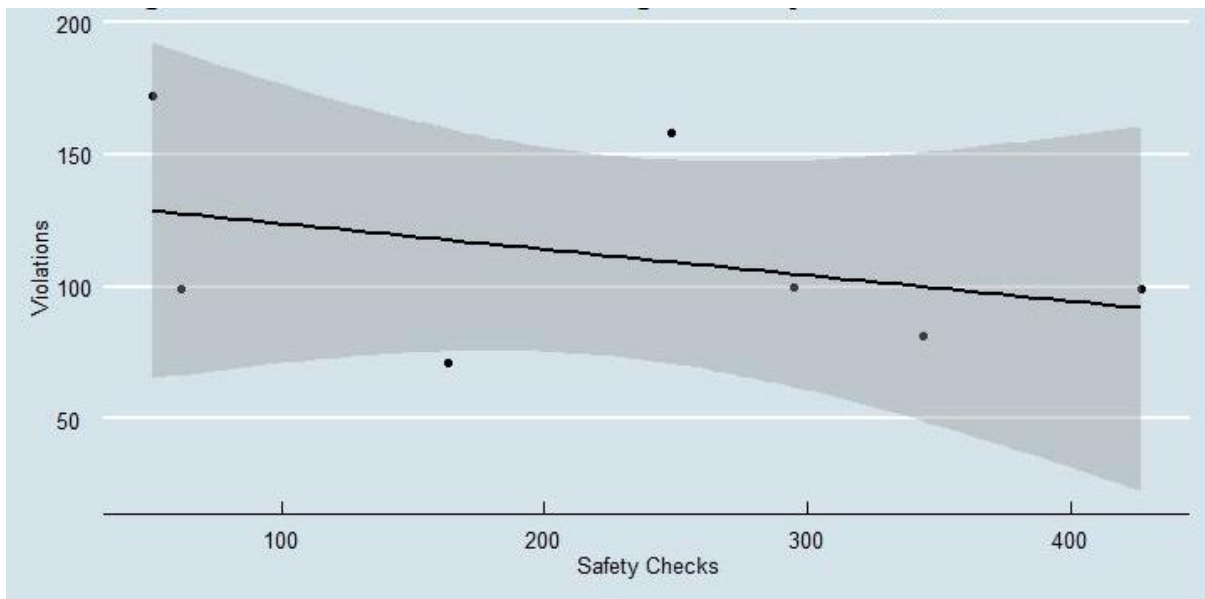


Source: Field Data (2021).

The test was further repeated with data collected through observation. The test observed a negative correlation of -0.75 to say that most of the time, enforcement actions were conducted at a time when violations are expected to be high. The p-value = 0.06627 which is slightly more than 0.05. In that manner, it can be said that the observed relationship occurred by chance³⁵. Subsequently, there is no association between hours of the day when violations are frequent, and enforcement is frequently conducted. According to observation data, therefore, police discretion over enforcement time does not contribute to the maximization of implementation resources.

³⁵ The relationship is not significant

Figure 5.11: Accidents and Timing of Safety Checks; P-Records



Source: Field Data

As shown in the last column of Table 5.5 on the correlations test between road users' ranks of violations and enforcement, a review of police records revealed a negative correlation figure of -0.4285714. This suggests that in certain instances, traffic enforcement actions are not done at the time when violations are expected to be high. This implies enforcement actions are rarely conducted at the time of the day when traffic violations, accidents and fatalities are expected to be high. Correspondingly, traffic officer's discretion over what time to conduct safety arrest undermines road safety policy implementation.

Taken together, these three correlations indicate that accident data do not inform enforcement schedules. These findings can be explained in two possible ways. To begin with, field notes indicated that police safety checks are mostly conducted during routine traffic control activities. The divisional traffic police officers also occasionally send out police to conduct thorough safety checks. These, thorough safety checks, are commonly known as "operation". Some of them target a policy domain, while others are general. Given this, most safety checks are done in the morning, and the intensity of checks goes down as the day progresses.

In contrast, violations are not many at these hours since most of the causes for violations, such as fatigue and impaired driving, are not present in the morning. Field notes also indicated that road users have observed enforcement schedules over time and developed response strategies. The study

observed, for instance, that whenever there is an operation, be it intended to monitor over-speeding or drunk driving, road users often tell one another. The study also observed that *matatu* owners bring unworthy vehicles to the road at night once the traffic police officers have ended their shifts. These findings corroborate Mitullah and Asingo's (2014) observations that Kenyans only observe safety rules whenever traffic police officers are.

5.4.2 Correlating violations and chronometric discretion by days of the week

To find out if police enforcement actions are targeted at the days of the week when violations are more likely to occur, the ranks on the prevalence of violation were compared to ranks of the frequency of safety checks. A Spearman's test of correlations was applied using statistical software to ascertain the observed relationships between observed ranks of violations and observed ranks of the frequency of enforcement. The table below provides the results. The results have been arranged as per the data sources utilized.

Table 5.6: Violations and Enforcement by Day of Week

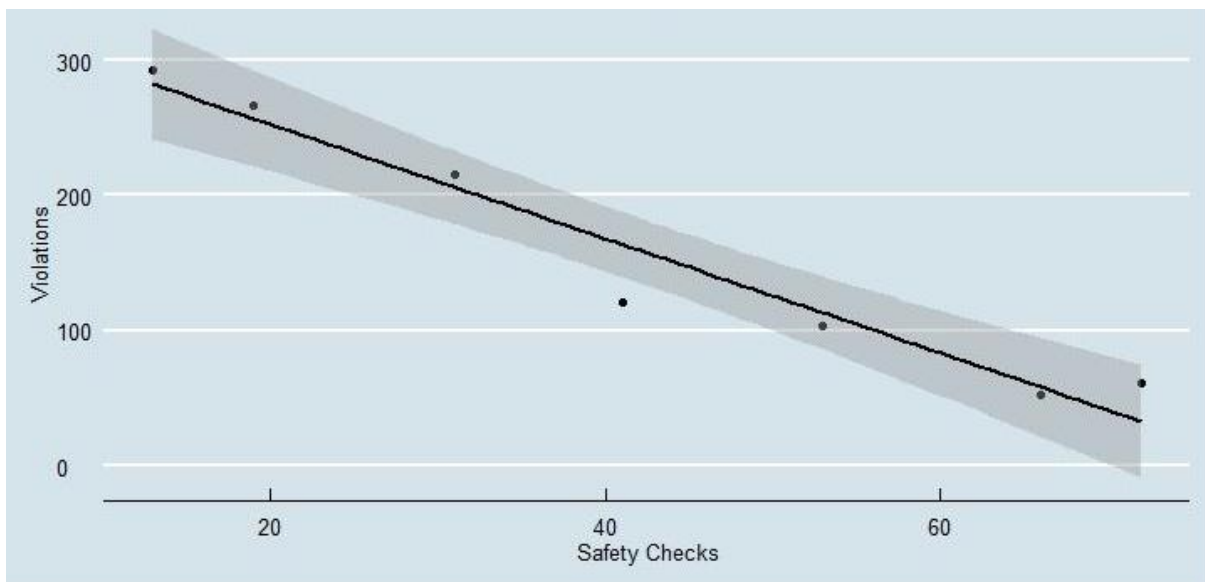
Time of the day	Survey (Ranks)		Observation (Ranks)		Police records (Ranks)	
	Enforcement	Violation	Enforcement	Violation	Enforcement	Violation
Monday	1	6	4	6	1	6
Tuesday	2	5	2	5	2	7
Wednesday	3	4	5	4	3	5
Thursday	4.5	7	1	7	4	4
Friday	4.5	1	3	3	5	3
Saturday	6	3	7	2	6	1
Sunday	7	2	6	1	7	2
Cor	rho -0.5766		-0.7857143		-0.9285714	

Source: Field Data (2021).

As shown in Table 5.6 above, there are variations in days of the week when safety checks and arrests are frequent and days when violations are frequent. Regarding survey data, it is noticeable that most road users reported that they are mostly subjected to road safety checks on Mondays and Tuesdays and are rarely checked during weekends. On the contrary, according to the police perception survey, most violations occur on Friday followed by Saturday and Sunday, respectively. Similar variations are observable in the data extracted from structural observations. Most safety

checks were conducted on Thursday and Tuesday, while most violations were observed on Sunday, Saturday and Friday. On the same code, the data extracted from accidents and enforcement registries indicated that while on the one hand, most violations took place on the weekends and Friday, on the other hand, most people were arrested on Monday and Tuesday. Taken together, it seems that most safety checks take place at the beginning of the week while traffic violations and the resulting accidents are prevalent on Friday and weekends. A Spearman's rank of correlations was conducted to test the relationship between ranks assigned by different respondents to enforcement by day of the week and violations by day of the week. The results of the correlations tests are hereunder visualized.

Figure 5.12: Violations and Timing of Safety Checks; Observation



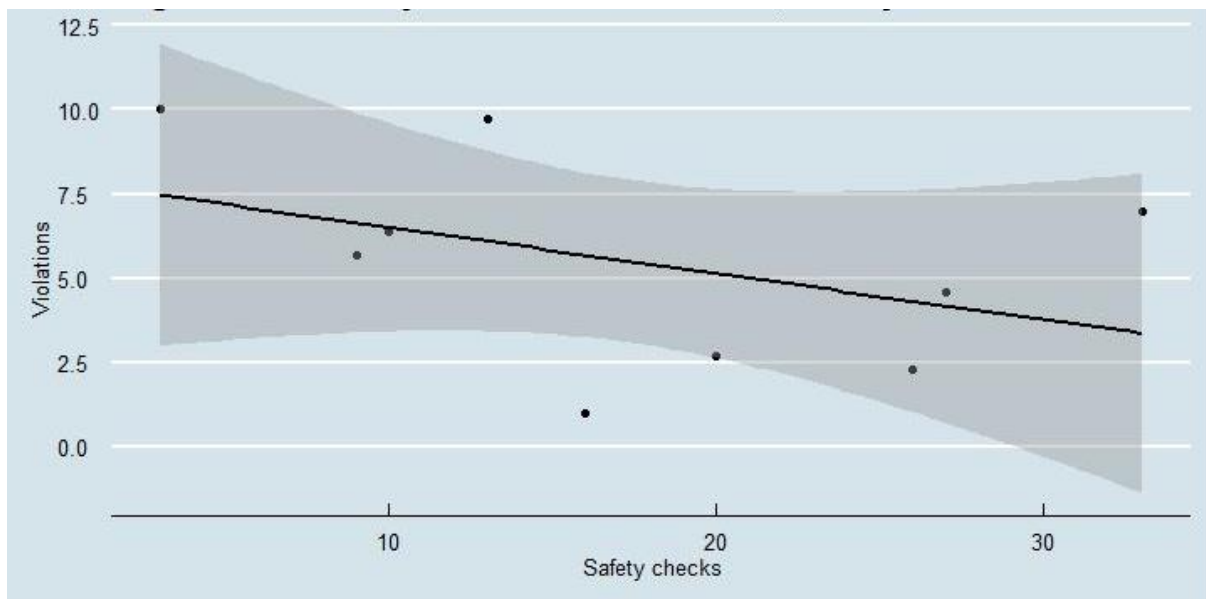
Source: Field Data (2021).

As can be seen from Table 5.6 above, correlation tests between road users' ranks of violations and enforcement revealed a negative correlation figure rho -0.5766 and the p-value = 0.1754. The p-value = 0.1754 is higher than 0.05, which is acceptable at a 95% interval. Thus, there is no significant relationship between the days of the week when safety checks were observed to be prevalent and days of the week when violations were prevalent. Due to the fact that there is no significant relationship, the study fails to reject H_0^{36} and concludes that bureaucratic discretion by

³⁶ Chronometric discretion by traffic officers do not influence road safety policy implementation in Nairobi Traffic Command Area

traffic police officers does not influence road safety policy implementation. This imply that traffic police officers decisions to time their implantation effort at certain hours of the day and days of the week in not informed by data on prevalence of violations by time of day. Consequently, the traffic police officers did not maximize implementation resources and fall short of policy makers' expectations.

Figure 3.13: Safety Checks and Violations; Survey



Source: Field Data (2021).

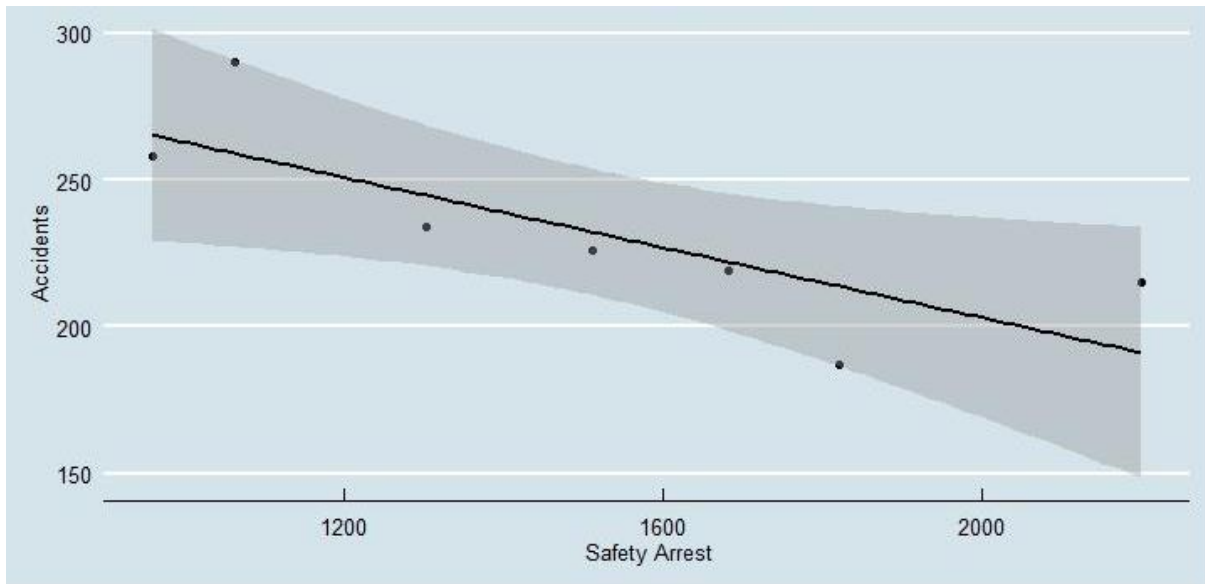
The observed p-value for this test in Table 5.6 is 0.9063 which is more than 0.05. In that manner, it can be said that the observed relationship occurred by chance³⁷. The test was further repeated with data extracted from structured observation schedules. The test observed a negative correlation of -0.7857143. This is a very strong correlation value and thus imply that in most instances, enforcement actions were conducted at a time when violations are not expected to be high. The p-value = 0.04802 which is equal to 0.05. In that manner, it can be said that the observed relationship did not occur by chance and the study rejects H₀³⁸. The observed correlations values imply that

³⁷ Insignificant

³⁸ Chronometric discretion by traffic police officers do not influence road safety policy implementation in Nairobi Traffic Command Area

there is significant negative relationship between police rating of days of the week by frequency of violations and road users' perceptions of the week when they are subjected to most safety checks. Since most safety checks are conducted on days of the week when violations are not prevalent, it follows that enforcement efforts do not deter violations some days of the week when they are high.

Figure 5.14: Accidents and Timing of Safety Arrest: P-Records



Source: Field Data (2021).

Concerning police records, as shown in Figure 5.14, one is more likely to be arrested if he or she violates traffic rules on a day of the week when traffic fatalities are expected to be high. The observed p-value = 0.006746, which is less than 0.05. To that end, the observed relationship has not occurred by chance. Thus, there is a significant negative correlation between day of the week when safety checks are prioritized and those when the accident is prevalent. Given the significant relationship the study rejects the H_0^{39} and conclude that chronometric discretion by traffic police officers influences road safety policy implementation. However, the observed behaviour is a different policymaker expectation, for there to be maximization of implementation resources there is need to be a positive relationship between indicators of discretion and those of implementation. Subsequently, traffic police officers do not use their discretionary powers to arrest more people on days of the week when accidents are prevalent to create a sense of deterrence.

³⁹ Chronometric discretion by traffic police officers do not influence road safety policy implementation in Nairobi Traffic Command Area

Altogether, the data indicate that more violations take place on Fridays and weekends than other weekdays. It also shows that there are fewer enforcement activities on the road during these days of the week. A previous study indicated that police presence and enforcement methods greatly influence road users' behaviour. For instance, a study was conducted in Belgium on the effects of speed cameras on road users' behaviour. It observed that road users would slow down as they approach the speed cameras and speed off again after passing the camera location (DePauw et al., 2014). Other studies have also observed that road users' level of compliance is greatly influenced by police surveillance and punitive systems associated with non-compliance (Freeman et al., 2017). Therefore, from the above discussions, it follows that police discretion over which day of the week to prioritize road safety undermines the road safety policy implementation process.

5.5 Chapter Conclusion

This chapter aimed to determine how chronometric discretion by traffic police officers affects road safety policy implementation. It observed that none of the indicators of chronometric discretion were positively correlated with those of road safety policy implementation. Consequently, traffic police officers' decisions on the time of the day and day of the week to enforce traffic rules are driven by other considerations apart from the desire to deter road traffic policy violations. The main explanatory factor for the wrong discretionary practices observed included the desire to make more money and public pressure. For instance, while most traffic crashes occur at night, a run through the traffic occurrence book suggests that only a few individuals are arrested at night. Indeed, transcripts of the traffic police KII indicate that DTOs rarely work at night unless there is an operation. Their failure to work at night may also be explained by the desire to reduce the risk associated with their jobs and increase their level of job comfort, given that most criminals operate at night. Because police decisions on what time and day of the week are not informed by the desire to deter traffic crashes, it can be deduced that chronometric discretion undermines road safety policy implementation.

CHAPTER SIX

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

6.1 Introduction

The preceding chapters of this study have discussed how traffic police officers' discretion affects road safety policy implementation in Kenya. It is against this backdrop that this chapter presents a summary of the study findings. Based on the findings, the conclusions and recommendations are also presented. The chapter is organized into three sections: a summary of the study and its findings; conclusions, and recommendations.

6.2 Summary of findings

The main objective of this study was to establish the relationship between discretion by traffic police officers and road safety policy implementation. It was thus delineated into three sub-objectives namely; to establish how to target discretion by traffic police officers affects road safety policy implementation in Kenya, to investigate how road safety policy implementation in Kenya is influenced by domain discretion by traffic officer , and to determine how chronometric discretion by traffic police officers influences road safety policy implementation in Kenya.

6.2.1 Target Discretion and Road Safety Policy Implementation in Kenya

The study's first objective sought to find out the relationship between target discretion by traffic police officers and road safety policy implementation. To realize this objective, the study compared road traffic violations by different road user's categories as well as different vehicle types, against road policy implementation actions taken by police officers. In the first place, the study observed that road traffic violations are generally very high in Nairobi compared to other parts of the country. It was however noted that the frequency of violations varies from one category of road users to another, according to police ratings with the highest number of violations involving: motorcyclists (10); pedestrians (9.6); and passengers (8.2) in that order, as can be seen in Table 3.1.

With regard to comparisons of non-compliance by vehicle category, the police rated government vehicles (10 out of 10) and cars and utilities (9.7) as those responsible for the highest number of violations in the command area. Moreover, the study analysed the patterns of road traffic accidents,

and observed that commercial vehicles had significantly lower accident rates than non-commercial vehicles, as indicated in Table 3.2

Concerning law enforcement practice, it was observed that traffic police officers exercise a lot of discretion in deciding, which road users to stop for traffic compliance checks, how detailed such a check would be. In case a violation was noted, the kind of action to be taken against the offender, with the actions ranging from a verbal cautioning to arrest. The study also observed that police officers protect their interests first; and those of the policymakers second. This is evident from discrepancies in the frequency of checks targeting different categories of road users. For instance, while motorcycles were ranked second in terms of frequency of violations, in terms of frequency of safety checks, they were ranked fifth concerning road safety policy violations as compared to other categories such as lorries, private cars and buses whose level of involvement in traffic offences is relatively low. In the same accord, while buses were ranked fifth in terms of violations, they were ranked second in safety checks. On the intensity of the safety checks, it was observed that more time was taken with Lorries and private cars more than any other road users.

A test of correlations of the level of enforcement and the level of non-compliance among different vehicle categories revealed a negative correlation figure. This implies that the road user categories commonly targeted to traffic law enforcement were not necessarily those responsible for the highest number of violations. While drivers are more targeted for traffic law enforcement, their level of non-compliance was much lower than other road users, including pedestrians and motorcycles. Similarly, the level of targeting for commercial vehicles was not proportionate to their level of non-compliance. Thus, the correlation test between violation and enforcement by vehicle category revealed a negative correlation. The same phenomenon was observed when the test of correlations was conducted between the frequency of accidents and the frequency of arrests and the frequency of arrests and fatalities. In both cases, the study observed that the road users responsible for the highest number of fatalities and accidents were not the ones targeted by enforcement officers during enforcement.

6.2.3 Domain Discretion and Road Safety Policy Implementation in Kenya

The second objective of this study was to investigate how road safety policy implementation in Kenya is influenced by domain discretion. Therefore, the study compared the frequency of violations and the frequency of safety checks among the paired road safety policy domains. Similar

comparisons were made between the frequency of accidents and arrests for the paired road safety policy domains. The study established that some aspects of the traffic act are frequently violated than others. Among motor vehicle drivers, these included uses of mobile phones, driver's not wearing seatbelts, and careless overtaking. Among the motorcycles, common violations were: lack of passenger helmet; failure to wear a reflective jacket; transporting more than passenger at a time; riding at more than 50 Kilometres per hour; and overtaking from the left side of the road. In addition, the most common violations among the pedestrians were: lack of respect for traffic lights; and crossing at an inappropriate place⁴⁰. It was also observed that some accidents cause codes such as loss of control and careless overtaking have more entries than others. This implies that certain violations account for more accidents than others.

To maximize the limited implementation resources, the police are expected to prioritize the road safety policy aspects that are frequently violated for enforcement actions. They are to target common causes of traffic accidents for safety arrests equally. However, the study observed that the police do not target the policy domains frequently violated for safety checks. This was evidenced by the fact that the frequency of violations for the observed policy domains was different from the frequency of safety checks for the same policy domains. The same trend was observed concerning the relationship between the causes of accidents and the frequency of safety checks. It was noted that the ranking of the frequency of checks bore only a little similarity to the ranks of the number of accidents attributed to violations of the road safety domains under observation. In only 20% of the cases, the safety checks' frequency was similar to the frequency of violations for the observed policy domains.

Regarding the severity of punishment, it was noted that the frequency of arrests was not related to the frequency of accident attribution to the observed policy domains. The decisions by enforcement officers on the aspects of the Traffic Act to enforce during the traffic were primarily informed by the ease of enforcement as opposed to its impact on road safety. The decision as to whether to arrest or not was also informed by the characteristics of road users and their behaviour towards the enforcement officers rather than the severity of the offence.

⁴⁰full reference is in Table 4.1

6.2.4 Chronometric Discretion and Road Safety Policy Implementation in Kenya

The third study objectives concerned the relationship between the frequency of traffic checks and that of violation disaggregated by the time of the day and day of the week. The study observed that more violations occurred at night and during the weekends. However, most of the enforcement efforts occur during the day and weekdays. Consequently, the intensity of the safety checks is negatively correlated with the number of violations at different times of the day. Similarly, the study observed a negative correlation between the frequency of accidents and the frequency of safety checks during different times of the day. Correlations tests between the timing of implementation and the level of policy non-compliance during the paired hours of the day revealed a negative correlation. This implies that the police do not conduct traffic enforcement during the hours of the day when traffic law violations are at their peak. Similarly, tests of correlations between indicators of implementation and road safety policy outcomes during paired days of the week revealed a negative correlation figure. While most traffic accidents occur during weekends, most safety checks and arrests occur at the beginning of the week. This denotes that enforcement officers' decisions on the timing of implementation are informed by other considerations, and not the prevalence of violations and accidents during different hours of the day and days of the week.

6.3 Conclusions

Having looked at the summary of the discussions above, the study now draws some conclusions on the same. These are organized as per the study questions:

6.3.1 Target Discretion and Road Safety Policy Implementation in Kenya

It can be concluded from the study that when it comes to how targeting discretion affects road safety policy implementation in Kenya, traffic officer socially profile road users. This is done by dividing them into large categories after which decisions are made on who will be stopped at the traffic check points.

It was further concluded that in a majority of cases, the law enforcement officers rarely stopped the road users who were frequently involved in road accidents at the roadblocks for safety checks. This therefore confirmed the fact that the police consideration on which road users to target during road safety policy implementation is different from their desire to reduce the number of accidents. The study also deduced that in over a half the cases, the categories of road users who were frequently arrested were not the same categories that were commonly involved in causing accidents. It was

noted that since police officers failed to prioritize investigations on road users who frequently violated traffic laws and those who are frequently involved in accidents, they undermined the road safety policy implementation process. It is with the above conclusions in mind, that the study deduces that target discretion undermines road safety policy implementation in Kenya.

6.3.2 Domain Discretion and Road Safety Policy Implementation in Kenya

As pertains to how road safety policy implementation in Kenya is influenced by domain discretion by traffic police officers, the study concludes that the traffic police officers prioritize some policy objectives over others. The act of prioritizations comes in two ways, namely frequency of implementation effort and intensity of implementation effort. With regards to frequency of implementation effort, it was observed that some policy domains such as the presence of car insurance, road and drivers' licenses were checked more frequently than other policy domains such as driving while talking on the phone. As pertains to the intensity of the implementation effort, it was observed that not all confirmed violations at the safety checks lead to traffic arrests.

Only a small section of violations is processed for prosecution. This relates to the fact that the enforcement officers do not have enough time to prosecute all the traffic offenders considering the competing requirements of their jobs. Some of the violations that are frequently processed for prosecution include obstruction, speeding, wearing seat belts and overloading. These are frequently processed for prosecution in comparison to using helmets, careless overtaking and crossing at an inappropriate place. Because street-level discretion is primarily intended to maximize on the limited implementation resources against the overstretching demand for enforcement services, one would expect that enforcement efforts would be informed by violations and accidents data. This, however, is not the case, both the frequency and intensity of enforcement effort are not informed by a presence or strength of the causal relationship between the policy objectives and policy problems. Stated differently, street-level bureaucrats do not necessarily prioritize implementation of policy objectives with the highest probability of success in solving policy problems. This is evidenced by the fact that tests of correlations between indicators of implementation and indicators of policy outcomes among the paired policy domains revealed negative correlation figures.

The study further concluded that traffic officer's failure to prioritize implementation of policy objectives with the highest possibilities of solving the policy problems neither arises from personal biases or lack of information but a conflict of interest between the policy makers and implementers.

This is evidenced by the fact that police officers prioritize checking of traffic violations that are easy to check such as driver's license and insurance at the traffic checkpoints. They also prioritize processing for the prosecution of those policy domains, which are easy to prove in court. In sum, the decision to either check or process for prosecution is informed by their desire to make their jobs less demanding. Correspondingly, domain discretion by traffic police officers undermines the policy implementation process.

6.3.3 Chronometric Discretion and Road Safety Policy Implementation in Kenya

Regarding how chronometric discretion influences road safety policy implementation in Kenya, the study concluded that traffic police officers do not randomly enforce traffic laws all the time. On the contrary, there are hours of the day and days of the week when enforcement efforts are more intense than others. The study further observed that there are discrepancies between the timing of road safety policy implementation and timing of road traffic violations, accidents and fatalities' prevalence. This is evidenced by the fact that a test of correlations between ranks of traffic violations during different times of the day and ranks of the intensity of enforcement actions during the same hours is negatively correlated. This was attributed to the fact that the police mainly concentrate on controlling the flow of traffic during rush hours. During the mid-morning and afternoons when traffic is flowing t However, the study observed that most traffic violations are motivated by the urge to reach the workplace in good time. To that extent the prevalence of road traffic violations such as overlapping, driving on pavements, speeding and even careless crossing is more prevalent during rush hours than other times of the day.

As far as the time of day to prioritize implementation efforts is concerned, the study concluded that while most safety checks take place in the morning and evening, most traffic accidents occur at night before midnight and dawn. To this end, it can be deduced that the police do not prioritize road safety policy implementation during the hours of the day when road accidents are at their peak. Therefore, the high levels of road accidents at night before midnight and dawn time are attributable to inadequate enforcement services.

It was further deduced that in a majority of the cases, police decisions on which days of the week to prioritize road safety policy implementation were different from days when violations are prevalent. While most road users are arrested between Monday and Wednesday, most road traffic fatalities occur on Friday, Saturday and Sunday. The data further revealed that these decisions

were by the desire to avoid public pressure and make more income. There were fewer traffic police officers on the roads during weekends not because of fewer traffic accidents but fewer vehicles on the road and thus fewer traffic snarls. Similarly, fewer arrests were made during weekends not because there were few violations but because more road users are willing to pay bribes to avoid spending nights in police cells until courts open the following week on Monday.

6.4 Recommendations

The study sums up its contributions from the above conclusions, draws implications, and makes recommendations for various stakeholders. Some of these relate to the policy-making processes, implementation practices and public policy analysis scholarship. At the end of the section, the study provides directions for further research.

6.4.1 Recommendations for Policy Makers

- i. The study recommends detailed feasibility studies of future road safety policies before adaptation to increase their chances of implementation success. The study findings suggest that there seems to be an eminent belief among policymakers and scholars alike that once good public policies are made, they will automatically be implemented, and the results will come forth. Every time there is an upsurge in road accidents in Kenya, the reaction has been to create new laws. The finding of this study demonstrates that the missing link in the road safety policy process is implementation. It indicates that the hours of the day, days of the week and weeks of the month when there have been stiff road safety policy implementation measures, there have been lower levels of traffic violations and accidents compared to when implementation was relaxed. It is also noted that road user categories who are frequently checked and arrested if found culpable of traffic law violations tend to be more careful on the road than those who are not.

- ii. The study recommends automation of all safety monitoring functions that can be done using technology such as careless overtaking, lack of respect for speed limits and other traffic signs. The study established that policy domain that is frequently and thoroughly checked. People frequently get arrested and receive stiff penalties if convicted tended to be less violated compared to those that are less frequently checked, such as the use of cellular phones while driving. To this end, the new policy directions need to focus on easing and making efficient the implementation process as well as controlling discretion. In the

developed world, people rarely disregard traffic lights because such disobedience would result in direct prosecution. After all, such an offence will have been captured by traffic cameras. Discussions with both the police and road users also indicated that during the months when there was an intense use of speed cameras and breathalysers, there was a reasonable reduction in the occurrence of such offences on the roads on which the road users suspected of being monitored.

- iii. The study also recommends policy efforts towards the robust performance management of traffic police officers. The current management system is top-down. This means communication is passed down to the officers from the bureaucratic executives through the organization's hierarchy. Unfortunately, however, those giving orders are not on the roads and therefore cannot provide contextualized insights into the operations. The new performance efforts should, therefore, be geared towards goal achievement and team spirit. The performance evaluation system should be geared towards monitoring the achievement of the set goals on which rewards can be accorded or sanctions applied. Efforts should also be put into ensuring goal clarity.
- iv. The study also observed that decisions by traffic police officers to stop, to investigate, and arrest road users for road safety policy violations were primarily determined by the desire to make more income and not policy implementation as such. To a large extent, the enforcement practice targeted road users who had a high propensity to pay bribes, such as PSVs owned by small SACCOs or vehicles whose drivers travelled with cash as opposed to those owned by large companies whose drivers do not travel with cash. Policy efforts should, therefore, be put into ensuring that passengers use smartcards to pay their fares. With such a new law in place, there will be little motivation to stop certain road users simply because they have free cash to give out as bribes.
- v. According to Sabatier (1986), one of the key ingredients for policy success is the extent to which implementation responsibility is placed in an agency sympathetic⁴¹ to policy goals. During the key informant discussions with some of the NTSA staff, there were complaints about discrepancies between the number of people arrested by NTSA officials for road

⁴¹ That have strategic objectives similar to policy objectives

traffic violations and those who appeared in court. This problem resulted from the fact that the police officers who arrest and take custody of law offenders were not accountable to NTSA. While the police report to the Ministry of Interior and Coordination of National Government, NTSA is under the Ministry of Transport and Infrastructure. This relationship needs to be ironed out if the implementation process is to succeed. There have also been challenges associated with duplication of roles between NTSA and traffic police that need to be clarified. The current situation is such that no one can be held responsible for policy implementation failure.

6.4.2 Recommendations for Road Safety Policy Implementation Practice

- i. This study also established that traffic enforcement practices are routine. Thus, road users are aware of which the enforcement officer commonly stops road users for investigations, road safety policy domains that are commonly investigated, and the investigation's timing. Because of the routine nature of the enforcement practice, the road users can predict the enforcement actions and thereby respond accordingly. Because of this finding, the study recommends that traffic enforcement practices be random. The road users always expect enforcement officers to check them at any time for anything.
- ii. The study established that the wrong prioritization of road users, timing and road safety domains for implementation did not arise from ignorance but conflict of interests. To this end, the bureaucratic executives should control discretion by enforcement officers. One way of doing this is by curbing corruption. This is because most cases of conflict of interest between the policymakers and the enforcement officers arise from the desire to make more money (Chitere & Kibua 2004). One possible way to do this is through an effective performance management system coupled with sanctions and rewards for performance achievement.
- iii. To curb road accidents in Kenya, one would need to change the bureaucratic attitudes and beliefs among the traffic police officers. This is viewed as important, given that wrong triaging by traffic police officers observed during the study was by no means related to lack of information. The police perceptions on hours of the day, days of the week, road users, and police domains that are frequently violated are responsible for the highest number of accidents and fatalities, which were consistent with observations, road user interviews, and

accident records. Their perception of road users, which aspects of the Traffic Act and time of the day were related to the prevalence of violations, accidents and fatalities. Their practice, however, was not related and sometimes moving in the opposite direction. Since what the police officers do in their daily lives cannot be controlled, efforts to change their bureaucratic beliefs and values would go a long way in enhancing their work performance. One of the plausible ways of doing this is through controlling police culture before recruitment through aptitude tests and after recruitment through training and induction.

6.4.3 Recommendations for Further Research

From the summary and conclusions outlined above, the study gives direction for future research.

- i. During analysis and discussions, it was established that discretion by traffic police officers undermines road safety policy implementation. However, discretion is an important part of a traffic officer's work. Consequently, the focus of new research should be on how to manage police performance to ensure that they put their best foot forward during the road safety policy implementation process.
- ii. This study concentrated on the discretionary decisions of traffic police officers and their effect on road safety policy outcomes. However, other departments in the criminal justice system are also involved in the implementation of road safety policies. These include judges and prosecutors in the traffic division of the High Court among others. The study recommends that future inquiries be expanded to include all the implementing agencies.
- iii. It was out of the scope of this study to investigate conclusively other aspects of discretion such as road user targeting based on gender, targeting based on age, targeting based on social status and the effect of the same on-road safety policy implementation. This was occasioned by the lack of comparable secondary data on these aspects of discretion. Yet such would be critical components for future research as far as street-level bureaucratic discretion is concerned. Therefore, new research efforts can target these areas of police discrepancies that, though identified during the literature review process as possible causes of road safety policy failure, were never tested.

- iv. Finally, the external validity of this study is limited by the fact that its data was collected in one administrative context at one point in time. Therefore, there is no guarantee that its findings can be replicated in a different administrative context and future. The study, therefore, recommends that future studies should aim at more at cross-national comparisons.

- v. In the same vein primary data for this study was collected in Nairobi's metropolis. Previous studies (Chitere & Kibua, 2004; Mitullah & Asingo, 2014) have observed variation in the enforcement behaviour between town centres and the rural areas. These studies, however, did not investigate the relationship between levels of non-compliance, and road safety policy enforcement processes in rural areas. The study, therefore, proposes cross-country comparative studies on street-level bureaucracy and road safety policy outcomes to better explain road safety policy failure in the other parts of Kenya not included in this study.

REFERENCES

- Abdulgafoor, M. Bachani, P. K., 2013. Road Traffic Injuries in Kenya: The Health Burden and Risk, Factors in Two Districts. *Traffic Injury Prevention*, pp. 24-30.
- Adeloye, D., Thompson, J. Y., Akanbi, M. A., Azuh, D., Samuel, V., Omoregbe, N., & Ayo, C. K. (2016). the burden of road traffic crashes, injuries and deaths in Africa: a systematic review and meta-analysis. *Bulletin of the World Health Organization*, 94(7), 510.
- Akinci, C., & Saunders, M. N. (2015). Using questionnaire surveys for within-organisation HRD research. In *Handbook of research methods on human resource development*. Edward Elgar Publishing.
- Alcohol and Drug Foundation (2016). Annual Report.
<https://cdn.adf.org.au/media/documents/ADF-Annual-Report-FY15-16.pdf>
- Alevizou, P. J., Oates, C. J., & McDonald, S. (2018). Signalling sustainability: approaches to on-pack advertising and consumer responses. In *American Academy of Advertising. Conference. Proceedings (Online)* (pp. 74-77). American Academy of Advertising.
- Alexandre, A. B. (2018). Perception of corruption by traffic police and taxi drivers in Bukavu DR Congo: the limits of moral analysis. *Journal of Contemporary African Studies*, 36(4), 563-574.
- Alila, P. O., & Hyden, G. (2021). Teaching Public Policy in Kenya: Approaches and Current Issues. In Onyango G. & Hyden, G. (Eds). *Governing Kenya: Public Policy in Theory and Practice*. Palgrave MacMillan, pp., 299-318.
- Allen, M., 2017. *The SAGE Encyclopedia of Communication Research Methods*. Thousand Oaks: SAGE Publications.
- Alpert, G. P., Dunham, R. G. & MacDonald, J. M., 2004. Interactive Police Citizen Encounter that Results in Force. *Police Quarterly*, p. 475–488.
- Alpert, G. P. et al., 2006. *Police Officers' Decision Making and Discretion: Police Officers' Decision Making and Discretion*: Washington DC: US Department of Justice.
- Aondo, R. M. *Emerging Issues in Road Safety in Kenya: Government Strategy to Enhance Traffic Safety*.
- Asingo, P. O. & Mitullah, W. V., 2007. *Implementing Road Transport Safety Measures in Kenya, Policy Issues and Challenges*. Nairobi: Institute for Development Studies.
- Asingo, P., 2004. *The institutional and organizational structure of public road transport in Kenya*. Nairobi: Institute of Policy Analysis and Research.

- Audemard, J. (2020). Objectifying contextual effects. The use of snowball sampling in political sociology.
- Ayuk, E. & Marouani, M. A., 2007. *The Policy Paradox in Africa: Strengthening Links between Economic Research and Policymaking*, Nairobi: IDRC.
- Baumgartner, F. R., Christiani, L., Epp, D. A., Roach, K., & Shoub, K. (2017). Racial disparities in traffic stop outcomes. *Duke FL & Soc. Change*, 9, 21.
- Behrens, R., McCormick, D., Orero, R., & Ommeh, M. (2017). Improving paratransit service: Lessons from inter-city matatu cooperatives in Kenya. *Transport Policy*, 53, 79-88.
- Berg, B. L., 1999. *Policing in Modern Society*. Woburn: Butterworth-Heinemann.
- Birkland, T. A., 2010. *An Introduction to the Policy Process: Theories, Concepts, and Models of Public Policy Making*. New York: M.E. Sharpe.
- Bjurstrøm, K. H. (2020). Principal–agent or principal–steward: how ministry–agency relations condition the impact of performance management in the steering of government agencies. *Public Performance & Management Review*, 43(5), 1053-1077.
- Bleidorn, W., Hill, P. L., Back, M. D., Denissen, J. J., Hennecke, M., Hopwood, C. J., & Roberts, B. (2019). The policy relevance of personality traits. *American Psychologist*, 74(9), 1056.
- Borry, E. L., & Henderson, A. C. (2020). Patients, protocols, and prosocial behaviour: Rule breaking in Frontline Health Care. *The American Review of Public Administration*, 50(1), 45-61.
- Box, R. C., 2013. *Public Administration and Society: Critical Issues in American Governance*. New York: M.E. Sharpe.
- Brandsma, G. J., & Adriaensen, J. (2017). The principal–agent model, accountability and democratic legitimacy. In *The principal agent model and the European Union* (pp. 35-54). Palgrave Macmillan.
- Brasil, F. G., & Capella, A. C. N. (2017). Translating ideas into action: Brazilian studies of the role of the policy entrepreneur in the public policy process. *Policy and society*, 36(4), 504-522.
- Brehm, J. & Gates, S., 1999. *Working, Shirking, and Sabotage: Bureaucratic Response to a Democratic Publican study in Political Analysis*. Michigan: University of Michigan Press.
- Brown, M. K., 1998. *Working the Street: Police Discretion and the Dilemmas of Reform*. New York: Russell Sage Foundation.

- Brown, M. K., 2012. *Working the Street: Police Discretion and the Dilemmas of Reform*. New York: Russell Sage Foundation.
- Bryman, A. (2016). *Social research methods*. Oxford university press.
- Bulletin of Sociological Methodology/Bulletin de Méthodologie Sociologique, 145(1), 30-60.
- Burfeind, J. W. & Bartusch, D., 2011. *Juvenile Delinquency: An Integrated Approach*. London: Jones & Bartlett Learning.
- Buvik, K., 2016. The Hole in the Doughnut: A Study of Police Discretion in a Nightlife Setting. *Policing and Society*, pp. 771-788.
- Calvi, A., Benedetto, A. & D'Amico, F., 2017. Investigating Driver Reaction Time and Speed during Mobile Phone Conversations with a Lead Vehicle In front: A Driving Simulator Comprehensive Study. *Journal of Transportation Safety & Security*, pp. 1943-9962.
- Campos, J. E., & Syquia, J. L. (2006). Overhauling the legal infrastructure of public procurement in the Philippines. *Managing the politics of reform*.
- Capraro, R. M., Capraro, M. M., & Rupley, W. H. (2012). Reading-enhanced word problem solving: A theoretical model. *European journal of psychology of education*, 27(1), 91-114.
- Carter, T. J. (2006). Police use of discretion: a participant observation study of game wardens. *Deviant Behavior*, 27(6), 591-627.
- Caswell, D. (2020). Talking policy into being—How street-level bureaucrats and vulnerable unemployed talk about labor market participation. *European Policy Analysis*, 6(1), 23-37.
- Chitere, P. O. & Kibua, T. N., 2004. *Efforts to Improve Road Safety in Kenya, Achievement and Limitations of Reforms in Matatu Industry*, Nairobi: Institute of Policy Analysis and Research (IPAR).
- Clark-Daniels, C. L. & R. Steven Daniels, 1995. Street-Level Decision Making in Elder Mistreatment Policy: An Empirical Case Study of Service Rationing. *Social Sciences Quarterly*, pp. 461-471.
- Cohen, L., Manion, L. & Morrison, K., 2013. *Research Methods in Education*. New York: Routledge.
- Constantinou, A. G. (2016). “Demystifying” the police: a participant observation study of police stops (and searches). *International journal of comparative and applied criminal justice*, 40(1), 79-99.
- Cox, S. M., McCamey, W. P. & Scaramella, G. L., 2013. *Introduction to Policing*. London: SAGE Publications.

- Daniel, J., 2012. *Sampling Essentials: Practical Guidelines for Making Sampling Choices*. London: SAGE Publications, Inc.
- David, M. & Sutton, C. D., 2011. *Social Research: An Introduction*. New Delhi: SAGE.
- Davis, K. C. (1970). Discretionary justice. *Journal of Legal Education*, 23(1), 56-62.
- De Pauw, E., Daniels, S., Brijs, T., Hermans, E., & Wets, G. (2014, April). The traffic safety effect of combined speed and red-light cameras. In *Transport Research Arena (TRA) 5th Conference: Transport Solutions from Research to Deployment*.
- Delreux, T., & Adriaensen, J. (2017). Introduction. Use and limitations of the principal–agent model in studying the European Union. In *The principal agent model and the European Union* (pp. 1-34). Palgrave Macmillan.
- Dempsey, J. S. & Forst, L. S., 2011. *An Introduction to Policing*. New York: Cengage Learning.
- Denhardt, R. B., 2010. *Theories of Public Organization*. Boston: Wadsworth Cengage Learning.
- Durant, R. F., 2010. *The Oxford Handbook of American Bureaucracy*. Oxford: Oxford Handbooks Online.
- Elemore, R., 1979. Backwards Mapping: Implementation Research and Policy Decisions. *Political Science Quarterly*, pp. 601-616.
- Elmore, R. F. (1980). Complexity and Control: What Legislators and Administrators Can Do About Implementing Public Policy
- Engel, R. S., Worden, R. E., Corsaro, N., McManus, H. D., Reynolds, D., Cochran, H., ... & Cherkauskas, J. C. (2019). Explaining the Decision to Arrest. *The Power to Arrest*, 29-74.
- Evans, B., & Sapeha, H. (2015). Are non-government policy actors being heard? Assessing New Public Governance in three Canadian provinces. *Canadian Public Administration*, 58(2), 249-270.
- Evans, T. (2010). Professionals, managers and discretion: Critiquing street-level bureaucracy. *The British Journal of Social Work*, 41(2), 368-386.
- Evans, T. (2016). *Professional discretion in welfare services: Beyond Street-level bureaucracy*. Routledge.
- Fischer, F. & Miller, G. J., 2006. *Handbook of Public Policy Analysis: Theory, Politics, and Methods*. Boca Raton: CRC Press.
- Fischer, F., & Miller, G. J. (Eds.). (2017). *Handbook of public policy analysis: theory, politics, and methods*. Routledge.

- Freeman, J., Kaye, S. A., Truelove, V., & Davey, J. (2017). Is there an observational effect? An exploratory study into speed cameras and self-reported offending behaviour. *Accident Analysis & Prevention*, *108*, 201-208.
- Gaines, L. K. & Kappeler, V. E., 2011. Policing in America. Waltham: Elsevier.
- Glachant, M. (2001). The need for adaptability in EU environmental policy design and implementation. *European Environment*, *11*(5), 239-249.
- Gordon, M. D., Morris, J. C., & Steinfeld, J. (2019). Deepwater or troubled water? Principal-Agent theory and performance-based contracting in the coast guard's deep-water modernization program. *International Journal of Public Administration*, *42*(4), 298-309.
- Gottschalk, P., 2007. *Business Dynamics in Information Technology*. Hershey: Idea Group Inc. (IGI).
- Government of Kenya (2011). National Police Service Act Published by the National Council for Law Reporting with the Authority of the Attorney-General www.kenyalaw.org
- Government of Canada, 2011. Road Safety and Motor Vehicle. Available at: <http://www.tc.gc.ca/eng/roadsafety/tp-tp15145-1201.htm> [Accessed 9 June 2013].
- Graeff, J. E., 2013. Bus Rapid Transit in Nairobi: A Matatu. [Online] Available at: <https://nairobiplanninginnovations.files.wordpress.com/2013/02/the-organization-issues-and-the-future-role-of-the-matatu-industry-in-nairobi-kenya.pdf> [Accessed 24 October 2017].
- Gunn, L. A. (1978). Why is implementation so difficult? *Management Services in Government and O and M Bulletin London*, *33*(4), 169-176.
- Habyarimana, J., & Jack, W. (2011). Heckle and Chide: Results of a randomized road safety intervention in Kenya. *Journal of Public Economics*, *95*(11-12), 1438-1446.
- Habyarimana, J., & Jack, W. (2012). State vs Consumer Regulation: An Evaluation of Two Road Safety Interventions in Kenya (No. w18378). National Bureau of Economic Research.
- Henderson, A. C. (2014). The critical role of street-level bureaucrats in disaster and crisis response. *Handbook of critical incident analysis*, 210-245.
- Henderson, P., Romoff, J., & Pineau, J. (2018). Where did my optimum go? An empirical analysis of gradient descent optimization in policy gradient methods. ArXiv preprint arXiv: 1810.02525.
- Heppner, P. P., Wampold, B. E. & Dennis M. J., 2008. *Research Design in Counselling*. New York: Cengage Learning.

- Hill, H. C., 2003. Understanding implementation: Street-level bureaucrats' resources for Reforms. *Journal of Public Administration Research and Theory*, pp. 289-320.
- Hill, M. & Hupe, P., 2008. *Implementing Public Policy: An Introduction to the Study of Operational Governance*. London: SAGE.
- Hill, M. J., 1997. *The Public Policy Process*. London: Prentice-Hall.
- Hill, M., & Hupe, P. (2014). *Implementing public policy: An introduction to the study of operational governance*. Sage.
- Hill, M., & Møller, M. Ø. (2019). An approach to the development of comparative cross-national studies of street-level bureaucracy. *Journal of international and comparative social policy*, 35(2), 177-193.
- Hornsby, C. (2013). *Kenya: A History Since Independence*, London: IB Taurus & Co.
- Howlett, M., 2018. Moving policy Implementation Theory Forward: A multiple Steams/Critical Juncture Approach. *Public Policy and Administration*, 34(4), p. 405–430.
- Hudson, B., Hunter, D., & Peckham, S. (2019). Policy failure and the policy-implementation gap: can policy support programs help? *Policy design and practice*, 2(1), 1-14.
- Karau, P. B., Ogeng'o, J. A., Okoro, D., Muia, M., & Saumu, M. W. (2015). Risk factor profile of motorcycle crash victims in rural Kenya. *Annals of African surgery*, 12(1).
- Kasau, M. P. (2019). *Exploration of Factors that Influence Incidence of Road Accidents in Kenya: A Survey of Black Spots along the Mombasa-Malaba Road* (Doctoral dissertation).
- Keiser, L. R., 2012. Understanding Street-Level Bureaucrats' Decision Making: Determining Eligibility in the Social Security Disability Program. [Online]
- Kleinig, J., 1996. *Handled with Discretion: Ethical Issues in Police Decision Making*. London: Rowman & Littlefield.
- Kochel, T. R., Wilson, D. B., & Mastrofski, S. D. (2011). Effect of suspect race on officers' arrest decisions. *Criminology*, 49(2), 473-512.
- Komba, D. D., 2006. *Risk Factors and Road Traffic Accidents in Tanzania: A Case Study of Kibaha District*. Trondheim: Norwegian University of Science and Technology.
- Kothari, C. R. (2004). *Research methodology: Methods and techniques*. New Age International.
- Kothari, C. R. (2009). *An introduction to operational Research*. Vikas Publishing House Pvt Ltd.
- Kraska-Miller, M. (2013). *Nonparametric Statistics for Social and Behavioural Sciences*. CRC Press.
- Lazarus, R. S. & Folkman, S., 1984. *Stress, Appraisal, and Coping*. New York: Springer Publishing Company.

- Lennon, M. C. & Corbett, T., 2003. *Policy into Action: Implementation Research and Welfare Reform*. Washington Dc: The Urban Institute.
- Lewis, C., 1999. *Complaints against Police: The Politics of Reform*. Annandale: Hawkins Press.
- Lewis, D. L. (1999). *Road user and mitigation costs in highway pavement projects* (Vol. 269). Transportation Research Board.
- Li, Q., Adetunji, O., Pham, C. V., Tran, N. T., Chan, E., & Bachani, A. M. (2020). Helmet use among motorcycle riders in Ho Chi Minh City, Vietnam: results of a five-year repeated cross-sectional study. *Accident Analysis & Prevention, 144*, 105642.
- Lichtenberg, I. (2002). Police discretion and traffic enforcement: A government of men. *Clev. St. L. Rev.*, 50, 425.
- Lipsky, M., 2010. *Street-Level Bureaucracy, Dilemmas of the Individual in Public Service*. New York: Russell Sage Foundation.
- Loh, W. D. (1984). *Social research in the judicial process: Cases, readings, and text*. Russell Sage Foundation.
- Maguire, M., Morgan, R. & Reiner, R., 2007. *The Oxford Handbook of Criminology*. Oxford: Oxford University Press.
- Manyara, C. G. (2016). Combating road traffic accidents in Kenya: A challenge for an emerging economy. In *Kenya after 50* (pp. 101-122). Palgrave Macmillan, New York.
- Matheka, D. M., Omar, F. A., Kipsaina, C., & Witte, J. (2015). Road traffic injuries in Kenya: a survey of commercial motorcycle drivers. *Pan African medical journal*, 21(1).
- Maynard-Moody, S. W. & Musheno, M. C., 2003. *Cops, Teachers, Counsellors: Stories from the Front Lines of Public Service*. Michigan: University of Michigan Press.
- Maynard-Moody, S., & Musheno, M. (2009). Story worlds, narratives, and research. *Cops, teachers, counselors: Stories from the front lines of public service*, 25-35.
- Mbao, M. J. N., & Mwangangi, P. (2017). Influence of Centralized Operation Controls on the Performance of Public Service Vehicle Firms Offering Long-Distance Night-Time Passenger Services in Kenya. *European Journal of Business and Strategic Management*, 2(7), 44-66.
- Minton, M., 2000. *Policy Entrepreneurs and School Choice*. Georgetown: Georgetown University Press.
- Mitullah, W. & Asingo, P., 2014. *Road Safety Policies in Kenya: In search of Explanation for Non-Compliance*. Nairobi: Institute of Development Studies.

- Moran, M., Rein, M. & Goodin, R. E., 2008. *The Oxford Handbook of Public Policy*. Oxford: OUP Oxford.
- Morton, R. B. & Williams, K. C., 2010. *Experimental Political Science and the Study of Causality: From Nature to the Lab*. Cambridge: Cambridge University Press.
- Mugenda, A., 2011. *Social Sciences Research, Theory and Principles*. Nairobi: Kijabe Printing Press.
- Mugenda, O., & Mugenda, D. (2004). *Research Methods: Qualitative Techniques*.
- Muguro, J. K., Sasaki, M., Matsushita, K., & Njeri, W. (2020). Trend analysis and fatality causes in Kenyan roads: A review of road traffic accident data between 2015 and 2020. *Cogent Engineering*, 7(1), 1797981.
- Mutto, M., Kobusingye, O. C., & Lett, R. R. (2002). The effect of an overpass on pedestrian injuries on a major highway in Kampala–Uganda. *African health sciences*, 2(3), 89-93.
- Myhill, A. (2019). Renegotiating domestic violence: Police attitudes and decisions concerning arrest. *Policing and society*, 29(1), 52-68.
- Narain, V. (2018). *Public Policy: A View from the South*. Cambridge University Press. M
- Nation Media Group, 2013. Uhuru Decries Ricing Road Carnage, Nairobi:
- Nation Media Group, 2013. Uhuru Decries the Rising Number of Road Accidents. Nation Media Group, 2 November, p. 11.
- National Council for Law Reporting, 2003. Legal Notices 2003, October (L. N's 161-177). [Online] Available at <http://kenyalaw.org/kl/index.php?id=578>
- National Council on Administration of Justice (NCAJ) (2016). Criminal justice system in Kenya: An Audit. Understanding pre-trial detention in respect to cash flow management and conditions of detention. Supreme Court Building, City Hall Way, Nairobi. http://kenyalaw.org/kenyalawblog/wp-content/uploads/2017/01/Criminal_Justice_Report.pdf
- National Transport and Safety Authority, 2015. NTSA. Available at: <http://www.ntsago.ke>
- Nhamo, G., 2008. *Environmental Policy Processes Surrounding South Africa s Plastic Bags Regulations: Tensions, Debates and Responses in Waste Product Regulation*. Boca Raton: Universal-Publishers.
- North, D. C., (1990). *Political Economy of Institutions and Decisions*. Cambridge: Cambridge University Press.
- NTSA (2020). Status of Road Safety as at 31st October. <https://www.ntsago.ke/site/wp-content/uploads/2020/11/NTSA-Press-Release-on-Crash-Statistics.pdf>

- Nyachieo, G. M. Levels of Rider Training and Its Influence on Road Safety among Motorcycle (Boda Boda) Riders in Kisumu East Sub-County in Kisumu County, Kenya.
- Nyale, D., Kisii, K., Liyala, S., Ogalo, J., Kangethe, M., & Thika, K. (2020). Use of Hybrid Data Mining in Identification of Crime Patterns and Trends in the Matatu Industry in Kenya. *International Journal of Computer Applications Technology and Research* Volume 9–Issue 06, 194-199.
- Odero, W., Khayesi, M., & Heda, P. M. (2013). Road traffic injuries in Kenya: magnitude, causes and status of intervention. *Injury control and safety promotion*, 10(1-2), 53-61.
- Ogendi J., Odero W, Mitullah W., and Khayesi M. (2013) Pattern of Pedestrian Injuries in the City of Nairobi: Implications for Urban Safety Planning. *Journal of Urban Health: Bulletin of the New York Academy of Medicine*, (90), 5.
- Ogombe, J. A., (2017). Influence of Road Infrastructure Interventions on pedestrian safety rules in the city of Kisumu, Nairobi: University of Nairobi.
- Olowu, D. & Sako, S., (2002). *Better Governance and Public Policy: Capacity Building for Democratic Renewal in Africa*. Bloomfield: Kumarian Press.
- Onyango, G., Hyden, G. (Eds.). (2021). *Governing Kenya: Public Policy in Theory and Practice*. Palgrave MacMillan
- Orero, R., McCormick, D., Mitullah, W. & Chitere, P., (2012). Assessing Progress with the Implementation of the Public Transport Policy in Kenya. Pretoria, Institutional Repository of the University of Pretoria.
- Pengpid, S., & Peltzer, K. (2019). Prevalence and correlates of unintentional and intentional non-fatal injury among men and women in Kenya. *Gender and Behaviour*, 17(4), 14091-14100.
- Peters, B. G. (2018). The challenge of policy coordination. *Policy Design and Practice*, 1(1), 1-11.
- Peters, B. G., & Pierre, J. (Eds.). (2006). *Handbook of public policy*.
- Pressman, J. L. & Wildavsky, A. B., (1984). *Implementation: How Great Expectations in Washington Are Dashed in Oakland*. Berkeley: University of California Press.
- Prottas, J. M. (1979). *People processing: The street-level bureaucrat in public service bureaucracies*. Great Source Education Group.
- Quah, J. S. (Ed.). (2016). *the role of the public bureaucracy in policy implementation in five ASEAN Countries* (Vol. 9). Cambridge University Press.
- Raaphorst, N. (2018). How to prove, how to interpret and what to do? Uncertainty experiences of street-level tax officials. *Public Management Review*, 20(4), 485-502.

- Raaphorst, N., & Groeneveld, S. (2019). Discrimination and representation in street-level bureaucracies. In *Research Handbook on Street-Level Bureaucracy*. Edward Elgar Publishing.
- Rauchhaus, R. W. (2009). Principal-agent problems in humanitarian intervention: Moral hazards, adverse selection, and the commitment dilemma. *International Studies Quarterly*, 53(4), 871-884.
- Raynor, N. J., & Mirzoev, T. (2014). Understanding road safety in Kenya: views of matatu drivers. *International health*, 6(3), 242-248.
- Roets, B., & Christiaens, J. (2019). Shift work, fatigue, and human error: An empirical analysis of railway traffic control. *Journal of Transportation Safety & Security*, 11(2), 207-224.
- Roy, M. L., (2012). *Research Methods in Political Science*. Boston: Cengage Learning.
- Ruhs, M., & Anderson, B. (Eds.). (2010). *who needs migrant workers? Labour shortages, immigration, and public policy*. Oxford University Press.
- Sabatier, P. A., (2007). *Theories of the Policy Process*. Berkeley: Westview Press.
- Sabatier, P., & Tasmanian, D. (1979). The conditions of effective implementation: A guide to accomplishing policy objectives. *Policy analysis*, 481-504.
- Sapru, R. K. (2011). *Public policy: Art and craft of policy analysis*. PHI Learning Pvt. Ltd.
- Schafer, J. A., Carter, D. L., Katz-Bannister, A. J., & Wells, W. M. (2006). Decision making in traffic stop encounters: A multivariate analysis of police behaviour. *Police quarterly*, 9(2), 184-209.
- Schafer, J. A., Carter, D. L., Katz-Bannister, A. J., & Wells, W. M. (2006). Decision-making in traffic stop encounters: A multivariate analysis of police behaviour. *Police quarterly*, 9(2), 184-209.
- Schneider, A. L. & Ingram, H. M., (2012). *Deserving and Entitled: Social Constructions and Public Policy*. New York: SUNY Press.
- Schueths, A. M. (2019). They watch for color: mixed-status couples experience with the police. *Contemporary Justice Review*, 22(2), 139-156.
- Schwarzenegger, F. & Tommasi, M., (1998). *The Political Economy of Reform, Massachusetts*: MIT Press.
- Shaw, B. I., Wangara, A. A., Wambua, G. M., Kiruja, J., Dicker, R. A., Mweu, J. M., & Juillard, C. (2017). Geospatial relationship of road traffic crashes and healthcare facilities with trauma surgical capabilities in Nairobi, Kenya: defining gaps in coverage. *Trauma surgery & acute care open*, 2(1), e000130.

- Sidha, Z., Asingo, P., & Magutu, J. (2021). Street-Level Bureaucrats as Policy Entrepreneurs: The Nexus between Timing of Traffic Enforcement Activities and Road Safety Policy Outcomes. *Politics & Policy*, 49(1), 186-204.
- Sisimwo, P. K. & Onchiri, G. M., (2018). Epidemiology of head injuries and helmet use among motorcycle crash injury: a quantitative analysis from a local hospital in Western Kenya. *Pan African Medical Journal*, 31(70).
- Sisimwo, P. K., & Onchiri, G. M. (2018). Epidemiology of head injuries and helmet use among motorcycle crash injury: a quantitative analysis from a local hospital in Western Kenya. *Pan African medical journal*, 31(1).
- Siya, A., Ssentongo, B., Abila, D. B., Kato, A. M., Onyuth, H., Mutekanga, D., & Lukwa, A. T. (2019). Perceived factors associated with boda-boda (motorcycle) accidents in Kampala, Uganda. *Traffic injury prevention*, 20(sup2), S133-S136.
- Smart, J. C., (2008). *Higher Education: Handbook of Theory and Research*. New York: Springer.
- Smith, T. B., Jun. (1973). The Policy Implementation Process. *Policy Sciences*, pp. 197-209.
- Solomon, M. G., Chaffe, R. H. B. & Presser, D. F., (2009). *Night time Enforcement of Seat Belt Laws: An Evaluation of Three Community Programs*, New Jersey: U.S. Department of Transportation National Highway Traffic Safety Administration.
- Spector, P. E. (2019). Do not cross me: Optimizing the use of cross-sectional designs. *Journal of Business and Psychology*, 34(2), 125-137.
- The Republic of Kenya (2019). *2019 Kenya Population and Housing Census, Volume I: Population by County and Sub-county*.
- The Republic of Kenya, (2012). *The National Transport and Safety Authority Act, 2012*. Kenya Gazette Supplement, 26th October, p. 1715.
- The Republic of Kenya, (2012). *The Traffic (Amendment) Act, No. 37 of 2012*. Kenya Gazette Supplement, 9 November, p. 1805.
- The Republic of Kenya, (2012). *The Traffic Act, Chapter 403*. National Council for Law Reporting.
- The Republic of Kenya, (2016). *The Traffic (Minor Offences) Rules*. Kenya Gazette Supplement No. 165.
- Tummers, L., Bekkers, V., Vink, E. & Musheno, M., (2014). *Coping During Public Service Delivery: A Conceptualization and Systematic Review of Literature*. Ottawa, IRSPM.
- Van de Walle, S., & Groeneveld, S. (2016). *Introduction: Theory and Practice of Public Sector Reform* (pp. 1-5). Routledge.

- Van Meter, D. S., & Van Horn, C. E. (1975). The policy implementation process: A conceptual framework. *Administration & Society*, 6(4), 445-488.
- Vissocki, J. R. N., Shogilev, D. J., Krebs, E., Andrade, L. D., Vieira, I. F., Toomey, N. & Staton, C. A. (2017). Road traffic injury in sub-Saharan African countries: a systematic review and summary of observational studies. *Traffic injury prevention*, 18(7), 767-773.
- Vito, A. G., Grossi, E. L., & Higgins, G. E. (2017). The issue of racial profiling in traffic stop citations. *Journal of Contemporary Criminal Justice*, 33(4), 431-450.
- Vos, A. D., Strydom, H., Delpont, R. & Toit, L. D., (2006). *Research at Grass Roots*. Pretoria: Van Schaik.
- Wali, M. A., (2010). *The Dynamics of Policy Implementation in Nigeria: The Case of Sokoto State*. Bloomington: I Universe.
- Wanyande, P. (2021). The Politics of Implementation at County Level: Realizing Devolution in Kenya. In *Governing Kenya* (pp. 103-120). Palgrave Macmillan.
- Weatherly, R. A. (1979). *Reforming special education: Policy implementation from state to street level*.
- Wilson, J. Q. (1989). *Bureaucracy: What Government Agencies Do and Why They Do it*. New York: Basic Books.
- Winter, H. (2017). Chapter twelve. Is racial profiling a nondiscriminatory policing strategy? Anderson v. Cornejo (2004) and the economics of police search procedures. In *Issues in Law and Economics* (pp. 177-189). University of Chicago Press.
- World Health Organization (2020). Road Traffic Injuries. <https://www.who.int/news-room/fact-sheets/detail/road-traffic-injuries>
- World Health Organization, (2013). *Global Status Report on Road Safety 2013: Supporting a Decade of Action*. Geneva: WHO Press.
- World Health Organization, (2018). *Global status report on road safety*. <https://www.who.int/publications/i/item/9789241565684>
- World Health Organization. (2014). *Injuries and violence: the facts 2014*.
- World Health Organization. (2015). *Global status report on road safety 2015*. World Health Organization.
- Yin, R. K. (2014). *Case study research: design and methods*. Fifth edit. United States of America.
- Zedekia, S. (2017). Street level bureaucrats as the ultimate policy makers. *Journal of Political Sciences & Public Affairs*, 5(4), 2332-0761.
- Zhang, G., Yau, K. K., Zhang, X., & Li, Y. (2016). Traffic accidents involving fatigue driving and their extent of casualties. *Accident Analysis & Prevention*, 87, 34-42.

APPENDICES

APPENDIX I: KII Schedule: Police Officers

Hello. My name is Zedekia Sidha; I am a postgraduate student at the University of Nairobi pursuing a PhD in Political Science and Public Administration. My thesis paper is on: Street-Level Bureaucrats and Policy Implementation in Kenya: A Study of Traffic police officers at Nairobi Traffic Command Area. I would appreciate your participation in this study because your views are very important. Whatever information you provide will be kept strictly confidential and will not be shown to any other person not involved in this study. The interview will take only a few minutes. While there is a KII schedule to guide our discussion, feel free to add any information you deem relevant, even if it is not part of the guide.

Street-level Discretion

1. What are the reporting lines for traffic police officers?
2. What are the command structures followed during traffic enforcement exercises?
3. What are the duties of divisional traffic police officers?
4. How is the shift for divisional traffic police officers?
5. Who allocates them jobs?
6. How does the police service assess the performance of divisional traffic police officers?

Domain Discretion

1. In what ways are road safety policies in Kenya enforced in Kenya?
2. Which are the common road traffic offences in Kenya?
3. Are there specific kinds of laws that the police prioritize during the implementation process?
4. Are there any challenges associated with monitoring certain road safety policy violations?

Target Discretion

1. Which road user is responsible for the highest number of road accidents?
2. Which road user is responsible for the highest road traffic fatalities?
3. Are there road users that the police target during a traffic check?
4. Why do they target those road users?
5. Are there challenges associated with monitoring certain road users?

Chronometric discretion

1. What time of the day and the week are accidents more prevalent in Nairobi?
2. Does the traffic department have an enforcement schedule?
3. What time of the day and the week more people are arrested for traffic law violations?

APPENDIX II: Road safety policy enforcement officers interview schedule.

Hello. My name is Sidha Zedekia; I am a post-graduate student at the University of Nairobi pursuing a PhD in Political Science and Public Administration. My thesis paper is on: Street-Level Bureaucrats and Policy Implementation in Kenya: A Study of Traffic police officers at Nairobi Traffic Command Area. I would appreciate your participation in this study because your views are very important. Whatever information you provide will be kept strictly confidential and will not be shown to any other person not involved in this study. The interview is likely to take about 20 minutes or less

Section 1 General Information

Place of the interview _____ Police Division _____

Position of the enforcement officer _____ Department _____

Gender of the enforcement officer _____ Date _____

Section 2: Resources

1. In your assessment are there enough policemen on the Kenyan roads? Yes ___No_____
2. Do the police have enough equipment for purposes of traffic enforcement? Yes ___No_____

Section 3: Road Traffic accidents

3. Please rank the categories of road users below in terms of the frequency with which they get involved in road traffic accidents, so that the one that gets involved in accidents most is number 1 while the one that least gets involved is number 8.

Road User Type	Rank
Pedestrians	
Passengers	
Motorcyclists	
Trolleys	
Handcarts	
Tuk-tuk	
Drivers	
Pedal Cyclist	

4. Rank the following vehicle types by the frequency in which they are involved in traffic law violations. The list involves is coded 1 and most involved 9

Vehicle type	Rank
<i>Matatus</i>	
Cars and utilities	
Buses	
Taxis	
Lorries	
College/school	
Trailers	
Tankers	
Government vehicles	

5. In your assessment between female and male drivers who cause more accidents? (Please tick one)

Male -----

Female -----

Which of the traffic rules below is mostly violated by road users (rank from 1 to 15, with 1 being least and 15 most)?

Policy domain	Rank
Crossing while on phone	
Use of mobile phone	
Seat belt	
Carrying more than one passenger	
Crossing at an inappropriate place	
Passenger without helmet	
Careless overtaking	
No jacket passenger	
Alighting at the wrong place	
Speeding	
No helmet	
No jacket for riders	
Drunk driving	
Vehicle defects	
Overloading	

6. At what time of the day do most accident occur (Rank from 1 to 7, with 1 least and 7 most)

Time of the day	Rank
Morning	
Noon	
Afternoon	
Evening	
Night before midnight	
Night after Midnight	
Dawn	

7. Which day of the week are violations more common? (Rank from 1 to 7, with 1 least and 7 most)

Day of the week	Rank
Monday	
Tuesday	
Wednesday	
Thursday	
Friday	
Saturday	
Sunday	

APPENDIX III: Road users Interview Schedule

Hello. My name is Sidha Zedekia; I am a post-graduate student at the University of Nairobi pursuing a PhD in Political Science and Public Administration. My thesis paper is on: Street-Level Bureaucrats and Policy Implementation in Kenya: A Study of Traffic police officers at Nairobi Traffic Command Area. I would appreciate your participation in this study because your views are very important. Whatever information you provide will be kept strictly confidential and will not be shown to any other person not involved in this study. The interview is likely to take about 20 minutes or less

Section 1: General Information

1. Place of the interview------(b) Date of the interview-----
c) Gender -----d) age-----
2. Which is your main mode of transport?
 - i. Private car
 - ii. Government vehicle
 - iii. Company /NGO owned vehicle
 - iv. Trailer/truck
 - v. Motorcycle
 - vi. Tuk-Tuk
 - vii. PSVs managed by large companies (e.g. easy coach)
 - viii. PSVs managed by individual owners/ small SACCOs
3. If you drive a private car what is its model _____

Section 2: Safety Checks

Have you been flagged off at the road black over the last week? Yes ___NO ___

What was the first thing they checked after flagging your dawn _____?

What was the other things that they checked (tick more than once)?

Policy domain	YES	NO
Crossing while on phone		
Use of mobile phone		
Seat belt		
Carrying more than one passenger		
Crossing at an inappropriate place		
Passenger without helmet		
Careless overtaking		
No jacket passenger		
Alighting at the wrong place		
Speeding		
No helmet		
No jacket for riders		
Drank driving		
Vehicle defects		
Overloading		

4. At what time did you get checked
5. Which day of the week did you get checked? Tick one (Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, Sunday)

Section 3: Road Traffic Accidents

6. Have you ever been involved in a road accident in the last one month?
YES _____ NO _____
7. What was the cause of the accidents? _____
8. At what time was the accident? _____
9. What day of the week was the accident? Tick one (Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, Sunday)

APPENDIX IV: Structured Observation Schedule

Instructions: This is to be used by trained observers to directly observe road traffic violations and police reactions to those violations in the sampled observation sites.

Date	Time	Location	Road user	Violation	Police presence	Police action

APPENDIX V: FGD: Police Officers and Road Users

Hello. My name is Zedekia Sidha; I am a postgraduate student at the University of Nairobi pursuing a PhD in Political Science and Public Administration. My thesis paper is on: Street-Level Bureaucrats and Policy Implementation in Kenya: A Study of Traffic police officers at Nairobi Traffic Command Area. I would appreciate your participation in this study because your views are very important. Whatever information you provide will be kept strictly confidential and will not be shown to any other person not involved in this study. The interview will take only a few minutes. While there is a KII schedule to guide for our discussion, feel free to add any information you deem relevant even if it is not part of the guide.

Accidents

1. How frequent do you think are accidents on our road today?
2. What time of the day does most accidents occur?
3. What day of the week do most accidents occur?
4. What type of road users commonly cause accidents?
5. What type of vehicles commonly cause accidents?
6. What kind of traffic offences are commonly violated?
7. What kind of offences commonly cause accidents?

Law enforcement

1. What is your assessment of the effectiveness of traffic law enforcement activities in the country?
2. What time of the day are most safety checks conducted in Nairobi?
3. At what time of the day is one more likely to be arrested for a traffic violation?
4. What day of the week are most road safety checks conducted?
5. What type of traffic violations are commonly checked by the police at the traffic checkpoints?
6. What kind of violations can easily lead one to be arrested if found to have violated