

**THE INFLUENCE OF URBAN TRANSPORT POLICY ON THE GROWTH OF  
MOTORCYCLE AND TRICYCLES IN KENYA**

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# THE INFLUENCE OF URBAN TRANSPORT POLICY ON THE GROWTH OF MOTORCYCLE AND TRICYCLES IN KENYA

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## **Abstract**

The major towns of Kenya are faced with challenges of accommodating the motorcycle (bodaboda) and tricycle(Tukutuku) modes of transport in the already set system as stipulated in the urban transport policy. This article seeks to report research findings of a study that was carried out in Kitui town to investigate the influence of urban transport policy on the growth of motorcycles and tricycles as the preferred mode of public transport in Kenya. The paper calls for quick response from policy makers to address and embrace the changing face and pace of business and service provision in Transport Sector in Kenya. The objectives of the study were to: establish the influence of rules and regulations, availability of parking space and policy on motorcycle trade. The research problem was to find out why motorcycles and tricycle taxis had increased, in commercial transport despite their involvement in traffic accidents. The study adopted a combination of descriptive and naturalistic research designs. Questionnaires, interviews and observations guide were used in data collection. Qualitative data were analyzed by categorization into themes and narrations of respondents' quotations and verbatim, while quantitative data were analyzed using tally system to get frequency counts from the filled in questionnaires. The analyzed data was presented using frequency distribution tables and pictures. The study findings revealed that urban transport policy deals with issues to do with transport rules and regulations, availability of parking space and policy on motorcycle trade, has greatly influenced the growth of bodaboda and tukutuku public transport in town. The study recommended that the policy makers should formulate an all-inclusive urban transport policy that will take care of the safety precautions of motorcycle transport because although it was problematic in town it was found to provide affordable urban mobility especially to the poor who were the majority in most of the towns in Kenya

**Key words:** motorcycle (Bodaboda), tricycle (Tukutuku), urban, transport policy

## **Introduction**

A motorcycle is defined in the Traffic Act Cap 403, Laws of Kenya as a motor vehicle with less than four wheels, the weight of which unladen does not exceed eight hundred weights. By law, they should carry one passenger but sometimes in violation of the law, they could carry two or more passengers behind the rider (Cervero, 2000). In cities of developed nations, a good transportation mix generally exists as well as the presence of non-motorized and private motor vehicles and a good range of public transportation system notably buses in different sizes and trains and monorails (Cervero, 2000).

Commercial motorcycle industry in United Kingdom began in 1990 and had established itself as a niche market, never growing past a total of 12 bikes in a particular niche. All equipment were provided for the passenger along with an intercom system linking the rider and passenger. A luggage rack which is a cabin-sized suitcase could be taken on the back for convenient trips to local airports, especially Stansted, Gatwick and City. The bikes are licensed by Transport for London and the Public Carriage Office (Ambuli, 2008).

Unlicensed, motorcycle taxis are very common, form of public transport in Indonesia from the metropolitans where traffic jams prohibit other forms of transport to the backwater areas where four-wheeled vehicles could not travel.

Inadequate traditional forms of commercial urban transport network and infrastructure in most of the cities of the Third World countries were usually substituted with other innovative transport modes such as motorcycle taxis. Thus, commercial motorcycle public transportation continued to prevail in most cities of developing nations, due to its affordability by all people in respective societal socioeconomic statuses (Cervero, 2000).

The case of Kenya in Africa is not an exception. Before 2006, the only place in Africa that was known for motorcycle taxi business was Nigeria and “Okada” was the commercial motorcycle taxi name in the country (Ambuli, 2008). Originally in the 1960s and 1970s there were bicycle taxis in East Africa, also called ‘Bodaboda’ which came from the English word ‘border-border’ and it is part of the African bicycle culture. By then it had spread from its origin on the Kenyan-Ugandan border to other regions. However, motorcycle taxis are taking over the place of bicycles because it is faster, convenient and one does not have to wait for other passengers as the motorbike only has the capacity of one or two persons (Ambuli, 2008). In the past, motorcycles were very expensive to buy and maintain in Kenya, because only the Honda and Yamaha makes were available and very few people owned them. However, the coming of the new makes of motorcycles changed things upside down completely (Cervero, 2000).

In spite of the convenience, in 2008 the Kenyan police were set to implement a ban on commercial motorcycle transport on safety grounds (Bulema, 2008). The boda-bodas had been responsible for 303 deaths of passengers and riders, since the start of that year. There had been high rate of both educated unemployed and uneducated unemployed youth in most of the urban centres in developing countries due to rural-urban migration in search for salaried jobs (Bulema, 2008). Perhaps, that is why, Owour (2008) argued that the police seemed to be totally ignorant of the fact that the motorcycles not only provide the majority of poor Kenyans with both affordable public transport services and employment, let alone being environmentally more efficient within the context of the contemporary concerns about global climatic change.

The Traffic Act, cap 403, and Subsections 86, 87, 88 and 89 of the Laws of Kenya, stipulates certain requirements that road users must comply with. The traffic police accuse the riders of having no licenses or protective gear, which include reflectors and the mandatory helmets, for both the riders and their passengers (Owour, 2008). It is against this background that the study sought to establish the extent to which urban transport policy influences the growth of motorcycles and tricycles as means of public transport in Kitui town.

### *Statement of the problem*

Although motorcycle-propelled taxis has eased the problem of transport, and has been responsible for most of the traffic accidents as the police attempted to effect bans on the business, commercial motorcycle transport has continued to prevail in most cities of developing nations. Earlier, in Kenya motorcycle taxi operators were required to obtain an operating license at a cost while meeting certain safety conditions through registration. But, the licensing was removed in the year 2002 after a campaign in Parliament by the then Finance Minister in the Kenya National African Union (KANU) government (Bulema, 2008). In most of the third world cities inadequate common public transport infrastructure had been gradually substituted with other innovative modes of transport such as non-motorized bicycles, motorcycle-propelled tricycles and motorcycles, the pedestrian, cart pushing and animal potorage (Cervero, 2000). In Kitui town the number of motorcycles has steadily increased over the past two years. According to the preliminary police reports as inquired by the researcher more than two thirds of the motor vehicle accidents were caused by motorcycles.

While the motorcycle taxi operators had been accused of accidents, there had been unprecedented rate of growth of the motorcycle taxi business in most of the Kenyan towns. Therefore, this study

sought to investigate the influence of urban transport policy on the growth of motorcycle-propelled transport with an aim of adding to the existing literature and transport policy implications on this rapid expansion of mode of transport over the last few years. The purpose of this study was to establish the influence of urban transport policy on the growth of motorcycles and tricycles with a view to suggesting additional urban traffic policy options to cater for the motorcycles.

### **Objectives of the study**

The study was guided by the following objectives:

- i). Establish the extent to which transport rules and regulations influence the growth of motorcycle transport in Kitui town.
- ii). Identify the influence of availability of parking space on the growth of motorcycle transport in Kitui town.
- v). Find out whether Policy on motorcycle trade influence the growth of motorcycle transport in Kitui town.

### **LITERATURE REVIEW**

Motorcycles as a means of mobility have become an issue for urban transport planners, especially among developing countries. In the face of transport advancement coupled with increasing technological and environmental concerns and a drive towards sustainable transportation, the issue is whether the presence of innovative modes of local public transport like the motorcycle-propelled (tricycles and motorbikes) are to be encouraged (Barter, 1998). Urban transportation planning is designed to meet the end objective of addressing transport problems in terms of traffic movement, public transport, pedestrian, environment and parking

space (U.P. NCTS Foundation, 2000). The growth of motorcycle and tricycle transport has been influenced policy on urban transport on the following aspects.

### ***Traffic rules and growth of motorcycle commercial transport***

Davao City's Habal-habal is unique in a number of ways. Physically, the motorcycle is innovated by extending its seat and adding extra shock absorbers. It seats 3-5 passengers (including the driver) per trip and its owner/driver organizational association does not have any internal policies on the use of helmet or other identifiable paraphernalia such as the use of colored motorcycle drivers' jackets used in Bangkok, Thailand for identification (Tarrazona, 2002). Habal-habal passengers, who usually range from two to three persons obviously against the traffic rules, sit behind the driver, close to each other, thus the term as shown in Figure 1.

Policy response of eliminating "triciboats" led to Habal-habal emergence. The availability of credit facilities for motorcycle ownership by private dealers and motorcycle shops led former "triciboats" owners to shift to Habal-habal/open-cab tricycles (Tarrazona, 2002).

Local enforcers on "Habal-habal" and open-cab tricycles apply "maximum" tolerance. Through interviews with the locals it was established that enforcers tolerated their presence in the absence of policies providing alternative modes for passengers as well as the lack of employment opportunities for the triciboats' drivers (Tarragona, 2002). Compared with the triciboats, motorcycles were registered. It is perceived to be better since motorcycles were registered and that the other issue is the difficulty of identifying a "Habal-habal" from private motorcycles since passengers connive with drivers (Ocampo, 1982). Most of the journeys made were rural-urban-rural journeys and a low number of either accidents or apprehensions have been reported. Interviews conducted with local officials also indicated that "Habal-habal" were not causing any

problem in the city and were actually solving mobility issues by being able to service those areas that were not passable to ordinary motor vehicles (Tarrazona, 2002).

In Phnom Penh and other cities in Cambodia, motorcycle taxis were the primary form of public transport. Motorcycle taxi drivers were called motodup. They form in queues outside major tourist attractions, office buildings, public markets and near the corners of residential streets. In Phnom Penh, a typical motodup ride would cost around 2,000 riel (Abela and Murphy, 2008).

In 2008 there was one company offering tours using two Chang Jiang sidecar motorcycles (Abela and Murphy, 2008). Policies towards these modes of transport thus have an impact on the poor as customers, operators and employees. There has been a great deal of debate over what policies should be adopted towards the various 'non-corporate' transport modes, such as motorcycles and tricycles (Meakin, 1993 and World Bank, 1996).

Giving priority to public transport on the roads also deserves to be much more widely implemented but there are few successful examples so far in low-income contexts (World Bank, 1996). Making non-motorized vehicles, especially bicycles, more available and safer to use also benefits the poor and has enormous potential in many cities.

In China before 1979 bicycle ownership and production remained something of a privilege but with market reforms bicycle ownership rose steeply. China has also long provided direct government and employer-based subsidies to workers for the purchase of bicycles (Hook and Replogle, 1996).



The use of motorcycle for public transportation came into Nigeria out of necessity where most workers who were retrenched from their work places as a consequence of the economic downturn in the early eighties had to resort to using their motorcycles to start carrying passengers from one point to the other as a means of sustenance especially in the urban centres of the country (Hook and Replogle, 1996). The motorcycle business was creating employment so fast that in Nigeria the labour force in the other sectors may no longer be available.

### **Policy on motorcycle trade and growth of motor cycle transport**

In the Dominican Republic the cheapest and most common form of public transportation by 2005 was the motorcycle taxi (Amann and Sieber, 2005). They covered the streets in swarms; they stationed in gangs at intersections, outside of supermarkets, in front of bars and near the beaches. Their charges were the cheapest well under 50 cents to the higher of only one United States Dollar (USD). The fare for Habal-habal trip in Davao City was almost twice that of ordinary tricycles because in most cases, it monopolized certain routes. Moreover, without the side-cabs common to tricycles, it could traverse urban roads under heavy traffic. The new mode for servicing passengers living in areas where roads were not fully developed as well as during peak traffic hours in the urban city is getting encouraged (Cervero, 2000).

Motorcycle transport in Nigeria was used in the whole country and had even become the singular mode of transportation in the remote parts of the nation where other modes of transportation like motor cars found inaccessible due to poor terrain or even a complete absence of motorable roads (Cervero, 2000). Another influence of the Okada business which was not appreciated by all people was the fact that since the Okada ferried people door to door, the simple exercise of

walking from one's gate to the nearest bus stop was no longer undertaken and of course it was convenient (Cervero, 2000). The type of motorized vehicle people acquire often comes down to household economics without much consideration given to social costs. In terms of affordability, in India, for example, the retail price of a two-wheeler ranges from \$450 for an entry level moped or scooterette to \$1,325 for a premium class motorcycle (Iyer & Badami, 2007).

In comparison the recently announced low-cost car, the Tata Nano, was expected to sell for \$2,500 (Giridharadas 2008). As recently as 2007, the lowest priced car offering in India was about \$5,000 (DWS 2007). Low priced, entry level, small cars were directly aimed at a market segment dominated by motorcycles (Iyer & Badami, 2007). In Kenya many people chose motorcycle taxis rather than four-wheeled taxis because they were the cheapest transport compared with any other form of motorized transport (Marie and Haruo, 2003). The would-be passenger would haggle with the motorcycle driver for the cost per ride, which generally lay at around Twenty (20) Kenyan Shillings for short trips within town by the year 2003.

### ***Urban vehicle parking space policy and growth of motorcycle transport***

In Virginia University of USA as shown in 3, special 'motorcycle only' parking areas were designated throughout the Grounds. These areas were within many of the Green/reserved parking areas. However, many motorcycles could use the motorcycle only area, hence only a Commuter or Storage permit was required within the motorcycle only areas. Permits were a must to be displayed on the left front fork of the motorcycle. University vehicles faculty, staff, and students were eligible to purchase a blue commuter parking permit to use motorcycle spaces on the Grounds (Cervero, 2000). Motorcycles parked in a regular parking space within a parking lot (a

space that either a car or motorcycle could use) were subject to the same permit restrictions as cars (Cervero, 2000).

### ***Transport policy and growth of motorcycle transport***

Riding a motorcycle in the state of Michigan required that one got an endorsement on his or her license, called the C-Y, which required one to have passed a written knowledge test and a skills test. The skills test could be waived if one provided proof of passing a certified motorcycle safety course. Training for the tests was quite simple (Carrie, 2010). The written knowledge test could be taken at any Michigan Secretary of State office without an appointment. The test took approximately a half an hour to complete. The best way to study for the written test was to read the Michigan Motorcycle Operator Manual (SOS-116), which was a booklet provided at any Secretary of State office or online at Michigan government. The answers to all the test questions were given to one at the end of the test, pass or fail, so one could know what areas he or she needed to review (Carrie, 2010).

The skills test measured their basic riding to see if they could handle normal and hazardous traffic situations. You were scored on your ability to maintain a safe speed, stop, turn, and swerve quickly, and your ability to communicate with other people on the road. Practicing these skills is the best way to train for this test. Do your training in a safe setting. You could obtain a Temporary Instruction Permit for motorcycling at your Secretary of State office after you pass your skills test, which allows you to ride during the day only. You may not carry passengers while you only have your TIP. However, one could bypass the need to pass the riding skills test by providing proof that he/she had completed a certified motorcycle safety course. These courses provide basic motorcycle training and safety tips (Carrie, 2010).

The Philippines' policy approach on rationalizing the presence of motorcycle-propelled public transportation modes both at the national and local level were shown in the case of tricycles and Habal-habal of Davao City (Hsu, 2003). At the national level, there is development of local transport policy by integrating national policies (Land Transportation and Traffic Code, Public Service Act and the Local Government Code of 1991) and responding to related issues such as those of congestion. It also illustrates the role of national transport related policies in the emergence of informal public transport such as the case of Habal-habal and open-cab tricycles.

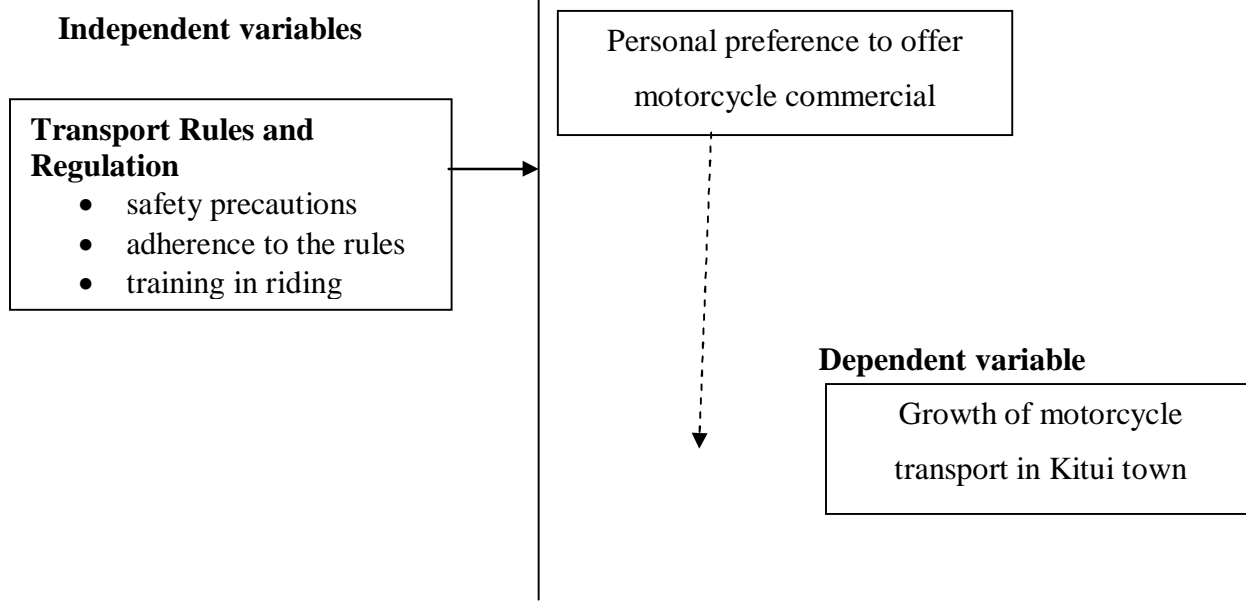
Also at the national level motorcycle registration is for record-keeping purposes and a guideline is issued to provide direction for local government units in developing local transport policy for motorcycle operations. The emphasis is on the motorcycle operations and not the physical design of the unit (Hsu, 2003). At the local level, the basis of transport-related policy development is determined. This is the presence of policy guidelines (DOTC Guidelines), experience from the implementation of previous local policy (Ordinance 512) and public inputs (such as request letters) among others. Moreover, the gap in the implementation of national policy on motorcycles such as use of helmet and restrictions on overloading is not strictly followed as shown in the operations of Habal-habal (Shimazaki and Rahman, 1996). In June, 30<sup>th</sup> 1992 the regulation of tricycles and other variants of motorcycle-propelled vehicles in Philippines changed when DOTC issued Guidelines to Implement the Devolution of LTFRB's Franchising Authority over Tricycles-for-hire to Local Government Units Pursuant to the Local Government Code (RA 7160) (Hsu, 2003).

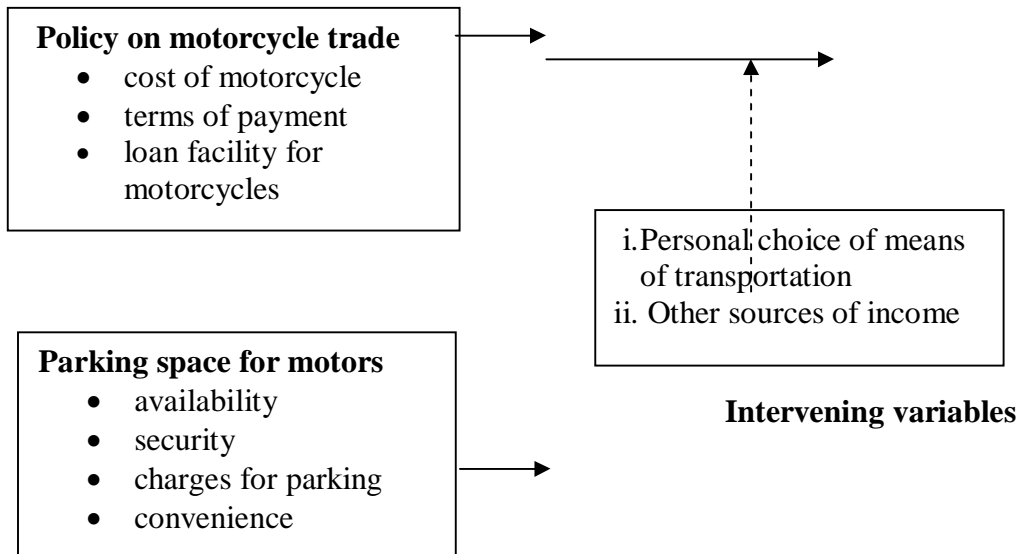
The ordinance also provided requirements for the issuance of permit for the operation of a new motorized tricycle as well as the schedule of fees 23. Franchising operations of tricycles provided an additional income-generating venue for the local government. After two years, the City Council began the implementation of the “Davao City Tricycle for Hire (TFH) Franchising and Regulatory Code of 1993” describing the functions and procedures for franchising and regulating the operation of tricycles for hire and collection of fees and charges (Shimazaki and Rahman, 1996).

An organizational structure called the Motorcycle for Hire (MTH) Board was created to manage the new operations of tricycles for hire. The Board created two separate systems for franchising and for regulation. (Shimazaki and Rahman, 1996).

### Conceptual framework

In the study, the researcher conceptualized The influence of independent variables; transport rules and regulation, policy on motorcycle trade, parking space for motors on the dependent variable; growth of commercial urban motorcycle transport is illustrated in figure 4 as conceptualized by the researcher





**Figure 4: Conceptual Framework.**

Transport rules and regulation which are clearly stipulated in the Transport Act are seen to influence the growth of motorcycle transport in urban centres. These include the safety precautions, adherence to the rulers and training in riding. Policy on motorcycle trade related to the cost of the motorcycles, terms of payment and availability of loan facility for motorcycles is also seen to determine the pace of growth of motorcycle transport in towns. Parking space for motorcycles, regarding the availability security and charges and convenience for the parking to the motorcycle customers also determines the growth of motorcycle transport business.

### **Research Methodology**

The study applied both quantitative and qualitative research approaches to source, process and analyze the information. Descriptive survey coupled with naturalistic design was adopted. Descriptive survey has the ability to elicit large amount of information through a single questionnaire administered to many participants while naturalistic design captures data from

respondents in their natural setting. The study targeted the Kitui town public officers in the following areas: traffic police, local authority, provincial administration, ministry of roads and public works, district development and ministry of health and the motorcycle operators together with their passengers. The choice of the town was due to manageability of the research since it had adequate motorcycle operators in designated positions within reach of the researcher. This area had nine motorcycle operators' points with an average of 15-20 motorcycle operators in each.

Cluster sampling was used to select the nine motorcycle operators' points as the nine clusters. Then ten motorcycle operators were randomly selected from each of the nine points using simple random sampling. Therefore 90 motorcycle operators were selected to participate in the research. Out of the total traffic police in Kitui town police station 25 plus 5 government departmental heads were selected to participate in the study using purposive sampling to select traffic police and government departmental heads whose work entailed working with motorcycles. Motorcycle transport passengers were not clustered at one point in time to allow for a formal sampling procedure to take place. Therefore, the 90 targeted motorcycle transport passengers comprised of a non-randomized sample of only those who were available and willing to participate in the research at the time of data collection. The total sample size was 210. Data were collected using three sets of questionnaires, interview guide and an observation schedule for triangulation purpose. To ensure and increase the validity and reliability of the instruments, a pilot study was conducted prior to major. Operational definitions of dependent and independent variables have been provided.

The Statistical Package for Social Science (SPSS) was used to analyze the resultant information. Qualitative data were analyzed using thematic categorization and narrations given as indicated on the questionnaires. Quantitative data were analyzed using descriptive statistics by organizing it into frequency distribution tables, percentages were generated and used to present the findings in charts such as bar graphs and histograms. Pictorial illustration was used in form of figures for photographs taken at the field to illustrating certain conditions in three and two-wheeled urban transport in Kitui town. Qualitative data were analyzed using thematic categorization and narrations given as indicated on the questionnaires.

### **Results and Discussions of the Study Findings**

This section presents results of the study. The study was set out to establish the influence urban transport policy on growth of motorcycles in Kenya. The objectives of the study were to: Investigate the extent to which transport rules and regulations, policy on motorcycle trade and parking space for motorcycles influences the growth of motorcycle public transport in Kitui town as presented below:

#### **Transport rules and regulations and growth of motorcycle transport in Kitui town**

In the analyzed data remarks of unawareness of rules came up in the responses from a question that sought to find out from the motorcycle operators if they could name some of the traffic rules that govern motorcycle public and commercial transport. Thanks to only two motorcycle operators making only 2.2% of all the 90 motorcycle operators participating in the study for



trying to give the traffic rules as follows: (“have a driving license”, “have 2 helmets and reflector jackets one for you the driver and the other for the passenger”, “use gloves on your hands”, “carry only one passenger”, “observe road signs as you keep to your lane”).

Otherwise most of the others a huge percentage of 97.8 of the total operators who participated in the study either gave sketchy responses to this question or they left it unanswered. Some of the sampled responses given by a fast majority of them have been revealed such as: (“be keen”, “observe all rules”, “keep left always”, “follow all rules” and “observe traffic rules”). According to the analyzed data 57.8 per cent of the motorcycle operators answered Yes to being in possession of a driving license. This meant that the other 42.2 per cent had no driving licenses.

As per the knowledge that it was mandatory to have a driving license 92.2 per cent of the operators knew that they needed to have the driving licenses but only 57.8 per cent of them had the driving licenses. A big number 86.7 per cent of the operators knew of the existence of traffic rules but only 67.8 per cent attested to have been using helmets with only 13.3 per cent who had their passengers’ helmets. See Table 1

**Table 1 Motorcycle operator’s knowledge and practice of traffic rules**

Traffic Rules	Yes		No	
	Frequency (n)	Percentage	Frequency (n)	Percentage
Give passengers helmets	12	13.3	78	86.7
Have and use your helmet	61	67.8	29	32.2
Have a driving license	52	57.8	38	42.2
Mandatory to have license	83	92.2	7	7.8

There were problems of breaking traffic rules on the minimum number of passengers to carry for a trip and the rule on the riders' helmet together with the helmet of the passengers as was exhibited by very many riders with their passengers as attested in Figure1. which shows a motorcycle operator without helmet and with two passengers also without their helmets.



**Figure 1: Left: safety rules, but right: overloaded, no helmets, on 31.5.2011 at 1.30 pm**

This photograph was taken at the central business district of Kitui town in the Kilungya Street. Adjacent and to the right in the same Figure also shows his counterpart in helmets together with his passenger correctly worn as per the traffic rules in place.

The other questions that the motorcycle operators were asked were on how they had gotten the driving licenses and how long they had taken in training before they were issued with the licenses. Only those with the driving licenses were able to answer the question on how they acquired their licenses.

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The others said they had no license under this question. Therefore the 57.8 per cent which was 52 motorcycle operators who attested to have had their driving licenses were almost half way divided on the number of months they took in the driving school before they did a test that resulted to having been given the licenses. Some of them 57.8 per cent 30 out of the 52 licensed motorcycle operators had trained for three months and did the test after which they were issued with the license. The others 42.2 per cent 22 out of 52 licensed operators who participated in the study trained for four months then they were tested after which they were issued with the licenses after passing the grade test. The motorcycle passengers in the study were asked to indicate if operators provided them with helmets and any other safety tool. The passengers in great numbers 87.8 per cent of the total 90 of them who participated in this study noted having not been provided with the helmet by the riders.

This rhymed with the earlier revealed 86.7 per cent of the motorcycle transport operators who indicated not having given their passengers helmets. This was a high percentage of breach of traffic rules in presence of law enforcers' right in the centre of Kitui town, the headquarters of Kitui County. Almost all passengers 95.6 per cent noted their most disliked thing as motorcycle careless accidents due to non-adherence to traffic rules in the motorcycle transport business. The others just a few 4.4 per cent of the passengers were unhappy with the rude behaviour of some of the riders.

The government officers including the five purposively selected departmental heads were asked to state why they thought motorcycles were causing accidents. Almost all 93.3 per cent 28 out of the 30 public officers and departmental heads cited careless driving as the main factor that led to motorcycle accidents among other factors. Some of the key words in their responses that helped

in deducing the 'careless driving theme' as a major causal factor of accidents especially by motorized two-wheeled vehicles included: ("failure of operators to adhere to traffic rules", "not trained to ride", "influence of young age", "lack of experience", "influence of drugs as they ride", "carelessness of riders", "poor driving", "arrogance of operators", "low levels of operator's education", "over- speeding", "poor roads", "poorly trained riders", "overloading", "no driving license", "inadequate motorcycle repair and maintenance", "lack of proper licenses", "lack of safety precautions"). These results explain why some although very few passengers were complaining about the operations of motorcycles in Kitui town.

The Government officers were asked to state what the Traffic Act Cap 403 say on the motorcycle operations, riding license, safety precautions, parking in town and number of passengers. The majority of the 93.3 per cent who are 28 out of the 30 Government officers who participated in the study gave the traffic rules as follows: ("have a driving license", "have 2 helmets and reflector jackets one for you the driver and the other for the passenger", "use gloves on your hands", "carry only one passenger", "observe road signs as you keep to your lane"). The officers were also asked to say if the motorcycle operators followed the Traffic Act Cap 403 rules. Almost all 96.7 per cent of all the government officers in the study disagreed with the fact that the motorcycle operators were adhering to the traffic Act Cap 403 rules. They cited the frequent accidents which were caused on daily basis by the motorcycles as some of their reasons this rating.

In Kitui District the level of road infrastructure network development was rated low generally by the time the 2008-2012 District Development Plan was prepared in 2007, with a classified road network of 1397.8 kilometres. Only 87.2 kilometres of the road had bitumen standards. The

district had 390 kilometres of unclassified road network which was impassable during the rainy season (Kitui District Development Plan 2008-2012). The poor roads in the district and Kitui town hindered public transport to most parts of the district as near to the town as two kilometres away (DDP, 2008-2012).

Three-wheelers have wider applications. In Asian and other cities, these vehicles are commonly used for commercial passenger, family, and goods transport (GTZ, 2004). Motorcycles have several advantages over other motorized transportation modes, both real and perceived. They are highly maneuverable in congested conditions, offer easier parking, and provide door-to-door connectivity. However, compared to other forms of motorized transport, motorcycles are generally not as safe and may also be more polluting (GTZ, 2004).

Congestion is another confounding issue in Kenyan towns. When public transport service is



limited, infrequent, or over-crowded; the time spent to complete a town trips

of youth who rely on the business to earn a living (Bulema, 2008).

### **Urban transport policy and growth of motorcycle transport in Kitui town**

According to the reviewed literature, the urban transport policy encompasses the Traffic Acts stipulating safety guidelines on the road but they are specific for each of the various countries

worldwide (Barter, 1998). In the analyzed data remarks of unawareness of rules came up in the responses from a question that sought to find out from the motorcycle operators if they could name some of the traffic rules that govern motorcycle public and commercial transport.

Thanks to only two motorcycle operators making only 2.2% of all the 90 motorcycle operators participating in the study for trying to give the traffic rules as follows: (“have a driving license”, “have 2 helmets and reflector jackets one for you the driver and the other for the passenger”, “use gloves on your hands”, “carry only one passenger”, “observe road signs as you keep to your lane”).

Otherwise most of the others a huge percentage of 97.8 of the total operators who participated in the study either gave sketchy responses to this question or they left it unanswered. Some of the sampled responses given by a fast majority of them have been revealed such as: (“be keen”, “observe all rules”, “keep left always”, “follow all rules” and “observe traffic rules”). According to the analyzed data 57.8 per cent of the motorcycle operators answered Yes to being in possession of a driving license. This meant that the other 42.2 per cent had no driving licenses. As per the knowledge that it was mandatory to have a driving license 92.2 per cent of the operators knew that they needed to have the driving licenses but only 57.8 per cent of them had the driving licenses. A big number 86.7 per cent of the operators knew of the existence of traffic rules but only 67.8 per cent attested to have been using helmets with only 13.3 per cent who had their passengers’ helmets. See Table2

**Table 2 Motorcycle operator's knowledge and practice of traffic rules**

Traffic Rules	Yes		No	
	Frequency (n)	Percentage	Frequency (n)	Percentage
Give passengers helmets	12	13.3	78	86.7
Have and use your helmet	61	67.8	29	32.2
Have a driving license	52	57.8	38	42.2
Mandatory to have license	83	92.2	7	7.8
Knowledge of traffic rules	78	86.7	12	13.3

There were problems of breaking traffic rules on the minimum number of passengers to carry for a trip and the rule on the riders' helmet together with the helmet of the passengers as was exhibited by very many riders with their passengers as attested in Figure 4.6 which shows a motorcycle operator without helmet and with two passengers also without their helmets.



**Figure 4. Left: safety rules, but right: overloaded, no helmets, on 31.5.2011 at 1.30 pm**

This was a photograph that had been taken at the central business district of Kitui town in the Kilungya Street. Adjacent and to the right in the same Figure 4.6 also shows his counterpart in helmets together with his passenger correctly worn as per the traffic rules in place.

The other questions that the motorcycle operators were asked were on how they had gotten the driving licenses and how long they had taken in training before they were issued with the licenses. Only those with the driving licenses were able to answer the question on how they acquired their licenses. The others said they had no license under this question. Therefore the 57.8 per cent which was 52 motorcycle operators who attested to have had their driving licenses were almost half way divided on the number of months they took in the driving school before they did a test that resulted to having been given the licenses. Some of them 57.8 per cent 30 out of the 52 licensed motorcycle operators had trained for three months and did the test after which they were issued with the license. The others 42.2 per cent 22 out of 52 licensed operators who participated in the study trained for four months then they were tested after which they were issued with the licenses after passing the grade test. The motorcycle passengers in the study were asked to indicate if operators provided them with helmets and any other safety tool. The passengers in great numbers 87.8 per cent of the total 90 of them who participated in this study noted having not been provided with the helmet by the riders.

This rhymed with the earlier revealed 86.7 per cent of the motorcycle transport operators who indicated not having given their passengers helmets. This was a high percentage of breach of traffic rules in presence of law enforcers' right in the centre of Kitui town, the headquarters of Kitui County. Almost all passengers 95.6 per cent noted their most disliked thing as motorcycle



careless accidents due to non-adherence to traffic rules in the motorcycle transport business. The others just a few 4.4 per cent of the passengers were unhappy with the rude behaviour of some of the riders.

The government officers including the five purposively selected departmental heads were asked to state why they thought motorcycles were causing accidents. Almost all 93.3 per cent 28 out of the 30 public officers and departmental heads cited careless driving as the main factor that led to motorcycle accidents among other factors. Some of the key words in their responses that helped in deducing the 'careless driving theme' as a major causal factor of accidents especially by motorized two-wheeled vehicles included: ("failure of operators to adhere to traffic rules", "not trained to ride", "influence of young age", "lack of experience", "influence of drugs as they ride", "carelessness of riders", "poor driving", "arrogance of operators", "low levels of operator's education", "over- speeding", "poor roads", "poorly trained riders", "overloading", "no driving license", "inadequate motorcycle repair and maintenance", "lack of proper licenses", "lack of safety precautions"). These results explain why some although very few passengers were complaining about the operations of motorcycles in Kitui town.

The Government officers were asked to state what the Traffic Act Cap 403 say on the motorcycle operations, riding license, safety precautions, parking in town and number of passengers. The majority of the 93.3 per cent who are 28 out of the 30 Government officers who participated in the study gave the traffic rules as follows: ("have a driving license", "have 2 helmets and reflector jackets one for you the driver and the other for the passenger", "use gloves on your hands", "carry only one passenger", "observe road signs as you keep to your lane"). The officers were also asked to say if the motorcycle operators followed the Traffic Act Cap 403 rules.

Almost all 96.7 per cent of all the government officers in the study disagreed with the fact that the motorcycle operators were adhering to the traffic Act Cap 403 rules. They cited the frequent accidents which were caused on daily basis by the motorcycles as some of their reasons this rating.

### **Conclusion**

With only less than three per cent of the motorcycle operators trying to give a resemblance of the traffic rules was enough proof that the motorcycle operators were not aware of the traffic rules in place. Thus there were problems with the motorcycle operators breaking traffic rules on the minimum number of passengers to be carried for a trip and the rule on the rider-passengers' helmet as was exhibited in most of the trips within Kitui town. These findings were indicating some laxity within the law enforcers which could have had indirectly and partially accelerated the growth of motorcycle transport in Kitui town.

### **Recommendations**

As revealed by the findings in this study there is need for a well thought out plan of urban transport. On the role of motorcycles in the cities of developing countries and the implications for the poor and for future policy options, the researcher recommended an all inclusive urban transport policy which encompasses both four-wheeled vehicles and two- and three-wheeled vehicles. The policy should spell out strict rules on age and training before obtaining the motorcycle driving license.

The current scenario in the motorcycle transport the study revealed could have been helped by more strict law enforcers. The law enforcers were blamed for laxity and therefore the study recommended more strict public officers in the law enforcers' category so as to improve the

efficiency of motorcycle transport, because it is the one affordable by most of the poor town residents.

### **Further Research**

Finally further studies on the role of law enforcers in public commercial transport would help in streamlining the anomalies, omissions as well as formulation of new modalities of maintaining law and order in the transport sector in order to ensure safety and faster traffic flow.

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