



TRAFFIC LAW ENFORCEMENT STRATEGIES AND THEIR EFFECTS ON ROAD SAFETY ON KENYAN NATIONAL HIGHWAYS: THE CASE OF THE MOMBASA-NAIROBI HIGHWAY.

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ABSTRACT

Road traffic accidents are a major challenge to the country's economy and public wellbeing with more than 75percent of the traffic casualties being young and productive adults between 15 – 44 years (Nantalya et al 2009:118-124). Odero, Khayesi and Heda (2003: 53) observe that Kenya, with an average of 7 deaths from the 35 crashes that occur each day, has one of the highest road fatality rates in relation to vehicle ownership in the world. They also add that nearly 3,000 people are killed on Kenyan roads annually. This translates to approximately 68 deaths per 1,000 registered vehicles, which is 30-40 times greater than in highly motorized countries. This exerts a lot of pressure on the economy, but road safety measures in place are ineffective, and enforcement is characterized by knee-jack crackdowns on motor vehicles following major road traffic accidents an indication that something is wrong.

The behaviors exhibited by traffic law enforcers in the course of their duties such as arbitrary flagging down of vehicles come with a lot of consequences like overloading of vehicles passengers and goods, use of defective vehicles on the road, exceeding speed limits, failure to adhere to statutory provisions like driver and crew compliance and worse of all, lack of public confidence.

This study was to find out how effective Traffic Law enforcement strategies are along the Mombasa-Nairobi Highway guided by accident statistics which indicate a rising trend despite the numerous government interventions. It involved drivers and crew of long distance p.s.v's, long distance truck drivers and crew and, Traffic Law enforcers all on the Mombasa-Nairobi Highway. A total of ten p.s.v drivers and p.s.v crew, twenty five drivers and twenty five crew from long distance trucks and thirty Traffic law enforcement officers between the rank of chief inspector and constable were interviewed. The police officers were drawn from the Traffic bases along Mombasa-Nairobi highway which included Embakasi, Athi River, Makindu and Mlolongo weighbridge.

The study found out that Traffic Law enforcement was inadequate leading to the increasing number of accidents. A number of issues were attributed to this factor among which were, the lack of equipment, weather conditions and offering of bribes to the police by drivers and crew at the expense of adhering to road safety requirements. The later was found to be the major cause for the failure of effective Traffic law enforcement along Mombasa-Nairobi highway.

Key Words: Traffic Laws, Enforcement Strategies

INTRODUCTION

The road transport in Kenya consists of a total of 63,265 kilometers of inter-urban roads, of which 8,933 kilometers are paved and 54,332 kilometers are unpaved. The road system is constituted by both classified roads and tracks. The classified roads are listed as, A, B, C and D. D roads are secondary roads linking important centers to each other and to larger class roads and rarely report any serious road accidents. According to the African Development Bank/United Nations Economic Commission for Africa, the 'C' roads typically connect towns and settlements within a single district or to a higher class road. These roads are characterized by very few reported road traffic accidents. The 'B' roads primarily connect major cities and districts and have fewer number of reported accidents compared to 'A' roads (African Development Bank/United Nations Economic Commission for Africa, 2003).

The 'A' roads are typically trans-national, linking centers of international importance and crossing international boundaries or terminating at international ports e.g Mombasa. These roads are characterized by a high number of road traffic accidents mainly causing deaths and injuries to passengers and pedestrians (African Development Bank/United Nations Economic Commission for Africa, 2003).

Among these major highways is the Northern Corridor, a highway that runs from Mombasa all the way to Bujumbura. It is a transport corridor linking the Great lakes countries of Burundi, D. R. Congo, Rwanda and Uganda to the Kenya's sea port of Mombasa. It also serves the Northern Tanzania, the Southern parts of Sudan and Ethiopia. About two thirds of the road network is paved; although the condition is generally poor due to inadequate resources for rehabilitation and maintenance. Overloaded freight vehicles and poor enforcement of axle load regulations further lead to deterioration of the road network and reduce the road life span. A section of the rehabilitated road is what forms the Mombasa-Nairobi road, meaning that

the road surface condition is not one of the direct causes of accidents reported to the police. This section is particularly important for the transportation of goods across borders to the East and Central African countries because it is the entry/exit point to the port of Mombasa which serves the landlocked countries of the region. It is classified as A109. It is the main link between the Kenyan cities of Nairobi and Mombasa and forms a total of 467 kilometers. However, annual police records indicate that there are several areas along this major highway that are considered black spots, meaning that they are prone to accidents. These areas include Konza junction to Salama road section, Kibwezi area, Salama-Sultan Hamud section, Emali-Simba market to Kibwezi, Mtito to Tsavo River stretch, Mlolongo, Small World Club and the junction to Namanga (Areas marked A-F in appendix 1).

Based on the traffic cause code classification used by the Kenya police, human factors contribute to (85percent), vehicle defects (5.1percent), road environment (2.9percent) and other factors (6.4percent) of the total accidents. (NRSCK, 2008). These statistics are worrying because road safety affects everyone whether directly or indirectly. It therefore becomes everybody's business. It also concerns everybody's road use behaviors, attitudes and technical standards. Road safety and insecurity are interwoven and much of what makes Kenyan roads unsafe are suspected to have their roots in criminal acts. It is on this basis that this study seeks to explore the reasons for inadequate road traffic safety on this important highway.

Problem Statement

Road traffic accidents are a major challenge to the country's economy and public wellbeing with more than 75percent of the traffic casualties being young and productive adults between 15 – 44 years (Nantalya et al 2009:118-124). Odero, Khayesi and Heda (2003: 53) observe that Kenya, with an average of 7 deaths

from the 35 crashes that occur each day, has one of the highest road fatality rates in relation to vehicle ownership in the world. They also add that nearly 3,000 people are killed on Kenyan roads annually. This translates to approximately 68 deaths per 1,000 registered vehicles, which is 30-40 times greater than in highly motorized countries.

Road traffic crashes are the third leading cause of death after Malaria and HIV/AIDS in Kenya and present major public health care costs. Kimani, Kibua and Masinde (2004:29) also echo the same view by noting that, 'Recent government statistics indicate that, on average, there are over 13,000 accidents annually involving more than 26,000 motor vehicles in Kenya. More than 3,000 people are killed through road accidents and, another more than 11,000 are injured annually. Out of all these reported accidents, passengers and pedestrians are the majority killed on intercity highways that traverse the rural settings with drivers reportedly being responsible for more than 50percent of road accidents and fatalities (Kenya Bureau of Statistics, Statistics Abstract, 2008).

The common causes of these accidents are given as speeding, dangerous overtaking and mechanical defects which are mainly human factors. The relative contribution of these factors has however remained unchanged over the years. Records from the Kenya Bureau of Statistics indicate that 61percent of these accidents occur during daytime, partly because of the large number of vehicles on the roads during this period. The vehicles involved in most accidents are mainly Lorries and passenger transport vehicles like buses, motor omnibuses, commuter taxis and pick-ups. They are often in use throughout the day and therefore cover substantial distances when compared to cars that are used for shorter and less frequent journeys. Among the most accident prone vehicles are the ones whose drivers are mandatorily required by law to undergo

licensing and registration by the Road Transport Department of the Kenya Revenue Authority. They are also supposed to have certificates of good conduct and to wear uniforms. The vehicles are supposed to be duly insured and undergo regular inspection by the Vehicle Inspection Unit of the Kenya Police.

The buses that ferry passengers for long distances like between Mombasa and Malaba or Kisumu are supposed to be regulated such that at designated stops, police and bus inspectors from the bus companies can check the distances covered by the drivers and expect them to take regular breaks. The commuter taxis and minibuses on one hand have been associated with chaotic operations that have often led to roadtraffic accidents (RTAs). The *matatu* operations in Kenya are associated with blatant disregard of traffic rules and regulations. In particular, *matatus* are known for indulging in speeding, overloading and haphazard dropping and picking of passengers in undesignated stages including roundabouts among other traffic violations (Aduwo, 1992, Shorter and Onyancha, 1997). This not only endangers the lives of the operators (crew) but also those of the passengers and other road users. In addition *matatus* operate without proper maintenance and hence lack essential gadgets that may minimize the involvement of the vehicles in road traffic accidents as well as protect the lives of passengers in the event of accidents (Mbatia et al 1998). Freight vehicles on the other hand are huge and do not give way to smaller vehicles and are also known to occasionally have defective warning signs thus also endangering the lives of other road users. In the event of a breakdown they are known to pose danger to other road users since they are left without any warning signs.

Legislative organs formulate laws with a hope that there will be someone else responsible to enforce them. In this case, there is the Traffic Act and other Acts that cover registration and licensing of vehicles, driving licenses road

licenses and vehicle insurance (laws of Kenya caps 403,404,405) There are also other laws like council by-laws all aimed at regulating traffic and ensuring the safety of road users. The Traffic Department of the Kenya Police is the body mandated to enforce all these and other laws that may be in use. Among the obligations of the traffic police are the regulation of traffic and prevention of accidents among other responsibilities. To do this, they carry out inspection on vehicles especially goods and passenger transport vehicles to ensure roadworthiness and speed checks for compliance of speed limits. Roadblocks are mounted on major roads to ensure that road users adhere to traffic laws and that violators are arrested and prosecuted. However, traffic rules continue to be violated right under the nose of the same traffic police. For example, section 42 of the Traffic Act limits public service vehicles speed to 80km/hour yet the police are unable to enforce this requirement (Chitere and Kibua, 2004). It would therefore be important to investigate why traffic regulations including speed limits are not properly enforced.

Despite the huge burden on the economy, road safety measures in place are ineffective, and enforcement is characterized by knee-jack crackdowns on motor vehicles following major road traffic accidents which only show how cosmetic the traffic law enforcement is. This view is also echoed in other studies, Chitere and Kibua (2004), Kimani et al (2004) and Odero et al, (2003) that raise suspicion that the traffic law enforcers could be engaging in corrupt activities that undermine road safety. These activities include the conduct of police officers on the roads such as selectively flagging down P.S.V.S only to release them shortly after. This is done even when they are carrying excess passengers or after involvement in outright offences which further raises a lot of suspicion on traffic law enforcement. These behaviours exhibited by traffic law enforcers come with a lot of consequences such as overloading of vehicles passengers and goods, use of defective vehicles

on the road, exceeding speed limits, failure to adhere to statutory provisions like driver and crew compliance and worse of all, lack of public confidence. The lack of public confidence on police officers means that the public cannot report to the police about traffic violations thus the problem continues to grow by the day.

This study therefore is based on the proposition that much of what contributes to the improper traffic law enforcement on the Kenya's National Highways are criminal behaviors, which then brings us to the following research question.

Research Question

What effects do the traffic law enforcement strategies on National highways in Kenya have on road safety on the Mombasa-Nairobi highway?

Research Objectives

The overall objective of this study was to analyze the effects of traffic law enforcement on road safety along the Mombasa-Nairobi highway. The specific objectives was:

1. To analyze the strategies of traffic law enforcement on the National Highways in Kenya.
2. To analyze the challenges to traffic law enforcement on Mombasa-Nairobi highway.

Scope and Limitations of the Study

While the wider literature review serves to guide the conceptualization of the study, the research is limited to the enforcement of traffic law along the Mombasa-Nairobi road. The trends of accidents indicate that more than 50percent of the traffic accidents occur on the Eastern segment of the highway which begins at Mlolongo all the way to Mtito Andei (NRSC, 2003). The study focused on relevant secondary data from related studies and draw on the information available in connection to the law enforcement strategies on this particular stretch of the Mombasa-Nairobi highway. The major interest was therefore be any information

available from the relevant authorities and the operators of long distance passenger transport.

LITERATURE REVIEW

Theoretical Framework

a) Social learning theory

According to this theory, behavior is acquired and sustained through adopting definitions favorable to illegal behavior through differential association with one's peers, through imitating such behavior by peers and through the positive reinforcement provided by rewards for such behavior (Akers 1998). Given the reciprocal relationships between these variables, the causal order between them is not determined (Akers 1998, Akers et al. 1979, Lanza-Kaduce et al. 1982).

This theory will be used to explain why the traffic law enforcers engage in corrupt exchange which is suspected by this study to be the reason for the ineffective traffic law enforcement. It will argue that being public officials, the decision to engage in corrupt behavior is primarily influenced by a personal definition of corruption and a perception of how widespread corrupt activities are (imitation). This explanation borrows from the social learning theory (Akers 1998) developed by sociologists to explain various sorts of deviant behavior.

b) The Rotten Apple Theory

The theory states that rotten apples are weak individuals who have slipped through the screening process or deviant individuals who continue their deviance in an environment that gives more opportunity. The basis of the rotten apple theory is a few morally weak individuals' presence corrupts everyone else. The rotten apple theory is most popular with police officers and administrators because it blames the whole affair on one highly unethical person, hence a bad apple. The traditional meaning is that one member can corrupt a group. Another meaning is when a person is accused of something wrong they are excused by the other members of same group as a 'bad' apple. The implication is that

the 'bad' apple has not affected the entire group. When confronted with allegations of police corruption for which there is supporting evidence, police agencies will generally claim that the problem identified is limited to a small number of corrupt officers who are quite unrepresentative of the wider standards exhibited by the organization.

c) Relevance of the Rotten Apple Theory

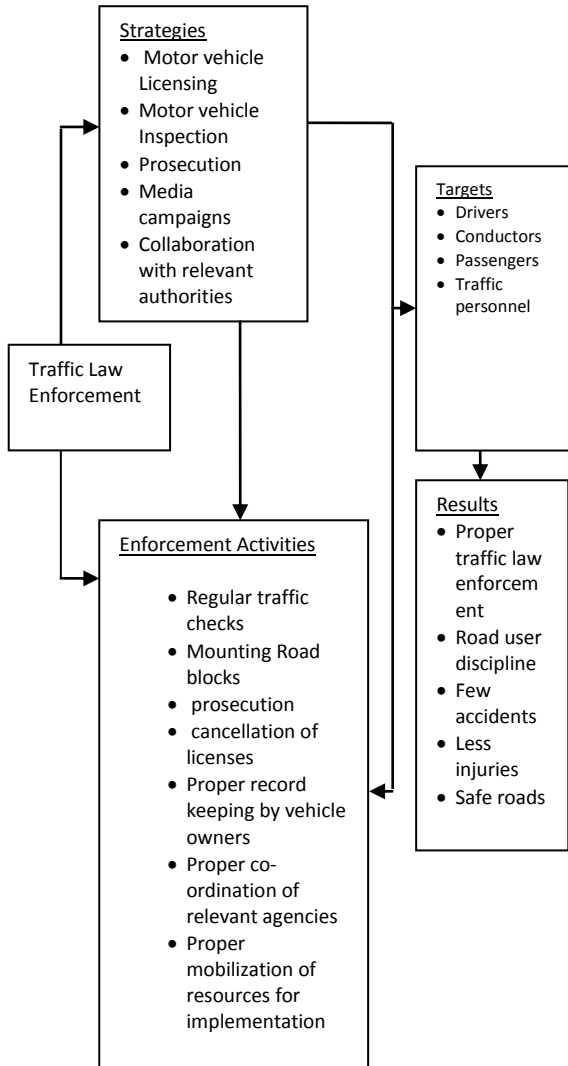
This theory helps us to understand the criminal behaviors of some law enforcement officers which prevent the proper and effective traffic law enforcement on the Kenyan National Highways and the Mombasa-Nairobi Highway. Merton's innovative typology is seen as an ideal explanation for the option traffic law enforcers take to cope with strains caused by societal expectations at the expense of road safety.

d) Broken window Theory

It is a criminological theory of the norm setting and signaling effects of urban disorder and vandalism on anti social behavior. The theory states that monitoring and maintaining urban environments in a well-ordered condition may prevent further vandalism as well as an escalation into more serious crime (James W and George K 1982).

The theoretical explanation for this theory is that a major factor in determining individual behavior is social norms, internalized rules about the appropriate way to act in a certain situation. The idea of the Broken Windows theory of policing is that if less serious crimes such as broken windows are overlooked, more serious crimes will follow. Cole (2000) says that the theory also works in reverse: If less serious crimes are committed by the police force and overlooked, more serious crime including corruption will follow.

Conceptual Framework



Operationalization of Variables

This is the process of strictly defining variables into measurable factors. The process defines fuzzy concepts and allows them to be measured empirically and quantitatively. It also sets down exact definitions of each variable, increasing the quality of results and improving the robustness of the design. The table below shows the relationship between variables in that Road safety on Kenya's National Highways is dependent on effective Traffic Law enforcement strategies.

METHODOLOGY

Study Design

This study adopted a survey research design. This means that data on a cross-section of

respondents was collected to represent a larger population and gathered in the shortest of time feasible, Singleton (1988:238). The survey targeted drivers and crew of long distance public service vehicles and Lorries, and the traffic enforcement officers along the Mombasa-Nairobi highway. Through survey, the study was to generate quantitative data. In addition, qualitative research was undertaken to compliment the survey

Site Description

The study was carried out along the Mombasa – Nairobi highway which covers 467 kilometers and falls under three Administrative provinces of Coast, Eastern and Nairobi.

The study focused on the impact of Traffic Law enforcement strategies on road safety along the said highway. Specifically, the target area was the Eastern Province segment which accounts for more than 50percent of the reported accidents along the highway and which covers the longest portion of the three segments. The area in question begins at Mlolongo all the way to Mtitu Andei.

Target Population/Sources of Data

The target population of this study was made up of Drivers, passenger transport crew and Traffic Police Officers.

Sampling Techniques and Sample Size

In this study, stratified sampling will be used. This is because the study population embraces a number of distinct categories and therefore the sampling frame can be organized a combination of purposive, convenience and random sampling techniques. The used purposive sampling to select long distance passenger vehicles because they are the ones that encounter police checks more and within the limits of the three administrative provinces. The selection of the termini for samples was also purposive to cover the oldest in the route like Coast bus and Buscar, the size of fleet like Chania shuttle, and also some of the recent ones like Mombasa Raha and within a manageable size.

Interviewing of drivers and crew was done at the Nairobi side of the highway because the information that could have been gained at the said end or the other is equivalent. This was done conveniently to cut down costs. The police officers were also randomly selected convenience at stations between the ranks of chief inspector and constable that were convenient on the highway and were interviewed in their offices or along the highway. A sampling frame of 60 drivers and crew from both from lorries and public service vehicles and 30 Traffic police officers between the ranks of Chief inspector and constable was used. Samples were randomly picked from these groups. All this was done ensuring that the respondents are conversant with the route to avoid sketchy work.

Methods of Data Collection

The study used two main methods of data collection. These are:

- (i) Structured interviews. This using questionnaires as the main method of data collection for the drivers, crew and traffic personnel of between and also for the engineers at Kenya National highways Authority.
- (ii) Observation especially to see the procedures that take place after a journey and also during police checks to see what happens in police checks.

Data Analysis Tools and Procedures

Field data was organized, sorted, cleaned and edited for clarity. The data was collected using questionnaires and organized in the following thematic components; Strategies, Enforcement activities, Targets and Behavior measures. The same was analyzed into quantitative and qualitative categories and presented using mean, percentages and frequency counts. This enabled the researcher to interpret and draw conclusions about the prevalence of accidents and the enforcement of traffic law along the

Mombasa-Nairobi highway and generally the Kenya's National highways.

DATA PRESENTATION AND ANALYSIS AND INTERPRETATION

Demographic characteristics

Table 1: Age category of Drivers and crew

From the findings out of the 60 respondents sampled in the study 43.33 percent were aged 36 years and above, 15 percent were aged between 31-35 years, 31.67 percent were aged between 25-30 years and only 10 percent were below 25 years. This implies that majority of those sampled were of mature age and possibly had the necessary experience required for both drivers and crew. The mandatory age for the drivers to be able to drive these categories of vehicles is twenty four years which a good number of these respondents had.

Period of service in the Transport sector

From the findings the data indicates that 70 percent of the respondents had over six years of experience in the transport sector an indication that they were experienced in terms of the exposure needed on the road. One would argue that they are well versed with all traffic rules and procedures. In addition they have experience dealing with the traffic law enforcers.

Period with current employer

The findings showed that the period in which each of the respondents spent with the current employer .The table shows that over 68.33 percent of the drivers and crew had been with their current employer for less than 4 years. This is a clear indication that there is high turnover of divers and crews in the transport industry. This may explain why road accidents are prevalent in Kenya. It may also imply that most drivers and crews are not known well by the owners of the long distance Vehicles. It can also be interpreted to mean that the turnover could be as a result of poor working conditions including long working hours.

Period of operation along Mombasa-Nairobi Highway

The findings showed that 51.67 percent of the respondents had worked along Mombasa Road for a period of less than five years, 33.33 percent had worked along the same road for between 6-10 years while 15 percent had worked for over ten years. This finding agrees with the findings of table 3 that turnover the public transport industry is high. It also reflects that drivers and crew quite often change routes.

Work schedule in Hours

The findings showed that the number of hours that the drivers and crew work each day. Under normal circumstances, the average working hours would be 8 hours a day but in this case more than 75 percent of the respondents work over the said eight hours stretching to extremes of 24 hours a day. This means that the respondent has no time to rest leading to fatigue which could be a major contribution of road traffic accidents.

Work schedule (monthly)

The findings showed that the work schedule for the drivers and crew monthly. The table indicates that 46.67 percent of the respondents worked 30 days each month with no off days, only 15 percent worked for 15 days whereas the rest were between the two. On average, if a person works throughout the month they will have worked an average of 21 days exclusive of the weekends and sometimes the public holidays. This schedule can be described as a major contributor of road accidents specifically attributed to fatigue.

Terms of employment

The findings showed that the terms of employment for the respondents. Out of the respondents interviewed, 39 percent of them were on permanent terms whereas 21 percent of the total was on temporary terms. This supports the earlier findings in tables 3 and 4 showing how high the turnover is in the industry. The high turnover could be as a result of poor terms, long working hours as indicated

in table 6 above and maybe low education levels.

Rules to be complied with before going to the road.

The findings showed that the important traffic rules that the drivers and crew felt were important before going to the road. 68 percent of the respondents believed that having a D/L is important. 31.67 percent felt that uniforms were important and 33.33 percent said that a passport was very important. Others like certificate of good conduct, p.s.v license, or formal education certificate was not thought to be important. This can be attributed to the fact that they believed they could buy their way on the road.

Instances in which compliance would not be adhered (roadworthiness)

The findings indicated that the responses of drivers and crew regarding instances in which they can do without compliance. 15 percent of the respondents said that there are no instances when a vehicle can be driven without compliance, 43.33 percent said that it is possible to drive even after windscreens crack while on transit and 41.67 said that vehicle can be driven while fitted with worn out tyres. This tells us that even with the knowledge of traffic rules and regulations, drivers and crew continue flouting the same knowingly. It further indicates that Traffic law enforcement in Kenya is very low.

Instances in which the vehicles would be driven without valid licenses

The findings clearly showed that there are instances when the long distance vehicle both for goods and passengers are used on the roads whilst unlicensed. However, the circumstances are acceptable.

Instances when vehicle can be used on the road with other compliance issues

The findings indicated that there are instances whereby the vehicles are on the road without

having complied with the requirements as stipulated in law. This reflects the weak Traffic law enforcement process. The authorities need to consider better ways of enforcing Traffic rules.

How often the police check compliance issues

The findings on how often the police check compliance issues. The majority of the respondents comprising of 61.67percent felt that the police checked compliance issues quite oftenly, 25percent thought it was at every check point while 8.33percent argued that they never checked at all. This shows that yes, the police are there on the roads and yes, they detect the compliance issues but the next challenge is their reaction to these issues of compliance on detection.

How easily the police detect compliance of rules

The findings showed that the responses of the drivers and crew on the question of how easily they thought the police were able to detect compliance issues. The responses indicate that 48.33percent felt that they always detected and 15percent at every check point.11.67percent felt that the police harassed them in order to get money and 13.33percent felt that they do not always detect. This table shows that the police to large extend noticed the failure to comply with the Traffic rules and only in few instances they did not detect.

How often are the vehicles serviced?

The findings shows that the responses given on the servicing of the vehicles.21.67 percent indicated that their vehicles were serviced after 10000 kilometres, 15 percent after 8000 kilometres, 5 percent after 6000 kilometers and 11.67 percent after 4000 kilometers. Out of the 60 respondents, 5 percent said they serviced the vehicles daily, 8.33 percent about three times a month and 5 percent once a month. This is a clear indication that over 40 percent of these vehicles are not well maintained since they are

not serviced regularly thus compromising road safety.

How often the respondent undergoes any retraining in connection to their job needs

The findings showed that the respondents undergo retraining in connection to their job description. Out of those sampled, 63.33 percent indicated that they had never undergone any kind of retraining, 23.33 percent had been retrained once, and between 4-5 times in a year there were 3.33 percent. This shows that the owners of the vehicles are not keen on upgrading the drivers and crew to be suited to the changing job demands a factor that can also be linked to the findings in table three and four.

Circumstances in which successive checkpoints would fail to address compliance issues with your vehicle

The findings showed that the circumstances under which successive police check points fail to address compliance issue in a vehicle.31.67 percent of the respondents said that after giving the police money, they do not bother checking anything, 28.33 percent said that they never fail to notice, 8.33 percent that when they fail to stop the police would not notice, 5 percent said that it all depended on how you talk to them and 20 percent said they do not always detect the same. The issue of money changing hands clearly indicates that it's a determinant of addressing or not addressing compliance issues by the traffic law enforcers.

Circumstances in which the traffic police would fail to notice compliance issues with your vehicle

The findings on the instances in which the police would fail to notice issues of compliance in a vehicle. This question got varied reasons for the failure but notable was the fact that more than 48percent were on bribery allegations or oversight from the police. 26.67percent said that once you give them money they don't

bother checking anything and 13.33 percent said that they were just after the money. 11.67 percent said that if they failed to stop the police would not notice anything, but 15 percent said that the police were very keen nowadays. 5 percent said that if the compliance issue was, inside the police would not notice 20 percent said that in many instances they saw differently whereas 3.33 percent said that the renewal of a driving license was not always detected. 5 percent also said that there were smaller offences that the police never noticed. This is a clear indication that there are many instances that the police flag down a motor vehicle for inspection but do not detect the offences. That can mean that there is a reason that would lead to its failure which is explained by the respondents on this particular table.

Experiences of encounters with police in connection with allegations of offences involving your vehicle

The responses given on personal experiences with the police by the respondents showed that; Out of the possible 60 respondents, 23.32 percent of them had been arrested for various offences and taken to court whereas the other 76.68 percent who also had been arrested for various offences bribed their way to freedom.

How drivers and their crews normally deal with the police demands and allegations of flouting traffic law

The representation of how the respondents normally deal with police officers when there are issues of compliance arising showed that; When confronted with the question, slightly more than 18 percent indicated that they are arrested and taken to court, 3.33 percent had never encountered them whereas the vast majority of more than 70 percent said that they negotiated or bribed the police.

Options for negotiation after an offence has been detected by the police

The responses given to the question of whether there are any options for negotiation with the police after they have detected a compliance issue in the vehicle showed that; A combination of the responses that point to corruption shows that more than 90 percent of the responses are positive that there are options for negotiation.

Responses by Traffic law enforcers (general)

Age category of the respondent

The findings showed that the age categories of the police officers sampled for the study. 105 of these officers were below the age of 25 years, 10% were between 25-30 years, 25% were between 31-35 years, 45% were between 36-40 years and 15% were above 40 years of age. This can be interpreted to mean that 85% of the officers deployed on traffic duties were above the age of 30 years of age. This is reasonably a mature age to make decisions.

Work experience

The findings showed that the number of years each of the officers performing traffic duties had worked in the same. 30% of the respondents had worked in the department between 1-3 years, 55% had worked between 4-9 years, 10% of them had worked between 10-14 years and 5% had worked for over 15 years. This can be interpreted to mean that 70% of the respondents had worked in the department for a reasonable time to be well versed with the Traffic rules and regulations and to have learnt the behaviors of the other stake holders of the industry.

Description of officer's day schedule

The responses of the respondents work schedule per day showed that; 60% of these respondents said they arrived at the office before 7.00am for deployment and proceeded to the various duty points where they worked up to around 5.00pm, 20% of them said they worked between 8-12 hours and 20% said that they reported to work at 6.00am, checked issues highlighted in the OB for their attention then proceeded to deploy personnel. All these officers' responses can be

interpreted to mean that they work more than eight hours per day which is higher than the average working hours.

Duties (if any) which officers perform and that which do not ordinarily fall within their work schedule

the findings showed that the duties which the Traffic personnel performed which would not ordinarily be within their work schedule. This can be interpreted to mean that despite the fact that they work over eight hours a day as in the above table 4 of doc 2, they also perform other duties that do not ordinarily fall within their work schedule. It can also mean that at some point their work stations are left without enough personnel.

Areas that are adequately equipped

the findings showed that the areas that the Traffic police officers are adequately equipped to perform their duties.75% of these respondents said that they were not adequately equipped in any area.

Areas experiencing inadequacy

The findings showed that the areas the Traffic officers said they were experiencing inadequacy. 50% of them said that they experienced shortage in all areas of their needs,10% said they lacked speed guns for detecting speed limit, and 40% of them said they lacked motor vehicles for attending to emergencies. These responses indicate that the Traffic police officers did not have the required equipment for performance of their duties.

Common traffic breaches that are detected among vehicles that ferry goods/passengers

The findings showed that the common Traffic offences that are detected by the respondents.25% of them carried excess passengers, 10% for speeding, 35%improper overtaking and 30% were driving motor vehicles fitted with worn out tyres. This can be interpreted to mean that 70% of the common Traffic breaches were those committed out of

the drivers and crew failure to comply while the other 30% were due to the failure by the owners of the motor vehicles to maintain their vehicles.

The kind of Traffic breaches considered serious

The findings showed that the kind of Traffic breaches that the respondents considered serious.40% of the respondents said that carrying excess passengers was a serious breach of traffic law,35% said that driving of unroadworthy motor vehicles and 25% said that speeding and careless overtaking was serious. This can be interpreted to mean that each officer goes to the field every day with different views from the other when it comes to the seriousness of the Traffic breaches. It can also mean that because of this reason they enforce the laws with different weight for each breach.

Category of road users that would deserve leniency after a breach of the Traffic law (opinion of the respondent).

the findings showed that the category of road users that the respondents think they deserve leniency in the event of a breach of Traffic law.80% of the respondents said that saloon cars deserved leniency more than others because they carried few passengers.20% of the respondents however said that no category of road users deserved leniency. This can be interpreted to mean that the greatest concern is on the vehicles that carry large numbers of passengers.

Conditions that determine decisions to launch crackdowns on the Highway

The findings showed that the conditions that determine whether to launch crackdowns or not. Out of the sampled respondents, 40% said that this was determined by public outcry, 35% said that it was when there were accidents, 35% said that it was when there were accidents and 25% said that it was highlights from the media that determined whether to launch crackdowns. This can be interpreted to mean that the Traffic law enforcers are not keen on preventing the

beaching of the law but are only pushed into doing so.

How to ensure that motorists adhere to speed limits

The findings showed that the respondents ensure that motorists adhere to speed limits. 35% of the respondents said that sometimes they talked to the motorists, 10% said they used speed guns to detect speed while 55% said that they arrest speeding motorists and take them to court.

What determine when to mount roadblocks/speed limits?

The responses on what determines when the officers mount roadblocks showed that; 80% of the respondents said that they mount roadblocks when there is need like public outcry or serious accidents and 10% said that this was determined on whether it was rush hour or not.

Areas in which the respondent encounters obstacles in performance of duty

The findings on the areas on which the respondent encounters obstacles in performance of duty showed that; 40% of those sampled said that members of public did not understand why they had to be delayed when the vehicles were detained for traffic breaches, 25% said when the supervisors were interested in cases, and 35% said they lacked transport.

Circumstances under which the respondents' decisions are overruled by their seniors

The finding showed that the circumstance s under which the respondent's decisions are overruled by their seniors. Out of those sampled 80% said that they are there when the junior officers arrest a motor vehicle they have an interest in, 10% said when there is public interest and 10% said under no circumstances. The responses can be interpreted to mean that the officers on the ground enforcing the Traffic law cannot be ale to effectively enforce the law due to interference from their seniors.

Retraining programmes available in the Department

The findings showed that the retraining programs available in the Traffic department. 60% of the sampled respondents said that there are refresher courses, 25% said that that there are public relations and first aid and 15% said that there were promotion courses. This can be interpreted to mean that there are no plenty of options in terms of courses that can suit the changing needs for officers.

Retraining programmes that the respondent has participated in

The findings showed that the programmes that the respondents have participated in. 40% of the respondents said they had not participated in any courses, 25% said they had participated in managerial courses, and 35% Traffic management courses. The above courses are basically for senior officers so this can be interpreted to mean that the junior officers who are mainly the ones performing the enforcement of laws, do not participate in these courses.

Description of officer's day schedule

The findings showed that the description of the work schedule for officers at the Athi River weighbridge. 60 percent of the respondents said that they reported to work early for deployment and proceeded to work for 8 hours. 30 percent of the respondents said that they worked for 12 hours but this depended on the availability of personnel and 10 percent of the said that they reported on duty from 1.00pm and proceeded to deploy personnel to border points and receiving those arriving from Mariakani weighbridge. This can be interpreted to mean that for most officers at the weighbridge the average working hours were relatively acceptable. For the 30 percent of the officers whose working seem to stretch up to 12 hours can be interpreted to mean that it's the time

they are on transit. The other 10 percent of the officers working long hours can mean that this is the officer in charge of the weighbridge since he has to constantly deploy and receive those arriving from other weighbridges.

Duties (if any) which officers perform and that which do not ordinarily fall within their work schedule

The findings showed that the respondents performed and which did not ordinarily fall within their work schedule. 40 percent of the respondents said that they attended to accidents along the highway before handing over to the concerned personnel, 20 percent said that they did not perform any other duties and 40 percent said that they attended all other duties that they may require their attention. This can be interpreted to mean that the officers at the weighbridge still have the obligation to attend to any accidents along the highway and later can hand over to the other Traffic personnel under whose jurisdiction the accidents occur.

Areas that are adequately equipped

The findings showed that the areas which the respondents felt that they were adequately equipped. 50 percent of them said that they were not adequately equipped in any way, 30 percent said that they were adequately equipped at the weighbridge. This can be interpreted to mean that the personnel at the weighbridge are relatively equipped to their satisfaction.

Areas experiencing inadequacy

The findings showed that the areas which the respondents said they were experiencing shortage/inadequacy of equipment. 20 percent of respondents said that they experienced personnel shortage; 70 percent said they experienced shortage of everything and 10 percent said they never experienced any shortage.

Areas experiencing inadequacy

The findings showed that the average working hours for the respondents. 50 percent of those sampled said they worked between eight and twelve hours, 20 percent said they worked eight hours, 10 percent said they worked twenty four hours and twenty percent said they worked for twelve hours. This can be translated to mean that they generally work throughout the day or when not actively on duty they are within reach of the station area.

Common Traffic breaches considered common among vehicles that carry goods.

The findings showed that the Traffic breaches considered as common by the respondent's sampled. 20 percent said they considered poor distribution of goods in the heavy commercial vehicles as a common breach while 80 percent said they considered overloading as more common. This can be interpreted to mean that the majority of those sampled shared the same opinion on the offences since poor distribution of goods inside vehicle can lead to the vehicle being seen as overloaded.

Common Traffic breaches detected at the weighbridge

The findings showed that common traffic breaches that are detected at the weighbridge. Out of the sampled respondents sampled, 20 percent said that they only checked for weight and eighty percent said that they detected overloading of goods. This can be interpreted to mean that as much as the weighbridge personnel are still traffic law enforcement officers, they only are concerned with the amount of load that is carried by the commercial vehicles and that they commonly detect that.

Category of goods transporters that complies best with traffic law.

The findings showed that the categories of goods transporters that best comply with traffic laws. This can be interpreted to mean that although different officers had different views, 50 percent agreed that the loose cargo transporters best complied with traffic laws. Those categories are however different

depending on the different officers thus showing how the application of that law is done differently.

Category of breaches considered as minor.

The findings showed that the category of goods transporters that complies least with traffic laws. 30 percent of the respondents said that they are all the same, 60 percent said that the single containers complied least and 10 percent said that vehicles carrying goods complied least. This can be translated to mean that the single container transporters for some reason seem to be the ones that flout the Traffic law most. This factor can also be translated to mean differences in the application of enforcement strategies.

Category of breaches considered as minor.

The findings showed that the category of transporters considered as minor. 40 percent of the respondents said that there was none of the traffic breaches was minor. 40 percent said that they considered poor distribution of goods to be a minor offence, 10 percent said worn out tyre and 10 percent said overtaking. This can be interpreted to mean that the officers do not share a standard thought on which offences are minor since 40 percent said that they did not consider any and a similar number said the poor distribution was minor. As in table 42 above, it also means that when it comes to application of the law, there will be divided opinion.

Category of transporters considered as serious

The findings showed that category of transporters considered as serious. 20 percent of the respondents said that they considered none to be more serious than others and 80 percent said that overloading was what they considered serious. This can be translated to mean that overloading of goods is considered as serious traffic breach at the weighbridge. The above tables 43 and 42 are a clear indication of differences in decision making concerning the categories of transporters considered to have

committed different levels of traffic breaches hence the expected confusion on the reaction towards them.

Procedures followed in dealing with minor Traffic breaches

The findings showed that the procedures that are followed in dealing with minor Traffic breaches. 50 percent of the respondents said that they were prosecuted, 30 percent said that they were warned and 20 percent said that they were subjected to rearrange the cargo then released. This can be interpreted to mean that at least 50 percent of the serious breaches were prosecuted whereas the other 50 percent were either released after being subjected to rearranging their cargo or otherwise. The percentage of 50 from a hundred percent meaning that half of the detected cases are not reflected anywhere meaning that the officers dispose them at will.

Procedures followed in dealing with serious Traffic breaches

The findings showed that the procedures that are followed in dealing with serious Traffic breaches. 70 percent of the respondents said that they were prosecuted and 30 percent said that they were subjected to rearrange the cargo then released. As supported by table 46 above, there is a good percentage that does not go to court bearing in mind that this is a very busy highway, it also means that this is quite a big number which again raises suspicion on how they are released. This echoes the representation on table 45 above.

Obstacles experienced in the course of duty.

The findings showed that the responses on the obstacles encountered by the respondents in the course of duty. 20 percent of them said that they lacked facilities to assist in the event of accidents. 20 percent said that they lacked vehicles for attending to emergencies, 30 percent said that vehicles failed to stop when required to do so, and 30 percent said that the weather conditions were their obstacle. This can

be generally interpreted to mean that the officers had some draw backs in their performance of duty which could be solved by providing them with the necessary equipment.

Circumstances under which decisions by Traffic law enforcers are overruled by seniors

The findings showed that circumstances under which their decisions on Traffic law are overruled by senior officers. 70 percent said none and 30 percent said when the senior officers have an interest in a particular case. This can be interpreted to mean that the weighbridge there is no much interference of decisions made by junior officers by their seniors but only in a few cases when they have an interest in a case.

Retraining programmes available in the department concerning area of operation

The findings showed that the retraining programmes that are available in the traffic department concerning the area of operation. 90 percent of the respondents said that there were refresher courses available in the department and 10 percent said that there were management courses available. It can be interpreted to mean that refresher courses available are there as an opportunity for the respondents to update themselves with the current needs of the department.

Retraining programmes in the department that the respondent has participated in

The findings showed that the retraining programmes in the department that the respondent has participated in. 10 percent of them said that they had participated in managerial courses, 20 percent said that they had participated in constable refresher. This can be interpreted to mean that there is a mixture of those who have attended beneficial courses in relation to their jobs and that could also mean a semblance in application of the Traffic laws. It can also mean that a reasonable number did not participate in any retraining

programmes yet they were expected to perform in an equivalent capacity.

Rules that the drivers and crew need to adhere to before going to the road

The findings showed that number of respondents who are aware of what they are required to have before going to the road. 100 percent of the respondents were well aware of the requirements an interpretation that there should not be any excuse for failure to comply with the Traffic laws.

SUMMARY OF RESEARCH FINDINGS

The study found out that the strategies used by the Traffic law enforcers on the Mombasa-Nairobi highway include: Motor vehicle licensing done by the Kenya Revenue Authority, Motor vehicle inspection which is done by the motor vehicle inspection unit of the Traffic Department, Prosecution of traffic offenders done by the traffic law enforcement officers and creation of public awareness by the traffic police in collaboration with relevant authorities.

This study also established that the Traffic law enforcement officers encounter different challenges that may hinder their effective law enforcement. These challenges include lack of equipment, personnel weather conditions, lack of retraining in relevant field and even long working hours and interference by seniors. Drivers and crew also have their share of challenges which are long working hours, and failure to be retrained in connection to job performance. The roadworthiness of the vehicle was greatly compromised in crucial areas like tyres and service.

The effects of Traffic law enforcement strategies on road safety along the Mombasa-Nairobi highway were found to be ineffective in several ways because inspection is done through random flagging down of vehicles and as such signifies a lot of bias, the media campaigns are also ineffective since the Road safety campaigns

are done occasionally and not covering a reasonable number of the intended people.

The enforcement activities of the police on regular Traffic checks and mounting of road blocks or prosecutions have not been effective. There is no regularity on enforcement because crackdown are always reactive rather than proactive. This is despite the heavy police presence not withstanding those deployed because of the staffing, and the drivers are hardly inspected despite being stopped.

Conclusions

This study establishes that Traffic law enforcement is a critical factor in ensuring road safety and therefore preventing accidents and injuries. It also shows that the Traffic law enforcement strategies along the Mombasa-Nairobi Highway are insufficient to insure against frequent accidents and threat to road safety along the highway.

The deficiencies in enforcement include;

The lack of adequate equipment and personnel, unfavorable weather conditions, lack of specialized skills, lack of retraining programmes and the interference by the senior officers. Some of the road users therefore take advantage of this inefficiency by giving bribes to the Traffic law enforcers to ignore the laws and regulations and in the process they pose a great threat. These deficiencies should be the first step to be addressed to increasing efficiency and effectiveness of Traffic law and ensuing road safety in Kenya.

This study therefore concludes that, corruption is rampant on the Kenya's National Highways and specifically along the Mombasa-Nairobi highway leading to the ever increasing accidents it therefore means that the factors that undermine law enforcement outweigh the factors that support it.

Recommendations

Based on the foregoing observations, this study offers the following recommendations:

The traffic department should deploy appropriate enforcement Traffic law strategies like logging of licenses or withdrawal of the same for those who overload, introduce loading locks to avoid overloading, and using closed circuit television on the highway for the purposes of detection of speed and other offences ad automated machines for ticketing.

The government should also get a way of imposing instant fines which will ensure that those engaged in constant flouting of Traffic law do not have a chance of getting their way out to continue the same behavior.

Drivers and crew need to undergo frequent retraining programmes to update their skills and prepare them for the changing needs of society and those of the transport sector.

Police officers with the responsibility of Traffic law enforcement need to be regularly retrained and well equipped to ensure that they performed their duties effectively. The officers also need to be trained on relevant skills especially to enable them to carry out inspection of motor vehicles on their own without having to rely on ministry of works officials as at the weighbridges. Apart from the trainings, the necessary policies and procedures that are required to support change also need to be addressed.

It is also important to continuously sensitize the public on fighting corruption and the importance of road safety.

Areas of the further research

Given the various challenges encountered in the enforcement of the Traffic law, the study suggests that further research on the best alternative way of enforcing Traffic laws in Kenya and,

Secondly the attitudes of the passengers should be studied to ascertain why they seem to be in agreement with the behaviors of the traffic policing agencies, drivers and crew.

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