Regulation of *Boda Boda* Operators and Road Accident Reduction in Uganda: A Case of Kampala City Council Authority

Bonny Bagenda
(bbagenda@mubs.ac.ug)

Arthur Ahimbisibwe
(aahimbisibwe@mubs.ac.ug)

Wilson Tusiime
(tusiimewilson@yahoo.com),

and

Musa Moya
(mmoya@mubs.ac.ug)

Abstract

Motorcycle transport commonly referred to as *Boda Boda* is a popular means of transport in Uganda. It is cheap compared to the other forms of motorized transport, easy to maneuver where roads are impassable to motor vehicles, and carries passengers from door-to-door because the culture of walking is not typical to many Ugandans. Despite benefits offered by *boda boda* transport, it has proved difficult for the government to regulate the industry. There is some operational discipline provided by the associations to which majority of *boda boda* operators belong though most of them have only a local jurisdiction. Lack of clear regulations in the *boda boda* industry as well as weak enforcement of these regulations is threatening the

safety of passengers and riders as well. Despite several attempts to streamline the industry, the exercise has not been successful, making *boda boda* account for a significant number of fatal road accidents across the country. The purpose of the study was to investigate the regulation of *boda boda* operations in Kampala City Council Authority (KCCA) and its impact on road accident reduction. A quantitative research approach and cross-sectional survey were adopted. Data were collected using a self- administered questionnaire. Implications for both theory and practice are discussed, especially suggestions for government in formulation of policies and regulations that govern *boda boda* operations.

Motivation of the Study

One of the puzzles in the transport sector is that Africa, in general, with only a few isolated exceptions, suffers from what has been called the "missing middle (Pankaj, 1991). Movement of people and goods goes from walking and head loading to the truck and bus in one technological leap. There is nothing much in between. In comparison with Asia, there has been little use of animal, bicycle, or motorcycle-based technologies. The sector lacks flexibility in service provision. This has been equally true in urban and rural areas, although the situation is starting to change with development of passenger carrying motorcycle services in West Africa (Howe and Iyiola Oni, 1996; Anon, 1997).

A decline in organized public transport systems has led to rapid growth in non-conventional means of public transport, initially, provided by minibuses as well as shared taxi/vans, and more recently, by commercial motorcycles. Unlike cities in South and East Asia, ownership and use of motorized two-wheelers as a personalized vehicle is very small in Sub-Saharan cities. However, over the past decade, there has been a significant growth in use of motorcycles as a commercial public transport mode. While offering certain transport advantages in form of

easy maneuverability, ability to travel on poor roads and demand responsiveness, commercial motorcycle service growth has also led to an increase in road accidents, traffic management problems, pervasive noise and increases in local air pollution accompanied with greenhouse gas emissions.

Boda boda transport services are a Ugandan innovation that has grown from small beginnings in the 1960s in the border region with Kenya (Malmberg-Calvo 1994). The term itself is a corruption of the English "border border. *Boda boda* mainly provide a passenger taxi service, although they can sometimes be hired to move goods. The original services were provided on a man's bicycle, equipped with a padded cushion fitted over the rear carrier. Starting in the early 1990s, the bicycle-based carriers have been complemented by, and compete with, light motorcycles that have greatly extended the range and load carriage of services.

Boda boda transport is a popular means of transport because it is cheaper than other forms of motorised transport, easy to maneuver where roads are impassable to motor vehicles, and carries passengers from door-to-door as the culture of walking is not typical of Ugandans.

Despite benefits offered by boda boda transport, it has proved difficult for the government to regulate the industry. There is some operational discipline provided by the "associations to which majority of *boda boda* operators belong though most of them have only a local jurisdiction. Lack of clear regulations in the *boda boda* industry as well as weak enforcement of these regulations is threatening the safety of passengers and riders as well. Despite several attempts to streamline the industry, the exercise has not been successful, making *boda boda* account for a number of fatal accidents across the country.

According to the Injury Control Centre, Uganda, Mulago Hospital alone receives 5 to 20 boda boda accident cases every day, resulting to 7,280 cases in a year. A five-year (2008-2012) injury and fatality trends report

from Police indicates that 3,043 motorcyclists were injured in accidents last year, a significant increase from 1,795 cyclists injured in 2008. The same report shows that passenger fatalities as a result of road traffic accidents increased from 3,951 in 2008 to 5,145 last year.

All these problems have been partly linked to the huge expansion of the boda boda industry without proper planning. Because of poor registration, the actual number of boda boda bikes in the country is unknown. But modest estimates indicate that there are over 300,000 boda boda in Kampala alone. According to a traffic report on the industry, in January to June 2012, over 290 boda boda riders and 190 passengers died from traffic crashes. But the number of pedestrians that were killed in the same period was not recorded.

Mulago National Referral Hospital's budget and facilities have been overstretched by the influx of boda boda accident cases. According to Prof. Nelson Sewankambo, the Principal of Makerere University College of Health Sciences, the hospital spends Ugandan shillings (sh1.) 5b on treating boda boda patients every year. "When weighed against the annual budget allocation of about sh2.4b to the Directorate of Surgery, this translates to 62.5%."

Despite this precarious situation, more riders are joining the industry, which according to Dr. Steven Kasiima, Commissioner of Police, Traffic and Road Safety has been infiltrated by criminals and terrorists.

Statement of the Problem

The government of Uganda through its organs such as KCCA, Police, Ministry of Transport and Works and other bodies has instituted a series of traffic regulations to legislate the operations of vehicles and motor cycles of which boda boda cyclists are among. The traffic rules relate to number of passengers to be carried on a boda boda, third party insurance, driving on the right side of the road, use of helmets and use of reflector jackets,

among others. For instance, Section 127 (1) of the Traffic and Road Safety of 1998 states that not more than one person in addition to the driver shall be carried on any two-wheeled motorcycle; and no person shall be so carried otherwise than on a proper seat securely fixed to the cycle. In addition, Section 178 (g) of the Traffic and Road Safety Act of 1998 prescribes wearing of safety belts by drivers and passengers of motor vehicles, wearing of crash helmets by motorcyclists and use of reflectors on any road.

However, despite all mentioned regulations, boda boda accidents have become a menace on the Ugandan roads. For example, Ssenkaaba (2012) revealed that Mulago Hospital alone receives 5 to 20 boda boda accident cases every day, resulting to 7,280 cases in a year. Furthermore, a five-year (2008-2012) injury and fatality trends report from Police indicates that 3,043 motorcyclists were injured in accidents in 2012, a significant increase from 1,795 cyclists injured in 2008.

The question remains, 'why is there increasing boda boda related accidents amidst the regulations? Could it be because of lack of awareness of these regulations? Weak enforcement of these regulations? It is upon this background that the researchers were propelled to investigate the impact of regulations of boda boda operators on reduction of accidents in Uganda using Kampala city as a case study. The study was guided by the following objectives: (1) To examine awareness level of regulations governing boda boda operations; (2) To establish challenges faced by boda boda operators in a bid to comply with regulations and (3) To analyze the impact of boda boda regulations on level of accidents in Uganda.

Literature Review

Branas and Knudson (2000) in their study investigated motorcycle rider death rates between states with full motorcycle helmet laws and those without. They (*ibid*.) revealed that from 1994 to 1996, states with helmet

laws experienced a median death rate of 6.20 riders per 10,000 registered motorcycles and states without helmet laws experienced a median death rate of 5.07 riders per 10,000 registered motorcycles. Their (*ibid*.) study weakened the claim that rider death rates are signicantly lower in states without full motorcycle helmet laws.

Ferrando and colleagues (1998) in their study offered the first evaluation of a helmet law using combined forensic and police data in a large south European urban area where there is widespread use of motorcycles. They (*ibid*.) concluded that there was effectiveness of the helmet law, as measured by reduction in number of deaths and mortality ratios after the law implementation. Similar findings were by Servadei and colleagues (2002) in which they stated that the revised Italian mandatory helmet law, with police enforcement, is an effective measure for traumatic brain injuries' prevention at all ages.

Studies by Chiu (2000) and Kraus (1995a) revealed that following implementation of a helmet law, a reduction in motor-cycle-related head injuries occurs while the repeal of a law results in increased death and injury. Ecological-type studies also suggest that motorcycle helmet laws result in a reduction in motorcycle head injury-related deaths (Sosin, 1990) and that helmet laws result in a reduction in motorcycle related death rates (Branas, 2001).

Research Methodology

Research Design

The study employed a descriptive research design using a case study based on empirical measures through observation and measurement of reliability. The study employed quantitative research approach. While quantitative studies point out to existing relationships between different variables of phenomenon under investigation, qualitative studies help in

deepening and expanding detailed knowledge of various attributes as well as involved parameters.

Study Population

Kothari (2004) defines a population as including all people or items with the characteristic one would like to study. It can also be defined as total members of a defined class of people, objects, and places from whom a sample is to be selected. The target population for this study included boda boda riders who are estimated to be about 865,000. They were selected because the researchers believed they have the required data and they are directly involved in the business.

Sample Design and Sample Size

Probabilistic sampling procedure was employed, specifically simple random sampling was employed in selection of boda boda operators to be included in the study. The study targeted a sample size of 150 boda boda operators in the capital city.

Data Collection

The questionnaires were designed according to objectives of the study to enable the researchers elicit information from respondents on all aspects of study. The questionnaires had close-ended questions designed according to objectives of the study. The questionnaire was selected because it was anticipated to give respondents freedom to fill in at their convenience. The instrument has a capacity to motivate respondents to participate in the research survey with ease. Additionally, the instrument enables the researcher to get information from a wide geographical area. The questionnaires enabled the researcher to reach many respondents in a

short time. The questions were designed using a 5-point Likert scale from 1 (strongly disagree) to 5 (strongly agree). This requires the respondents to select the most appropriate response and tick.

Measurement of Variables

Variables were quantified on a five point Likert scale and the level of regulation of boda boda was assessed based on Traffic regulations of Uganda (Traffic and Road Safety Act of Uganda (1998) and Traffic and Road Safety (Motor cycle) Regulations (2004).

.

Reliability and Validity of Instruments

For quality control, the research instrument was pre-tested to ensure validity and reliability. Pretesting was done to show whether or not the instruments were valid, had no repetitions, not bulky, simple to interpret and easy to understand.

3.7. Data management and analysis

Collected data were compiled, sorted, edited and coded to have the required quality, accuracy and completeness. They were later entered into the computer for analysis using Statistical Package for Social Sciences (SPSS) to generate results and interpretations. Tabulations for means and standard deviation were used to show the degree to which respondents agreed with the asked questions.

Findings

Response Rate

Of the 150 copies of the questionnaires that were initially sent out, 40 usable questionnaires representing 26.7 percent response rate were returned and analyzed using SPSS version 17.0.

Demographics

Majority of respondents had an age of 25-35 years with 65 percent, followed by respondents 6-45 years (22.5%), and those below 25 years (12.5%). The results indicate that majority of boda bodas who participated in this study had attended secondary school education (55%), while 22 percent had attended primary school education. The rest of the respondents (22.5%) did not indicate their education levels, possibly implying that they did not attend school at all. The results indicated that majority of the respondents had worked for a period of 4 to 10 years (22 or 55%), while 8 (20%) had worked for more than 10 years, also 8 (20%) respondents had worked for 1 to 3 years and 5 (2%) respondents had worked for less than a year.

Descriptive Statistics

Table 1: *Descriptive Statistics Showing the Level of Awareness of Regulations Governing Boda Boda Operations*

	N	*Minimum*	*Maximum*	*Mean*	*Std. Deviation*
As a boda boda rider I must have a riding permit	40	1.00	5.00	4.2750	1.19802
I must register my boda boda and display a valid number plate	40	1.00	5.00	4.2250	.97369
I must register my boda boda with KCCA	40	1.00	5.00	3.6750	1.49164
I must carry liability insurance (third party)	40	1.00	5.00	2.7750	1.86035
I must wear eye protection: face shield, goggles or glasses.	40	1.00	5.00	4.0750	1.47435
I shouldn?t operate a boda boda if am under the age of 18	40	1.00	5.00	2.7000	1.84252
I must wear an approved helmet	40	1.00	5.00	4.4750	1.01242
I must carry a helmet for my passengers	40	1.00	5.00	2.7000	1.78599
Am not supposed to carry more than one passenger	40	3.00	5.00	4.4500	.71432
I should not ride under the influence of alcohol or any other	40	3.00	55.00	5.8750	7.98777
I should not drive carelessly and recklessly	40	3.00	5.00	4.5500	.59700
Am supposed to obey traffic lights	40	1.00	5.00	3.9250	1.36603
Should use the right lane all the time	40	1.00	5.00	2.8500	1.83345
I must ride a roadworthy motorcycle	40	1.00	5.00	3.0500	1.70895
I must respect other road users	40	1.0	5.0	3.97	1.44093

As indicated in Table 1, most of the respondents strongly agreed that a boda boda rider must have a riding permit (4.2750). The respondents strongly agreed that they must register boda boda and display a valid number plate (4.2250). However, respondents disagreed that it is vital to carry liability insurance [(third party) 2.7750]. The respondents agreed that they wear eye protection: face shield, goggles or glasses (4.0750), but they disagreed that one should not operate a boda boda if he/she is under the age of 18 (2.7000). The respondents strongly agreed that they must wear an approved helmet (4.4750) but strongly disagreed that they must carry a helmet for passengers (2.7000).

The responses further indicated that they strongly agreed that they are not supposed to carry more than one passenger (4.4500) and should not ride under the influence of alcohol or any other drugs (5.8750). The respondents strongly agreed that they should not drive carelessly and recklessly (4.5500) but they strongly disagreed that they are supposed to obey traffic lights (3.9250) and strongly disagreed that they should use the right lane at all times (2.8500). The respondents moderately agreed that they must ride a roadworthy motorcycle (3.0500) and must respect other road users (3.9750).

The results in Table 2 indicate that respondents generally agreed that challenges prevail. Accordingly, the respondents strongly agreed that there is less sensitization about boda boda regulations (4.0000), moderately agreed that law enforcers are very harsh (3.7000), agreed that there is corruption on part of law enforcers (3.9250) and strongly agreed that registration fees are very high (4.6000).

Table 2: *Descriptive Statistics Showing the Challenges for Regulating Boda Boda Operations*

	N	Minimum	Maximum	Mean	Std. Deviation
There is less sensitization about boda boda regulations	40	1.00	5.00	4.0000	1.46760
Law enforcers are very hash	40	1.00	5.00	3.7000	1.34355
Corruption on the part of law enforcers	40	1.00	5.00	3.9250	1.30850
High registration fees	40	3.00	5.00	4.6000	.70892
Bureaucratic process of receiving permits and licenses	40	2.00	5.00	4.7000	.68687
The helmets, jackets are expensive to get	40	1.00	5.00	4.4250	1.10680
The passengers normally force us to over speed	40	1.00	5.00	3.2500	1.66024
Passengers are not cooperative as they don?t want to wear helmets	40	1.00	5.00	3.0750	1.68534
KCCA officials always harass us from our stages	40	1.00	5.00	3.0250	1.47609
Driving permits are expensive for us to obtain	40	1.00	5.00	4.4750	1.17642
The government has not given us audience to listen to our challenges	40	1.00	5.00	4.0750	1.30850
Traffic lights always delay us since passengers use boda	40	1.00	5.00	3.0000	1.58519
There are no designated lanes for boda bodas	40	1.00	5.00	3.9250	1.49164

The respondents further agreed that there is a bureaucratic process of receiving permits and licenses (4.7000), strongly agreed that helmets, jackets are expensive to get (4.4250), moderately agreed that the passengers normally force them to over-speed (3.2500) and passengers are not cooperative because they do not want to wear helmets (3.0750). It was further revealed that KCCA officials always harass them from their stages (3.0250) and driving permits are expensive for them to obtain (4.4750). The respondents also strongly agreed that the government has not given them audience to listen to their challenges (4.0750) but moderately agreed that traffic lights always delay them since passengers use boda boda to minimize on time wastage (3.0000). Lastly, they strongly agreed that there are no designated lanes for boda boda (3.9250).

Discussion and Contribution

The purpose of the study was to investigate regulation of boda boda operations in Kampala City Council Authority (KCCA) and its impact on accident reduction in Uganda. Despite several attempts to streamline the industry, the exercise has not been successful thereby making boda boda account for a significant number of fatal accidents across the country. According to the findings, most of the respondents strongly agreed that a boda boda rider must have a riding permit. This shows that boda boda drivers are well aware that there is a need for obtaining a valid permit that can help to regulate the boda boda who are issued with driving licenses.

Although the respondents strongly indicated that they must register boda boda and display a valid number plate, most of them disagreed that it is vital to carry liability insurance (third party). This perhaps shows that most boda boda drivers do not know well the role of insurance in handling transport risk. The respondents agreed that they wear eye protection: face shield, goggles or glasses but they disagreed that one should not operate a boda boda if he/she is under the age. The respondents strongly agreed that they must wear an approved helmet but strongly disagreed that they must carry a helmet for passengers. This is interesting because if boda boda drivers are unwilling to carry helmets for their passengers, it means passengers cannot buy and carry their own helmets because it is highly complicated.

The respondents further indicated that they strongly agreed that they are not supposed to carry more than one passenger and should not ride under influence of alcohol or any other drugs. Surprisingly, most of the boda boda drivers are often reported to be drunk. The respondents strongly agreed that they should not drive carelessly and recklessly but they strongly disagreed that they are supposed to obey traffic lights and strongly disagreed that they should use the right lane at all times. This is true because most of the boda boda drivers rarely respect traffic lights. They also often switch traffic lanes without any consideration to other road users. The respondents moderately agreed that they must ride a roadworthy motorcycle and must respect other road users.

These findings are consistent with previous studies. For instance, the results from the study mirror Ayinla and colleagues' (2012) study that examined factors influencing high rate of Commercial Motorcycle Accidents in Nigeria. Bradley (2014) investigated informal transportation in Uganda while focusing on the Boda Boda as a case study. Similarly, the results reflect findings from the study by Branas and Knudson (2001) who analyzed helmet laws and motorcycle rider death rates in the context of accident prevention. Additionally, the results support Chiu and co-workers' (2000) study who examined the effect of the Taiwan motorcycle helmet use law on head injuries, while Howe and colleagues (1996) studied how Nigeria downsizes to motorbikes.

Accordingly the respondents strongly agreed that there is less sensitization about boda boda regulations, moderately agreed that law enforcers are very hash, agreed that there is corruption on part of law enforcers and strongly agree that registration fees are very high. This means the government should put more emphasis on sensitizing boda boda drivers on traffic regulations. The government should train enforcement officers and fight corruption, which is rampant amongst the enforcement agencies.

The respondents further agreed that there is a bureaucratic process of receiving permits and licenses. This requires the government agencies (KCCA) to streamline the process of issuing driving permits. Furthermore, respondents indicate that they strongly agreed that helmets and jackets are expensive to get. The government can provide some subsidies in these gadgets. Boda Boda drivers indicated that passengers normally forced them to over-speed. This possibly shows that there other stakeholders who contribute to road accidents other than the bod boda drivers themselves. There is a need to install cameras in some major city locations.

The respondents also indicated that passengers were not cooperative because they did not want to wear helmets. Thus, there is a need for stricter monitoring of boda boda drivers. The respondents also reported that KCCA officials always harassed them from their stages and that driving permits

are expensive for them to obtain. This occurs possibly because law enforcement officers cannot easily identify some of the boda boda drivers, especially who deliver people from various locations into the city centre. There is a need for the boda boda drivers and give them uniforms to be easily identified. For driving permits being expensive, it is tricky because the government also wants to collect some revenues from the boda boda business. Nonetheless, this is not an excuse for charging exorbitant levies on the boda boda.

The respondents also strongly agreed that the government has not given them audience to listen to their challenges. There is a need for government to listen to boda boda drivers' concerns through their stage managers so as to be able to identify and understand their challenges. This is lacking at the moment. Last but not the least, the results indicated that most respondents moderately agreed that traffic lights always delay them since passengers use boda boda to minimize on time wastage and strongly agreed that there are no designated lanes for boda boda. The traffic officers should be stricter on the boda boda drivers when it comes to observing traffic lights and traffic lanes. Otherwise, that has often led to road accidents. Moreover, there are no traffic lanes for boda boda. That has often been reported as one of the main contributing factors to road accidents in the capital city.

In conclusion, this research enhances our understanding on the role of regulation in accident reduction, an area that has been given less attention. In so doing, this research makes a contribution to an area of study clearly in need for additional research endeavours. The research also provides recommendations on how the regulation of boda boda can be improved to reduce road accidents in Uganda.

References

Ayinla O.T, Gboyega, A, Ebijuwa A.S, Olusegun O.S, Olugbenga A.J (2012) Factors Influencing High Rate of Commercial Motorcycle Accidents in Nigeria American International Journal of Contemporary Research Vol. 2 No. 11

Bradley Raynor (2014). Informal Transportation in Uganda: A Case Study of the Boda Boda

Branas CC, Knudson MM (2001). Helmet laws and motorcycle rider death rates. Accident Analysis and Prevention;33(5):641–8.

Chiu W, Kuo C, Hung C, Chen M (2000). The effect of the Taiwan motorcycle helmet use law on head injuries. American Journal of Public Health

Howe, J. and S. Iyiola Oni (1996): *Nigeria downsizes to motorbikes*. Sustainable Transport, Number 6, Summer 1996. www.itdp.org

Integrated Transport Systems Limited (2008) Investigating the Impact of Motor Cycles Growth in Africa: Case Study of a Few Selected Cities Uganda Case Study

Kothari, C .R (2004) *Research Methodology: Methods and Techniques*. 2nd Revised Edition Wishma Prkashan, New Delhi

Kraus JF, Peek C, Williams A (1995). Compliance with the 1992 California motorcycle helmet use law. American Journal of Public Health;85:96–9.

Noam Noked, Providing a Corrective Subsidy to Insurers for Success in Reducing Traffic Accidents (2010)

Nziza A (2013) Boda boda: Regulate this necessary evil in East Africa

The Road Journal Issue: (2010) "Drug abuse and alcoholism have taken toll on commercial motor cyclists (boda boda)

Pankaj, T. (1991): *Designing low-cost rural transport components to reach the poor.*

Infrastructure Notes Transport No. RD-2. March, Washington, DC (The World Bank).

Sosin DM, Sacks JJ, Holmgreen P (1990). Head injury-associated deaths from motorcycle crashes.;264:2395–9.

Traffic and Road Safety Act of Uganda (1998),

Traffic and Road Safety (Motor cycle) Regulations, 2004

Vagias, Wade M. (2006). Likert-type scale response anchors. Clemson International Institute for Tourism & Research Development, Department of Parks, Recreation and Tourism Management. Clemson University.

Vogt, W.P (2007). *Quantitative Research Methods for Professionals*, Boston, Mass Pearson.