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Working Paper 545

**Institute for
Development
Studies**

UNIVERSITY OF NAIROBI

**Implementing Road Transport Safety
Measures in Kenya**
Policy Issues and Challenges

**Patrick O. Asingo
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Policy Issues and Challenges**

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Abbreviations

CRCs	Constituency Roads Committees
DRBs	District Roads Boards
DTU	Driving Test Unit
GDP	Gross Domestic Product
GNP	Gross National Product
GOK	Government of Kenya
IHT	Institute of Highways and Transportation
IPAR	Institute of Policy Analysis and Research
KRB	Kenya Roads Board
MOA	Matatu Owners Associations
MVIC	Motor Vehicle Inspection Center
MVRU	Motor Vehicle Registration Unit
NMITs	Non-Motorized and Intermediate Modes of Transport
NRAS	National Road Accident Summaries
PSV	Public Service Vehicle
RARP	Rural Access Roads Programme
RSU	Road Safety Unit
SPRP	Special Purpose Roads Programme
TLB	Transport Licensing Board
TTCA	Transit Transport Coordination Authority
UK	United Kingdom
WHO	World Health Organization

Section 1

Introduction

This paper examines the implementation challenges and emerging policy issues relating to the new road safety measures taken by the Kenya Government through Legal Notice No. 161 of October 2003. The legal notice emphasize reduced speeds through use of speed governors, passenger safety through compulsory use of safety belts, and reduced passenger capacity for more comfort in all PSV vehicles. The paper begins with an introduction which provides the context of the study, overview of road transport, theoretical framework, and methodology. The second section discusses road transport and road safety in Kenya, while the third section focuses on road safety issues in Kenya. The fourth section provides an analysis of the legal notice followed by concluding remarks and recommendations

Study Context

The paper is one of the outputs of the Institute for Development Studies (IDS) research project on 'Research and Technical Support to Renewed Road Safety Measures' in Kenya, funded by the FIA Foundation. The primary goal of the project is to provide research and technical support to the renewed road safety measures with three specific objectives, namely: monitoring, evaluating and analyzing the implementation of road safety measures in Kenya; offering technical guidance to government agencies charged with the implementation of new road safety measures; and building and strengthening a broad national coalition and partnership for implementation of the renewed measures.

Overview of Road Transport

Road transport crashes ranks high among the greatest development challenges currently facing many countries of the world. The frequency, magnitude and impact of global road carnage are generally very worrying. For example, during the 1990s, the Asian and Pacific region alone registered over 2 million annual road accident fatalities and about 17 million road accident-induced physical disabilities. It is estimated that the global economy loses up to US \$ 500 billion annually through road crashes. 20 per cent of this loss, which is about US \$ 100 billion, occur in the developing and transition countries of Eastern Europe. Yet the funding for research and development in road safety is just tens of millions of dollars. In essence therefore, the annual loss incurred by the developing countries as a result of road transport crashes, far exceeds the total annual aid and grants received by these countries (Ndungu *et al* 2004; Vinand & Muli-Musime, 2001; Razzak, 1998).

A recent joint World Health Organization (WHO) and World Bank report indicate that road crashes kill 1.2 million people annually and injure 50 million more. The majority of these people are in the developing countries. Globally, road crashes are the second cause of deaths for people aged between 15-29, and the third cause of deaths for those falling between ages 30 - 44. Infact, road crashes are currently the ninth major cause of deaths and disabilities world wide and are projected to rise by 65 per cent by the year 2020, placing it third after heart diseases and depression, but behind current major killers like Malaria, Tuberculosis and HIV/Aids. Although motor-vehicle-related crashes in the developed world are projected to reduce by 30 per cent between the periods 2000 - 2020, it is expected to increase by 80 per cent in the developing world. Ironically, the developing world has only 20 per cent of

vehicles in the world, but cause up to 80 per cent of vehicle related deaths (WHO & World Bank, 2004).

While these global figures paint a gloomy picture of the developing countries in as far as road crashes are concerned, they conceal the realities of country-specific road carnage. Kenya for example, has experienced phenomenal increase in road crashes over the years. Between 1981-1990, road crashes in Kenya increased at an average rate of 4 per cent p.a from 7,250 to 10,308 while road accident fatalities increased at an average rate of 0.9 per cent p.a from 1,720 to 1856 people. In 1990 alone, Kenya had a casualty per road accident of 1.84. In the same year, there were 29 road crashes per 1,000 motor vehicles operating in the country and 53 fatalities per 10,000 motor vehicles. Between 1990 and 1992, fatal road crashes increased phenomenally from 17 per cent in 1990 to 21 per cent in 1992. Presently, Kenya witnesses an average of 13,000 crashes annually, out of which 3,000 lives are lost while more than 11,000 injuries are sustained annually from road crashes. In 2002 alone, 13,428 crashes occurred, involving 28,774 people, of which, 2,782 or 10 per cent lost their lives, and 10,912 or 38 per cent sustained serious injuries, while 15,000 or 52 per cent were slightly injured. These figures rank road crashes as the third leading cause of deaths in Kenya after malaria and HIV/AIDS (TTCA, 1994; GOK 1994; GOK, 2003; Odero, *et al*, 2003).

Over the years, the annual cost of road crashes to the Kenyan economy has increased significantly. While it was estimated that road crashes cost the Kenyan economy Kshs. 100 Million or 1.7 per cent of the GNP in 1981, by 1997, it was estimated that, 26 per cent to 52 per cent of the road transport sector earnings were lost due to road crashes. Today, the annual average cost of road crashes to Kenya's economy is Kshs. 14 billion or 5 per cent of the GDP. This far exceeds the annual average cost of road crashes to the economies of Third World countries, which oscillates between 1-2 per cent of their GDP (GOK, 2004).

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Interestingly, road transport is currently the most widely used transport mode in Kenya, handling close to 80 per cent of both passenger and cargo transportation. Road transport eases mobility of the factors of production, creates direct and indirect employment, provides income to the government and to the road transport service providers, and facilitates linkages within the economy. During the period between 1998 and 2002, for example, the average contribution of the transport sector to Kenya's economy stood at 8.5 per cent of the GDP, of which the road transport sub-sector had the lion's share of 2.9 per cent of the GDP. It is projected that between 2003 and 2007, the transport sector will grow at an annual rate of 6.26 per cent (Ikiara 2005). From the surface of it, this looks meticulous. However, when one considers the fact that road transport crashes cost Kenya 5 per cent of her GDP, it becomes clear that road transport is a net robber of the national economy to the tune of 2.1 per cent of the GDP (GOK, 2001:1).

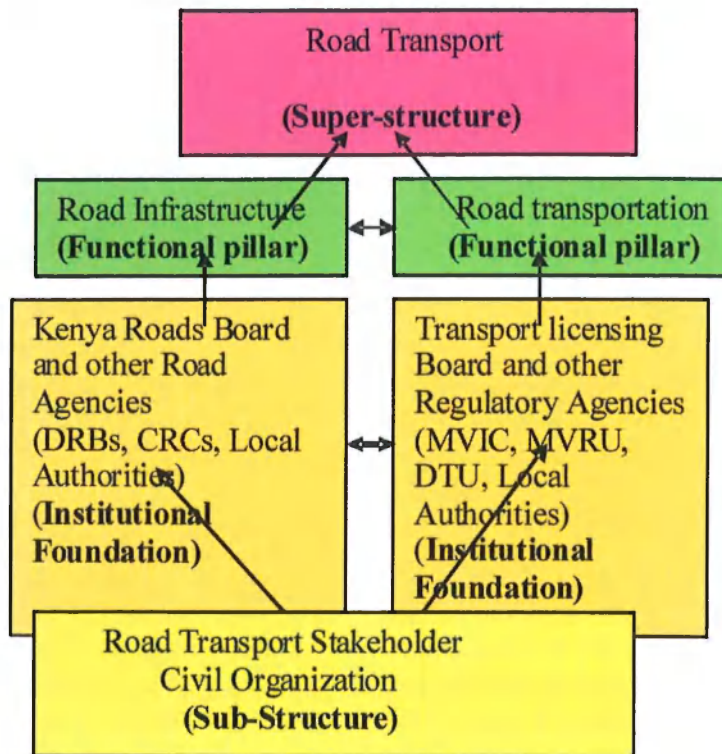
Given the importance of road transport in the social, economic and political life of Kenya as a nation, it is hardly surprising that the government has taken several policy measures in order to address the problem of road crashes. These measures have resulted from the realization that a functioning low cost road transport service supported by a good road infrastructure, as well as informed and disciplined road users, is crucial for economic development and poverty alleviation. It is largely because of this that Kenya's Economic Recovery Strategy for Wealth and Employment Creation for 2003-2007 regards transport as the third pillar of the country's economic recovery efforts.

Against this background, this study examines implementation challenges and emerging concerns with regard to the latest road transport safety policy interventions taken by the Kenya government through Legal Notice No. 161 of October 2003, and subsequent amendments to the Notice. The Notice emphasizes reduced speeds through use of speed governors, passenger safety through compulsory use of safety belts, and regulated load and passenger capacity for more comfort in all PSV vehicles. The paper examines the extent to which these measures have been successful in reducing road carnage in Kenya.

Theoretical Framework

Transport network should be understood using an integrated-systems approach with structural-functional linkages as part of the larger system. The sector is important for economic development, due to its forward and backward linkages with all sectors of the economy. In both urban and rural areas, transport facilitates access to places, economic sectors and related services, including agricultural inputs. At a sub system level, road transport is viewed as a super-structure supported by two functional pillars, namely road infrastructure and road transportation. The two pillars have a common objective of promoting safe and efficient road transport. Each of them is built on some institutional foundation. The pillars should be strong, with adequate structural and functional linkages between them. The efficiency and safety of road transport depends on the strength of its supportive functional pillars, which in turn depend on the strength of their institutional foundations. The strength of each of the institutional foundations also depends on the extent to which they embrace stakeholder involvement and participation in their activities. This theoretical conception of road transport and safety is shown in figure 1.

Figure 1: The Structural-Functional Linkages in Kenya's Road Transport Sector



Source: Asingo, 2004; *The Institutional and Organizational Structure of Public Road Transport in Kenya* p. 5

In order for the public road transport to efficiently perform, the institutional and organisational structures have to be efficient. Each component has to play its role and meaningfully relate to the other components.

Methodology

This study utilized both primary and secondary data. Primary data was obtained largely from baseline surveys conducted in Nairobi. A series of discussions were held with key stakeholders in the transport sector including the Permanent Secretary and chief officers of the Ministry of Transport; the Traffic Police Commandant; officials of the Transport Licensing Board, Motor Vehicle Inspection Unit, Driving Test Unit and Kenya Roads Board; the City Council of Nairobi; *Matatu* Owners Association and *Matatu* Welfare Association; key actors in the insurance industry; as well as *matatu* drivers and commuters among others. The issues teased out during these initial discussions were later concretized during a stakeholder workshop organized by the Institute for Development Studies, University of Nairobi, in collaboration with the Ministry of Transport (GOK), at the Nairobi Safari Club Hotel on 27th January 2005. Secondary data on the other hand was obtained from scholarly publications and relevant government documents.

The data obtained both from primary and secondary sources have been analyzed largely qualitatively, and presented in a descriptive manner. Statistical data have been used only to the extent that they demonstrate the magnitude of the problem of road crashes. In a nutshell, the findings of this study are only preliminary, and will be further refined in the next phase of the study which will entail more rigorous and in depth survey.

Section 2

Understanding Road Transport and Road Safety in Kenya

Road Infrastructure Development in Kenya

Serious development of road infrastructure in Kenya began during the colonial period, soon after the completion of the Kenya-Uganda railways. Initially, roads served mainly to link the settler areas with the railway line for easy transportation of agricultural produce from the white highlands to the coast for shipment to Europe. At independence in 1963, Kenya had a classified road infrastructure network of 41,800kms, of which 1,811kms was tarmacked. The rest were earth and gravel standard roads. (GOK, 2001).

Road infrastructure network witnessed tremendous expansion during the first two decades of independence, through government initiatives like the Special Purpose Roads Programme (SPRP) and the Rural Access Roads Programme (RARP). As a result, by 1980 the entire classified road infrastructure network had increased by 51 per cent from 41,800kms to 63,291kms, while the tarmacked road network increased by 393 per cent from 1,811kms to 8,937kms. Thus, the percentage of tarmacked road network grew from 4.3 per cent to 14.1 of the entire classified road network between 1963 and 1980 (GOK, 2001).

By the 1980s, most of the road infrastructure constructed earlier began to deteriorate rapidly. Ironically, rather than undertaking repairs and maintenance of the existing road network, the government's road infrastructure policy seemed to favor construction of new roads. It was only in the 1990s

when the government made a policy shift towards repair and maintenance of existing road network, with limited new infrastructure construction. Currently, Kenya's road infrastructure network is estimated at 150,600 Kms, of which 63,291kms is classified while the rest is unclassified.

Safety Concerns in Kenya's Road Transport

Legal and institutional framework for road safety in Kenya

Until 1979, road safety was primarily the concern of the Kenya police. In response to the increase in road transport crashes, the traffic police training was started at the Kenya Police College in 1971. In 1974, the traffic branch of the Kenya police was set up. In the late 1970s, some organizations began to emerge to work with the police on road transport safety. These include Safe Driver Awards and the Good Samaritans Awards. In January 1975, the ministry of Home Affairs set up a Road Safety Council with representatives from various ministries and organizations. The council however did not last long and was wound up after only one meeting. After the council's dissolution, the various road safety initiatives remained largely uncoordinated. Around the same time, the Kenya Police in partnership with the Voice of Kenya (today known as Kenya Broadcasting Corporation) radio began media campaigns to sensitize the public on road safety.

By 1979, some few districts like Nakuru and Kericho had set up District Road Traffic Committees to deal with road traffic issues. Some of the road safety problems noted in the 1970s include absence of pedestrian and bicycle lanes, poor road infrastructure and road furniture. The persistence of road crashes in the 1970s led the Kenya government and the World Bank to agree to include some equipment for police

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enforcement as part of the first highway sector loan during the 1970/1980 fiscal year. Similarly, in May 1979, the governments of Kenya and Finland initiated a joint road safety Programme that went on until 1988. It began with an initial study phase, which focused on dangerous road locations on rural roads in Kenya; differentiated speed limit system for Kenyan main roads; and road traffic crashes in Kenya. The recommendations of the latter study led to the formation of the National Road Safety Council (NRSC), which became an umbrella organization that coordinates all road safety efforts in the country. NRSC initially had 20 members, drawn mainly from the representatives of the stakeholder organizations. The members were eventually reduced to 15. In addition, Provincial Road Safety Councils were proposed to coordinate all road safety activities at the local level.

In 1981, the Road Safety Unit (RSU) was established as a secretariat for the NRSC. It was located within the Planning and Coordination Unit of the Roads Department within the ministry of Transport and Communication. Besides secretarial work, the mandate of the RSU included technical assistance to the NRSC, proposing and actively undertaking road safety work, undertaking studies and analysis of road crashes as well as advising on road design, maintenance work and general town planning. In August 1983, the NRSC in conjunction with the ministry of local government set up road safety committees in large urban centers. By May 1985, Nakuru, Mombasa, Kericho, Kakamega, Kitale, Meru and Eldoret had set up Safety Committees. Soon after, the Roads Department was transferred from the ministry of transport and communications to that of Public Works and Housing, and hence RSU became part of the Ministry of Public Works and Housing while NRSC remained in the Ministry of Transport and Communications.

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Coordination of road safety in the 1970s and 1980s thus became difficult due to a fragmentation of the existing institutional and legal framework. While the ministry of transport and communications was responsible for policy formulation, and overseeing the affairs of the NRSC, the Ministry of Public Works and Housing was responsible for planning, design, supervision, construction and maintenance of the road infrastructure network. At the same time, the responsibility for determining land use in the urban areas laid with the Physical Planning Department within the ministry of Lands and Settlement.

Related to this, the various sections of the law on traffic fell under different ministries without proper coordination. For example, while enforcement of the Public Roads and Roads of Access Act was seen as the primary concern of the Ministry of Public Works and Housing which housed the roads department, the TLB was under the Ministry of Power and Communications. At the same time sections of the Traffic Act were seen to be under the Registrar of Motor Vehicles within the ministry of Power and Communications. This fragmentation made it difficult to harmonize and coordinate road safety activities.

NRSC however, fizzled out due to several problems. First, NRSC was set up by a Gazette Notice rather than an Act of Parliament, had no central government budgetary allocations and hence could not be funded by the exchequer. It therefore depended largely on donor funding which eventually dried out. Secondly, it lacked institutional life of its own, was staffed by civil servants, lacked stakeholder representation, and depended on individual wit of the existing staff. Some of the committed civil servants retired, while others were transferred without replacement to departments that had

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nothing to do with road safety. In a sense there was no political good will to sustain it, leading to its regrettable demise.

The RSU on its part has remained active and is still housed by the Ministry of Roads and Public Works. It compiles and stores road accident data identifies black spot sections of the road network and suggests remedial measures. Its focus is more on what rather than who causes road crashes. It also undertakes countrywide public road safety awareness campaigns and is in charge of the children's road traffic parks countrywide. As part of its efforts to improve on road safety, it has currently adopted road safety audit to ensure that newly designed roads incorporate safety concerns.

Evidently therefore, the policy, legal and institutional framework for road safety in Kenya has been very weak. Besides the legal provisions scattered in various Acts of Parliament, there has been neither a coherent policy nor a coordinated safety institutional framework. Even the existing safety legislation often faces implementation hurdles (Asingo, 2004).

Investigation and reporting of road crashes in Kenya

The Kenya police are responsible for investigating all road crashes, collecting accident data, filing road transport accident reports and sending copies of the reports (P41 Forms) to relevant authorities. A Quarterly Accident Summary Report is prepared by individual police stations and sent to police headquarters, which uses them to produce the National Road Accident Summaries (NRAS). The police take notes from the accident scene and use them to fill in the Accident Report Form when they go back to the police station.

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There are at least three problems with the existing road accident data collection format. First, the police lack basic data collection and compilation equipment like cameras and computers and this compromises the accuracy of their reports, which in any case are compiled miles from the scene, sometimes several hours after the accident. Secondly, it is only the Traffic Police headquarters that receive copies of the duly filled in P41 Forms basically for prosecution, insurance compensation purposes and for records. This means that the relevant government agencies dealing with road safety, including RSU have no direct access to data on road crashes, and therefore rely on police records. In essence, data collected is not used for purposes of solving the problem of road safety. Thirdly, there are several crashes that remain unreported, either because they occur in the absence of the police or the police leave the drivers of the involved vehicles to sort them out on their own. These problems are compounded by the fact that, "the existing training programme for the police in Kenya relative to traffic safety matters are inadequate in meeting the increasing needs for road safety enforcement" (ITCA, 1994:124).

According to the Institution of Highways and Transportation (1997), investigations into road crashes should proceed in five phases – identification of problems that are related to road transport crashes; diagnosis of their causes and situation; selection of treatment; design and implementation of remedy measures; and evaluation of the performance of the selected remedy measures. In addition, the Institution identifies four approaches to road accident response: -

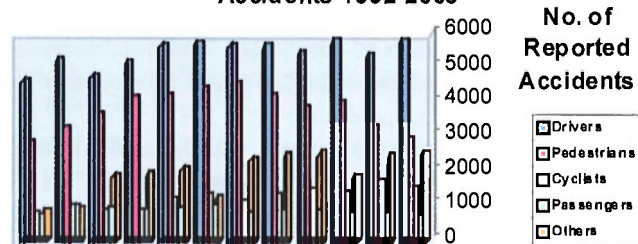
- (i) **Single Site Action**, which involves investigating specific sites or short lengths of a road, which are considered as accident black spots;

- (i) **Mass Action** which involves the application of a particular type of remedy to locations having common accident factors;
- (ii) **Route Action**, which involves the use of a particular remedy to a length of road having above average accident rates for that particular class of road; and
- (iii) **Area Action** which is the aggregate of the remedial measures over an area

Road Crashes in Kenya: Causes¹ and Casualties

Serious effort at addressing road safety must proceed from two related questions. First, what causes road crashes? Secondly, who are the greatest casualties of road crashes? With regard to the first question, available data show that for a long time, motor vehicle drivers have been the greatest cause of road crashes in Kenya, followed by pedestrians, cyclists and passengers respectively as expressed in Figure 2.

Figure 2: Persons Responsible for Reported Road Accidents 1992-2003



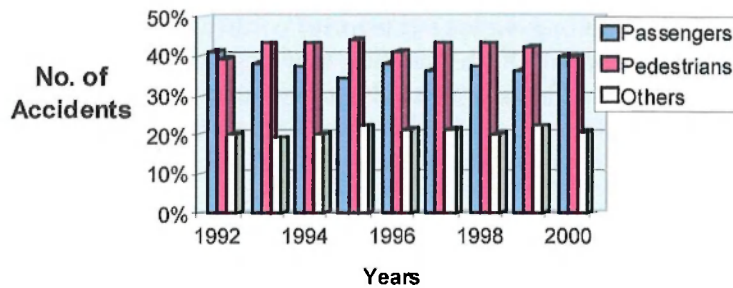
Source: Statistical Abstracts 2003

¹ The concept 'causes' is used by the Kenya police in recording road crashes, without factoring in the issue of attribution. In most cases when crash occurs, there can be more than one cause, including the road infrastructure.

However, this raises more questions about what makes drivers, pedestrians, cyclists and passengers to cause road crashes in the magnitude and proportions in which they do. This will be dealt with later.

In terms of accident casualties, available data shows that pedestrians and passengers are the two greatest casualties. By 1992, passengers were the greatest road accident casualties in Kenya, but in 1993 pedestrians overtook them and maintained the lead till 2000.

Figure 3: Fatal Road Accident Casualties in Kenya 1992-2000



Source: World Bank Report No. 26444-KE Vol. 2, 2003

Drivers and road transport crashes

In a study of road crashes in Leeds, United Kingdom, Carten, *et al* (1989) observed that the main problem among drivers which lead to crashes include failure to give way, lack of anticipation, loss of control and improper overtaking. They noted that the underlying reason for all this is basically over speeding, not keeping safe distance, obstruction by parked vehicles, overloading, slippery roads, poor visibility and wrong judgments.

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The study established that these problems are equally serious in Kenya. Indeed, Kenyan drivers cause crashes largely because of behavioral and attitudinal problems. These problems include failure of drivers to give way to fellow drivers and other road users and improper overtaking; lack of anticipation, wrong judgments and loss of control while driving; not keeping safe distance and making unwarranted emergency brakes; careless driving, over speeding and violation of speed limits; influence of toxic substance; Stress and fatigue due to long hours of work in the quest to meet daily collection targets set for them by PSV vehicle owners; failure to detect mechanical defaults in their vehicles; and obstructive parking. Related to this, there is suspicion and mistrust among various categories of drivers. While *matatu* drivers are viewed as crooks, they regard other drivers as amateurs and always try to show them that they have superior driving skills. Generally, these behavioral and attitudinal problems are more acute among PSV drivers.

In addition, there is also the problem of driver training, examination and certification in Kenya. There is a weak legal framework for driver training and certification. According to the Kenyan legislation, prospective motor vehicle drivers can receive driving training from any registered driving school or from any private individual who holds a driving license for at least the class for which one wants to be trained as a driver. This means that any one holding a driving license can train others how to drive. Further more, there is neither a standard curriculum nor set textbooks for drivers. There is also no requirement for proof of good health before one enrolls for driving training. Until 1972, the Driving Test Unit (DTU), which controls the driving schools, was staffed by civilians, but today it is under the traffic police. In fact it was the Finnish road safety project, which generated awareness on the

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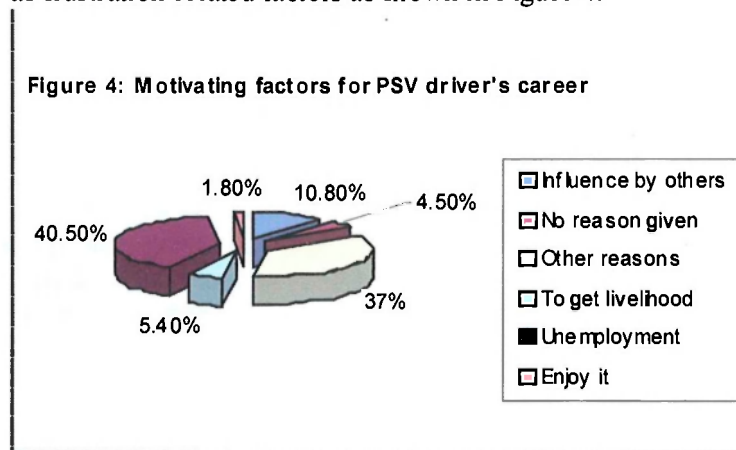
need for improved driver training and testing. Today, the head of DTU is a Senior Superintendent of Police and is supposed to oversee the control and supervision of all driving schools as well as the examination and certification of drivers.

To become a Public Service Vehicle driver in Kenya, the law requires one to be aged at least 24 years; possess at least class **C** driving license for those driving mini-buses with tare weight exceeding 1,820Kgs and class **E** license for those driving smaller vehicles with tare weight below 1,820Kgs such as Nissans; have at least four years driving experience since obtaining the driving license; and possess a certificate of good conduct from the Kenya police to show that they have no criminal record. There is also provision that those drivers who acquired their driving licenses four or more years earlier but do not have driving experience can be retested before being issued with the PSV certificate.

Chitere (2004) has established that more often the prospective drivers begin as touts and learn from those who already know how to drive. They then go to driving schools mainly to book driving test. Furthermore, drivers tend to work for long hours, in some cases up to 13 hours a day for seven days a week. They are also paid low wages on daily basis, lack permanent employment contracts, rarely stay with one employer for long, and operate on daily collection targets set for them by vehicle owners. Given casual manner in which driver training and certification is done, it is not surprising that drivers are the major cause of road crashes in Kenya as already shown in figure 2.

With respect to the factors that motivate people into becoming drivers, Chitere (2004) established that only 1.8 per cent of the drivers chose to be drivers because they enjoy it while the

majority are driven into it by what we have chosen to refer to as frustration-related factors as shown in Figure 4.



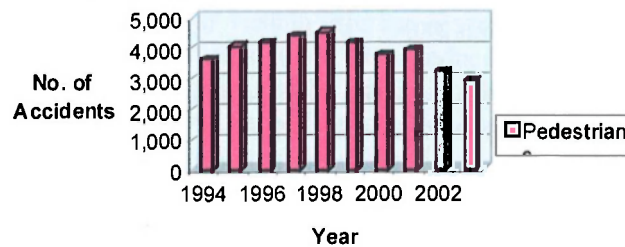
Source: Author's Reconfiguration of Data in Chitere (2004)

The capacity and competence of the driving schools has also been a major concern. Most driving schools are not properly equipped and staffed to provide effective training. At the same time, driver testing also lacks in rigor and can easily be passed even by a very weak candidate. This is partly because there are very few driving test examiners. As a result, one examiner handles too many candidates in one day. In addition, the conditions in most of the driving schools are appalling. To begin with, the driving instructors are very poorly remunerated, have low morale and keep asking for handouts from the trainees who have already paid fees to the school. It is those who are able to pay the instructors extra money that receives some semblance of good training. Due to low pay, the schools are unlikely to attract and retain good instructors. Most graduates of such schools learn how to drive on the road long after completing their course, and cause an average of about three road crashes in dense traffic zones like the city of Nairobi during their first month of driving.

Pedestrians and road transport crashes in Kenya

Currently, pedestrians are the second greatest single cause of road crashes in Kenya, after drivers. IHT (1997) observes that pedestrians are the most vulnerable road users, making over half of the deaths in the urban areas. In Kenya, pedestrians generally cause crashes due to ignorance of road traffic signs and signals, influence of alcohol and other toxic substances, wrong judgments, and general lack of anticipation.

Figure 5: Number of Road Accidents Caused by Pedestrians in Kenya 1994-2003

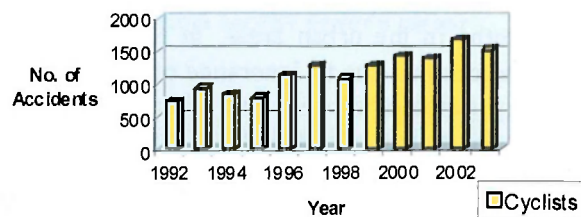


Source: Statistical Abstracts 2003

Cyclists and road transport crashes in Kenya

As shown in Figure 2 and 6, cyclists are the third largest cause of road crashes in Kenya after drivers (Figure 5) and pedestrians respectively. They cause crashes mainly because of ignorance of road traffic signs and signals. Cyclists are also victims of poor road infrastructure design, which ignores their presence on the road. Ironically, the government licenses motorcycles for example, while there are no provisions for cyclist lanes or parking bays. Infact, both motorcyclists and pedal cyclists, have to struggle with motor vehicle drivers for road space. Yet, it has been observed that, "cycle-lanes help to alert drivers to the presence of cyclists and give cyclists greater confidence" (IHT, 1997:320).

Figure 6: Number of Road Accidents Caused by Cyclists in Kenya 1994-2003



Source: Statistical Abstracts 2003

The Institution of Highways and Transportation identifies five characteristics of a good cycle network: -

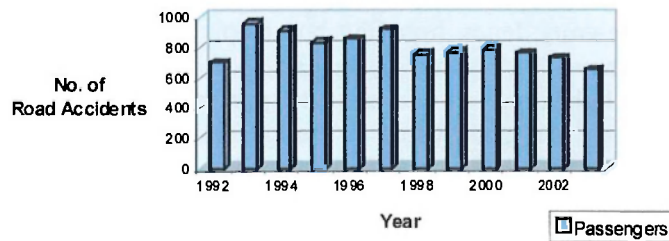
- (i) **Coherence:** - The cyclist section of the road infrastructure must form a coherent entity, linking major cyclist trip origins and trip destinations;
- (ii) **Directness:** - cyclist routes must be as direct as possible;
- (iii) **Attractiveness:** - The routes must have adequate lights and offer a sense of good personal safety for the cyclists so that they become attractive to cyclists;
- (iv) **Safety:** - they should be designed to guarantee safety and minimize casualty;
- (v) **Comfort:** - the routes should be smooth, relatively flat and well maintained to provide some acceptable measure of comfort for the cyclist.

The institution also advocates good cycling proficiency training to enhance cyclist safety.

Passengers and road transport crashes in Kenya

Passengers cause a significant percentage of (Figure 7) road crashes. First, some passengers do insist on alighting from vehicles at some dangerous places like roundabouts, sharp bends or in the middle of the road. As a result, an on-coming vehicle may crash them, or the vehicle they are alighting from may be hit by another vehicle. Similarly, an on-coming vehicle may ram into another vehicle or swerve off the road as it tries to avoid hitting the alighting passenger or the vehicle the passenger is alighting from. Secondly, sometimes passengers attempt to alight from a moving vehicle, as a result of which they may sustain injuries. Thirdly, some passengers and prospective passengers also induce drivers to violate traffic rules for example, by shunning slow moving vehicles and urging drivers to speed up, or even by waiting and waving for vehicles to stop and carry them in non-bus stops. Finally, some passengers who sit on the co-drivers seat engage the drivers in distractive talks that make them loose concentration and cause crashes. Notable among the latter category include nagging spouses, drivers' 'long time lost friends' and female passengers.

Figure 7: Number of Road Accidents Caused by Passengers in Kenya 1994-2003



Source: Statistical Abstracts 2003

Road infrastructure and road crashes in Kenya

Although no conclusive studies appear to have been done on the extent to which the sorry state of road infrastructure leads to road crashes, conventional wisdom indicates that the poor state of most Kenyan roads is a major contributing factor to road crashes in the country. First, there are numerous cases of crashes that occur when drivers try to avoid pot-holed sections of the road network. Secondly, crashes sometimes occur when drivers try to overtake other vehicles along narrow sections of the road. The narrowness of the road may induce risky overtaking especially for long distance driving along major routes like Nairobi-Mombasa highway and Nairobi- Kisumu highway. Thirdly, Kenya's road infrastructure design tends to ignore other road users like cyclists and pedestrians who have to struggle with motorists for road space at the risk of causing crashes.

Fourthly, the incessant demands by some passengers to be dropped outside designated bus stops are partly due to the fact that some of the bus stops are inconveniently located and improperly designed. According to the Institution of Highways and Transportation, bus stops in densely populated areas should be no more than 300 meters apart. Their lay out should also be such that the bus can enter and leave without causing obstruction to flowing traffic, with clearly marked road re-entry lanes from the bus stop. Fifth, most Kenyan roads have inadequate road markings and road signs, poor street lightening and inadequate parking space. It is not surprising therefore that the Transit Transport Coordination Authority (TTCA) established that up to 1/3 of road crashes that occur in the Northern African corridor take place at night due to poor illumination (TTCA, 1997).

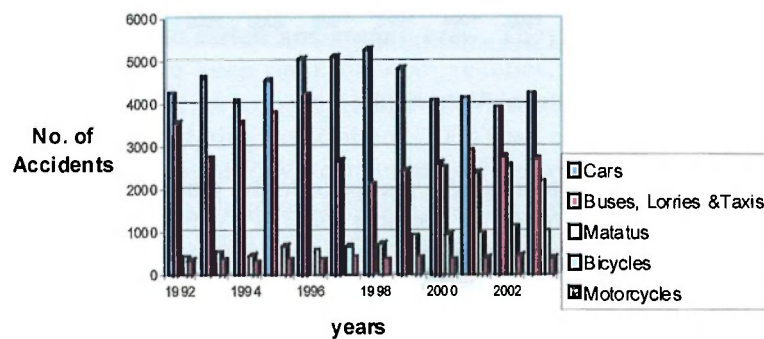
Section 3

Addressing Road Safety Issues in Kenya

Road Transport and Accident Situation in Kenya in 2003

The road safety picture in Kenya was very gloomy by 2003 when the Legal Notice No. 161 was gazetted. Between 2000 and 2003, the annual road accident fatalities averaged 2849. Interestingly, from the year 2000, the annual road accident fatalities, though considerably high, took a consistent nosedive from 2819 in year 2000, to 2790 in 2001 and to 2782 in 2002. However, in year 2003 road accident fatalities increased for the first time in four years and passed the average mark of 2849 to stand at 3004. Ironically, the total number of road crashes by categorized road users consistently decreased during the same period from 10,595 in 2000, to 10,873 in 2001 to 10,858 in 2002 and to 10,647 in 2003.

Figure 8: Accidents by Vehicle Type



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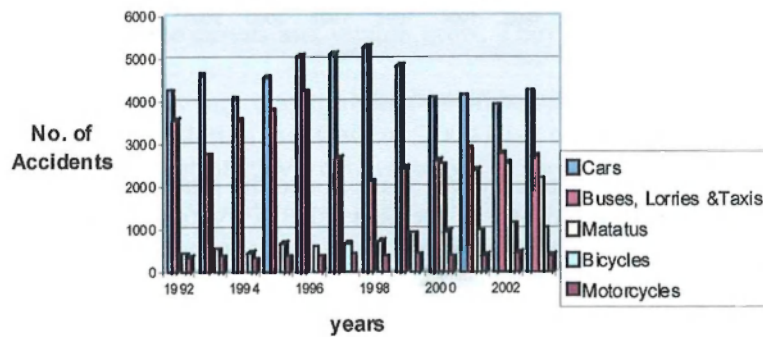
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Figure 8: Accidents by Vehicle Type

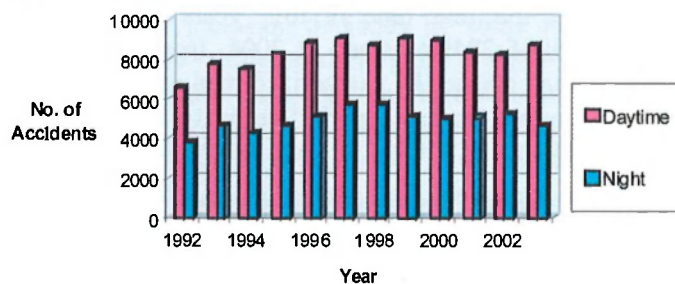


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In fact, between 2002 and 2003 it is only crashes by motorcars that increased from 3931 in 2002 to 4271 in 2003. Crashes by major vehicles like *matatus*, lorries, buses, taxis, motorcycles and pedal cycles declined between 2002 –2003 as shown in figure 8 below.

Similarly, more crashes occur daytime than at night. This is probably because there are fewer activities at night than daytime. However, accident risks are as high at night as they are daytime. While there are more road users daytime, problems of visibility are more acute at night, yet there are buses, *matatus*, and until recently, tracks and funeral vans operating at night. Figure 9 shows crashes by time of the day when they occur.

Figure 9: Accident by Time of Occurance 1992-2003



Source: GOK, Statistical Abstract, 2004

It is also instructive to note that prior to the introduction of the Legal Notice No 161 of October 2003, PSV transportation in Kenya, particularly in urban areas was characterized by the existence of too many actors in the sector with no clearly defined roles, poor enforcement of traffic rules, inadequate road infrastructure and road furniture, vehicle over speeding and overloading, corruption, drunkenness and general disorder

among PSV crew, poor treatment of commuters and use of un-roadworthy vehicles. In a sense, the sector was chaotic, uncoordinated and guided largely by the laws of the jungle.

Private Sector Road Safety Initiatives

One of the private sector actors that have undertaken commendable road safety initiatives is the *Matatu* Owners Association (MOA). Formed in April 2003, MOA initiated a road safety awareness campaign dubbed *Arrive Alive Program* or *Safiri Salama* in 2004. The program was hinged on the slogan: *Road Safety Depends on You*. The program which was supported by Invesco Insurance Company; emphasized adherence to road traffic rules; non-consumption of alcohol and other toxic substance by road users while on or intending to be on the road; and reducing fatigue of drivers by advocating that PSV crew should not be overworked. It implored road users to realize that it was their individual and collective responsibility to ensure that they start and end their journeys safely.

Although the campaign targeted all road users, it was directed more towards the *matatu* owners. The *matatu* owners were called upon to reclaim ownership of their vehicles, which they had long lost to cartels and *matatu* crew. They were required for example to keep track of their vehicles, know who is driving them at any one time and at what speed. This was important considering that Chitere (2004) had established that only 0.9 per cent of PSV vehicles are driven by their owners. The owners were therefore targeted because they stand to lose a lot in an event that their vehicles get involved in crashes, and therefore can play a leading role in promoting road safety. Furthermore, since they are the employers of the *matatu* crew, it is easier to use them to instill discipline on the crew. MOA whose motto is *A New Beginning with Safer Roads*, also entered into partnership with Kenya Institute of Advanced

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Driving in mid 2004, through which they undertook driver training with a road safety component at the institute. In supporting this initiative, Invesco was driven by the philosophy that the insurance companies would gain more when road safety is enhanced since they would have fewer or even no compensations to make.

The program was largely an awareness campaign and involved the use of mass media and stickers that portray road safety information. In addition, MOA organized sensitization meetings, as did the route-based *matatu* associations affiliated to MOA such as Nairobi-Embu Nissan Operators Sacco Ltd. (NENO) and Latema Travelers SACCO. The various road transport associations have to play a major role if road safety is to improve. In the *matatu* industry there are two major associations, one for *matatu* owners and another one looking into the welfare of *matatu* operators. A good working relation between these two associations has potential of ensuring compliance with the new road safety measures.

Road Safety Regulations under Legal Notice No. 161 of 2003

The most recent effort by the government of Kenya through the ministry of Transport and Communications to address the issue of road safety was the introduction of the Legal Notice No. 161 of October 2003, which amended the Traffic Act Cap 403 of the Laws of Kenya. To begin with, the Notice provides that every motor vehicle shall be fitted with seatbelts in every sitting position. Driving a motor vehicle without a safety belt is therefore an offence under the Act, which attracts a penalty of Kshs.500 for each seat lacking a safety belt. It is equally an offence for any one including the driver not to put on a safety belt while inside a moving vehicle. The Act prescribes a fine of Kshs.100 for every person inside a moving vehicle who does not put on a safety belt. While safety belts do not prevent

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crashes from occurring, they lessen the severity of the impact of crashes. This measure specifically aimed at reducing the magnitude of injuries sustained, and the number of passengers who die in road crashes.

Secondly, the Notice provides that all public service and commercial vehicles with tare weight exceeding 3,048 kilograms shall be fitted with a speed governor. The speed governor shall be of the type approved by the minister for transport, and must be adjusted in such a way that at no time can the vehicle fitted with it move at a speed exceeding 80 km /hr. The measure aimed at ensuring the safety of both the passengers and pedestrians and enabling the drivers to be firmly in control of the vehicle at all times.

Thirdly, every public service vehicle shall be painted with a continuous yellow band on both sides and on the rear. The band should be 150 millimeters in width and clearly visible within a distance of at least 275 meters. Where the main body of the vehicle is so colored that the yellow band does not contrast significantly, then the main body or so much of it as runs parallel to both sides of the yellow band, shall be painted a dark color of sufficient contrast as to allow the continuous yellow band to be visible at the said distance. While at the surface value this requirement might sound aesthetical, it aimed at making public service vehicles clearly distinguishable, and ensures that unauthorized vehicles do not carry passengers as this exposes such passengers to risk of accident.

Fourth, Public Service Vehicle owners are required to indicate their names and address on the body of the vehicle. In addition, they are required to indicate the registered route plied by the vehicle, licensed passenger carrying capacity, and tare weight.

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Fifth, Public Service Vehicle drivers and conductors are required to wear uniforms as well as special identification badges issued by the Registrar of Motor Vehicles. The drivers are supposed to display their photographs where all passengers can see them. Prior to employment as driver or conductor, one has to receive a certificate of good conduct from the police to certify that they have no criminal records. Furthermore each driver of a Public service vehicle is required to under go testing after every two years to certify their medical and professional fitness to continue driving.

Finally, every Public Service Vehicle owner is required to employ a driver and a conductor on permanent basis and to pay them monthly salaries as opposed to daily wages that they were receiving prior to these regulations. It was hoped that this would prevent vehicle owners from imposing unrealistic daily targets that force the vehicle crew to make many trips and work late into the night to meet. It is this setting of targets that explains the tendency by *matatus* for example to always be in a hurry, carry excess passengers, and defy established traffic rules in their madness rush for passengers.

Implementation and Enforcement of the Legal Notice No. 161

Speed limit for PSV vehicles

The Legal Notice identifies over speeding as a cause of road crashes, and prescribes speed governors as its remedy. It should be noted that Section 42 of the Traffic Act Cap 403 already limits PSV vehicle speed to 80 km/hr even before the issuance of the Notice. The enforcement of this speed limit was however impaired by several factors. To begin with, the traffic police are blotted with corruption. Indeed, the 2002 and 2003 reports by Transparency International-Kenya, ranked the

police as the most corrupt government agency. Studies have also shown that some traffic police officers own or protect certain PSV vehicles, which then defy traffic rules with impunity. Similarly, the traffic police are short of personnel and generally ill equipped to enforce the speed limits. The introduction of speed governors was in fact an admission by the government that the traffic police officers have been unable to enforce traffic rules particularly speed limits (Asingó, 2004).

This study identified a few problems with the enforcement of the provisions for speed governors. First, although the Legal Notice No 161 provided that all PSV vehicles should be fitted with speed governors, the study established that most vehicles were not fitted with speed governors but instead were allowed to undertake engine calibration, which also reduces vehicle speed to a specified limit, in this case 80 km/hour. However, as it turned out, calibrated engines are easy to tamper with, and therefore, a good number of vehicles with calibrated engines tampered with the calibrations and reverted to the normal high speed. It is in this light that the minister for Transport and Communications imposed a ban on engine calibration by PSV vehicles, and directed that all such vehicles must be fitted with speed governors. At the same time a few cases were reported of vehicles either fitted with faulty governors or whose governors have been tampered with after fitting.

Secondly, the police lack the capacity to detect a vehicle whose speed governor has been tampered with, unless it is spotted over speeding. Yet determining the speed of a moving vehicle is equally difficult without equipments like speed guns. It is therefore possible for the police to genuinely fail to detect over speeding vehicles. Although the corruption spotlight is usually on the police on the road, care should be

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taken to ensure that other speed limit enforcing agencies like the Motor Vehicle Inspection Unit are corruption free.

Thirdly, the enforcement of the Legal Notice is generally biased against the PSV vehicles, particularly the *matatus*. Although there are speed limit specifications for all categories of motor vehicles, and which they often exceed, it is only the PSV and the commercial vehicles, which are required to be fitted with speed governors as a means of ensuring compliance with speed limit requirements. Speed governors therefore do not take care of over speeding by non-PSV vehicles, particularly small cars. Yet as shown in figure 8 small cars remains the major cause of road crashes.

Fourth, it was noted that the government unilaterally gazzetted the companies authorized to supply speed governors without following competitive tendering procedures. In any case, since the Motor Vehicle Inspection Unit inspects vehicles after being fitted with governors, there is little harm in allowing vehicle owners to freely source the governors. Claims have also been made to the effect that there are eleven types of locally designed gadgets that have been approved by the Ministry of Roads and Public Works and the Kenya Bureau of Standards, but have been rejected by the Ministry of Transport on unexplained grounds, as the ministry insists on imported gadgets. This could have created employment and stimulated industrial growth. These would easily have been avoided if there was dialogue and consultation among the various road transport sector stakeholders.

Finally, the overemphasis on speed governors may lead to a neglect of other mechanisms for controlling speed. In countries like the United Kingdom (UK), speed cameras are used to regulate vehicle speeds. In the UK, local authorities select sites for speed cameras to be installed and maintain the

cameras. However, it is the police who provide the cameras and the radar equipment and install them in fixed sites to collect evidence of over speeding vehicles. The police install a radar unit, a flash-camera control unit and a camera at each site. The cameras take photographs of each over speeding vehicle at an interval of 0.5 and 1.0 second. The built-in flash unit allows the camera to be used at night or in poor visibility conditions. The radar uses the Doppler principle to measure speed and calculate the speed of the target vehicle at a 20 ° Offset. The police periodically remove the films to analyze and identify offending vehicles. The vehicle owners are then given notice of intention to be prosecuted. Results have shown that speed cameras have a significant effect on vehicle speeds and accident rates (IHT, 1997:280).

Safety belts

Safety belts do not prevent crashes from occurring. They merely lessen the physical injuries sustained by passengers and reduce the number of passengers who die as a result of road crashes. Thus while speed governors target the cause of road crashes, seat belts target the victims of road crashes. Because of the hurried manner in which these reforms were introduced, most PSV vehicles were fitted with low quality safety belts. In fact, a spot check in Nairobi's Eastlands routes indicates that there are quite a number of vehicles without functioning seat belts. The emphasis on seats belts ignores seat stability, yet most PSV seats are merely spot-welded and hence in an event of a sudden violent foreword surge, the passenger and the entire seat can be thrown foreword. Evidence from our baseline survey shows that the initial enthusiasm with which passengers embraced the safety belts has significantly subsided and most passengers only adorn them when they see the police. This is partly due to lack of awareness on the part of the passengers about the importance of seatbelts, and partly due to the careless manner in which

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they are handled, which leaves most of them dirty and generally distasteful. In a sense therefore, most passengers view safety belts as a legal requirement, rather than a road safety device.

Like speed governors, the implementation of the safety belt rules have been biased against PSV vehicles. Private vehicle drivers and their companion are never asked about safety belts. In fact many personal cars are driven without safety belts, even for the driver. The Notice provides that driving a vehicle lacking safety belt attracts a fine of Kshs.600, while each seat without a belt attracts a fine of Kshs.500. In addition, being in a mobile vehicle without putting on a safety belt attracts another Kshs.100. This is never enforced, especially on personal vehicles, as the police are keener on offences by PSV drivers.

Policy Gaps in Road Safety Interventions

One of the most serious flaws in Kenya's road safety initiatives is the neglect of road infrastructure as a contributing factor to road crashes. Most of the issues addressed by past and current road safety initiatives can broadly be divided into those that deal with the behavior and attitudes of road users and regulators, and those that deal with mechanical defect on vehicles. The two categories of initiatives deal with what we have referred to in our framework of analysis as road transportation. Yet as demonstrated in the framework of analysis, road transportation together with road infrastructure constitutes the two functional pillars of road transport.

The Draft Integrated National Transport Policy indicates that 85.5 per cent of road crashes are caused by human behavior and attitude, 10.5 per cent are caused by mechanical defects of vehicles while 4 per cent result from road infrastructure-

related issues. This should not be misconstrued to imply that road infrastructure makes a negligible contribution to road crashes, considering that it is not the number of crashes occurring that matters, but the extent of damage caused, injuries sustained and deaths resulting from crashes. Indeed, crashes are about human life and hence nothing that leads to the loss of even one life should be ignored in addressing road safety. The drive towards road safety must therefore integrate road transportation-related issues, with road infrastructure-related issues like road signs display, functioning traffic and street lights, road markings, and road design that embrace the needs of all road users. Such an initiative obviously must be multi disciplinary in nature and *inter-ministerial* in approach.

Secondly, road safety in Kenya lacks a clear, coherent and well-coordinated institutional framework. The Draft Integrated National Transport Policy proposes the creation of a National Transport Safety Board (NTSB) to act as a safety oversight and an independent accident investigator. The NTSB is to oversee safety issues in all transport sub-sectors including railways, aviation, maritime, inland waterways and pipeline. In addition, the policy paper proposes the setting up of a National Road Transport Management Authority (NRTMA), whose role will include, among other functions, road safety regulation. Both NTSB and NRTMA will be under the Department of Transport within the Ministry of Transport and Communications. The temptation to fragment government institutions dealing with road safety under various ministries and departments must be overcome for effective coordination of road safety.

Thirdly, pedestrians are currently the greatest casualties of road crashes in Kenya, yet the notice does not address their plight. They are largely ignorant of the traffic rules and signs, lack adequate safe walkways, fly-over, footbridges, pedestrian

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crossings, and often make wrong judgments while on or near the road. School children appear to be the most vulnerable as they cross the roads routinely in groups from and to school. Some get tempted into crossing the road just because colleagues have crossed even when a vehicle is already too close to avoid. Some children playgrounds are also located dangerously close to roads, and the children run blindly after each other and after play items like balls, crisscrossing the road. No serious safety awareness campaigns, particularly targeting the youth seems to have been done, at least in the recent past. Adults are no better in terms of knowledge of road rules and signs. They make as many serious mistakes as the children or even worse. Some cross the road drunk, around sharp bends or even on roundabouts.

Fourth, while the Legal Notice has several items, only about two directly relate to road safety. These include the requirements on safety belts, speed governors and display of photograph of the driver. The display of the driver's photograph was meant to ensure that the person driving a PSV vehicle at any given time is the one licensed to do so and to prevent untrained and unqualified drivers who would jeopardize the lives of their passengers. The rest of the requirements such as uniforms for drivers and conductors, painting continuous yellow bands on the vehicle, displaying name and address of vehicle owner, employment of drivers on permanent terms and paying them monthly salaries, indicating vehicle route and passenger capacity, and having special badges for *matatu* drivers and conductors are part of discipline, but do not directly contribute to safety.

Fifth, the Legal Notice neglects some key emergency safety concerns. To begin with, the Notice is silent on First Aid kit, which should always be stocked and conspicuously displayed in all PSV vehicles for use in event of an emergency.

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Similarly, it does not insist on PSV vehicle crew to be knowledgeable about first aid. In addition, exits in most high occupancy vehicles like buses are not facilitative in handling emergency cases. Ideally, vehicles with passenger capacity exceeding 40 people should have two doors as well as easy to open and close windows. Again, to avoid the obvious effects of fatigue, personal and PSV vehicles covering long distance should be co-driven.

Sixth, the bias against PSV vehicles is further reflected in the fact that continuous driving of a PSV vehicle for more than eight hours in a 24-hour day by one driver is prohibited, while there is no time limit for driving personal vehicles.

Finally, there are emerging governance issues in the formulation and implementation of the road safety policies. First, the confrontation between *matatu* owners and the government over the policies demonstrated lack of dialogue in the policy process. Again, the objective of the policy reforms remained unclear at least to the *matatu* owners. In fact, the Matatu Owners Associations (MOA) hold the view that the reforms were driven by the need to restore perceived lack of order in the industry, tame *matatu* owners and generate additional revenue for the government.

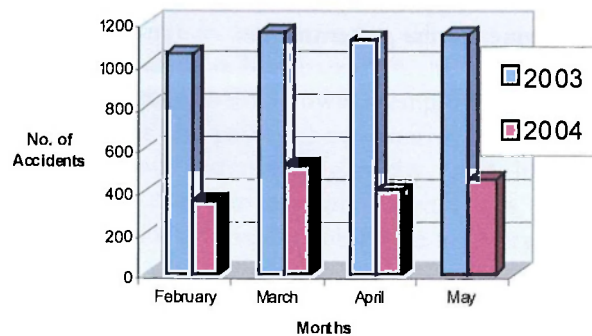
Section 4

Impact of the Legal Notice No 161 Of 2003

Impact on Road Safety

The baseline survey shows that the implementation of the Legal Notice significantly reduced cases of road crashes in Kenya, particularly during the first few months of implementation of the Notice. Available data indicates that between January 2004 and May 2004, there was drastic reduction in road crashes, compared to the data for 2003 as shown in figure 10. However, from June 2004, road crashes began to escalate as people reverted to business as usual. It was around this time that people began to tamper with the speed governors and calibrated engines as enforcement of the notice also became relaxed. With time, non-compliance cases increased and by Jan 2005 about 500 PSV vehicles had been thrown out of the road due to non-compliance.

Figure 10: Number of Accidents in Kenya for 2003 and 2004



Source: Traffic Police, Kenya.

In a stakeholders workshop organized by IDS on the 27th of January 2005, the Permanent Secretary, Ministry of Transport, Mr. Gerrishon Ikiara, reiterated the challenges facing the implementation of road safety measures. He highlighted issues such as tampering with speed governors and fitting of sub-standard gadgets, especially seat belts and speed governors; laxity of enforcement officers; re-emergence of cartels, poor infrastructure, poor driving skills and ignorance of Highway Code among others (Ikiara, 2005).

One interesting observation is that the gazettelement and implementation of the Notice relegated the other aspects of road safety provided for in the Traffic Act, but not covered by the Notice, to relative obscurity. For example, section 103 of the traffic act prohibits touting, but this continued as the traffic police concentrated their efforts on safety belts, speed governors, the yellow bands and passenger capacity. In a sense some traffic police officers viewed the Notice as supplanting rather than complimenting the Traffic Act.

Impact on the Economy and Society

The reforms introduced by the notice had a significant impact on the economy. To begin with, it boosted those industries that support the transport sector. Leading manufacturers of paint like Crown Bager Paints and Sadolin reported good business, as PSV owners rushed to adorn their vehicles with the required yellow band. Small-scale artisans like vehicle body builders and to a small extent the tailors also benefited from the reforms. This was more so as vehicles had to be reconfigured with fewer seats fitted with safety belts. The PSV vehicle crew was also required to have uniforms.

The reforms also reorganized the sector and introduced some order in the otherwise chaotic sector. Not only did it partially drive away cartels from the sector, but it also made it possible

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to easily identify genuine PSV crew. The resultant sanity in the sector significantly increased the number of female crew in PSV vehicles in many routes. Similarly, the implementation of the Legal Notice reduced the cost of insurance for PSV vehicles. Before the reforms, the third party insurance premium for Nissan *matatu* used to be Kshs.92, 000 if paid by installments and Kshs.87,000 if paid at once. At that time the insured risk was higher since Nissan *matatus* had passenger capacity of eighteen. The reforms however, reduced the passenger capacity to thirteen, thereby reducing the insured risk. Consequently, their third party premiums also went down to Kshs.74, 000 if paid by installments and Kshs.69,000 if paid at once. It should be noted that the third party, that is what most *matatus* can afford, only covers other vehicles damaged, pedestrians hit or fee paying passengers but not the driver, the conductor or even the vehicle itself.

In addition, the reforms led to an influx of additional vehicles, mainly high occupancy vehicles. The prevailing sanity and order in the sector attracted many new investors, who feared investing in the sector due to its previous chaotic nature. Some operators were also displaced as they found the new rules too taxing. There is a feeling that the reforms have pushed low and middle-income investors from business at the expense of high-income investors, yet it has traditionally been business of the poor, by the poor, for the poor.

Finally, the reforms have enabled the government to raise additional revenue from non-complying vehicles. In one week alone, from Thursday, January 14th 2005 to Friday January 20th 2005, the traffic police reported that the government managed to collect a total of Kshs. 7,654,600 as fines from non-compliance. The distribution of this amount by provinces is shown in the table below. If this is taken as the average

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weekly collection, it translates into almost Kshs. 400 Million Annual income for the government.

Table 1: Traffic Offence Fines for 3rd week of January 2005

Province	Amount
Nairobi	4,625,3000
Coast	1,260,200
Eastern	561,500
Western	374,600
Central	371,300
Rift Valley	361,700
Nyanza	100,000
Total	7,654,600

During the same week a total of 2,028 vehicles were detained nationwide for obstruction and 779 for either operating without valid TLB licenses or contravening requirements of TLB. Similarly, 2,846 drivers, 1,264 conductors, and 746 touts were arraigned in courts for various offences, while 1,058 passengers were charged for not using safety belts.

Section 5

Conclusion and Recommendations

Concluding Remarks

The measures being taken by the government shows the commitment and determination to address road safety issues. The government has initiated several legal, policy and institutional reforms in her quest to address both road infrastructural problems and transportation issues. The most recent road safety policy measures are subsumed in the Legal Notice No. 161 of October 2003, which emphasizes passenger safety and speed limits for PSV Vehicles. Apart from the road safety policy measures, the government in collaboration with key stakeholders has come up with a Road Safety Action Plan (RSAP) due to be launched in February 2006. The plan covers 14 key areas¹ relating to road safety.

The measures being implemented do not seem to have correctly diagnosed the root cause of road crashes in Kenya. While it increasingly becoming evident that human behavior and attitude significantly contribute to road carnage, neither the past road safety measures or the prescriptions of the Legal Notice No. 161 of October 2003 adequately address the behavior and attitude of road users and regulators. Change of behavior and attitude of road users and regulators has great potential of reducing road crashes. A vehicle can be mechanically sound but unless the users and the regulators

² The RSAP covers: road safety coordination and management, road safety funding, road crash data system, road safety research, development and maintenance of roads, Non-Motorized and Intermediate Means of Transport (NMIMT), vehicle safety standards and compliance, driver training, testing and licensing, traffic legislation, traffic law enforcement, road safety awareness, road safety awareness for children, and emergency services and rehabilitation.

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observe and respect road transport regulations, the fight against carnage remains a mirage.

The draft policy paper on Integrated National Transport Policy has isolated enhancing transport safety and security as a policy intervention area. The tasks for ensuring this intervention include: developing and enforcing vehicle standards through regular inspection of vehicles; developing training curriculum for drivers, traffic law enforcement agents and other road users including NMIMTs; establishing and enforcing regulatory framework and undertaking public awareness (GOK, 2004). While the latter intervention has potential of dealing with the behavior and attitude of road users, experience in Kenya shows that road users are aware of the rules relating to road use, but do not apply them unless there is an enforcement officer within sight.

Lack of compliance with legal requirements is a major problem in most developing countries, including Kenya. Unless road users respect and observe traffic rules and regulations, the noble goals and objectives of road safety policies will be difficult to achieve. It is therefore necessary to study what motivates road users to develop such a high propensity to flout regulations and traffic rules. This task will be a key component of the next phase of the Institute for Development Studies' project on Research and Technical Support to Renewed Road Safety Measures in Kenya.

Recommendations

First, there is need to enact a Road Safety Act which will strengthen and bring together the various existing pieces of legislation on road safety. This will provide the much-needed legal framework for promotion of road safety in Kenya. The Act should for example address issues of compensation for victims of crashes caused by poorly constructed public

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utilities like bridges that give in to the weight of vehicles. It should also prescribe serious punitive action against drivers who continually cause crashes.

Secondly, there is need to reorganize the training of drivers. Most attention and focus is usually directed towards how the PSV drivers are trained. However, it should be noted that the training of drivers for smaller vehicles is no better. In fact, rarely do trainees leave the driving schools competent to drive on their own. Hence there is need for regularized training and thorough inspection of the driving schools.

Thirdly, there is need to facilitate organization and performances of various transport associations. The associations have potential of influencing their membership to comply with regulations, and avoid cutting corners, in particular tampering with speed limit gadgets and flouting the Highway Code.

Fourthly, investigation and reporting of road crashes needs to be strengthened to ensure accuracy of reports and to transform the reports into inputs to be processed for the purposes of addressing road safety concerns. Currently there is a very weak link between the police who collect accident data and the policy makers who need the data to design appropriate response mechanisms for the problem of road safety.

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