

# THE ROLE OF PUBLIC TRANSPORT IN ECONOMIC ENHANCEMENT OF MOTORCYCLES AND MINIBUSES DRIVERS IN TANZANIA. A CASE OF ILEMELA MUNICIPALITY

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## ABSTRACT

*This paper establishes the role of the public transport sector in economic enhancement of motorcycles and minibuses drivers in urban areas in Tanzania using cross-section data collected from 40 motorcycles and 17 minibuses drivers in Ilemela Municipality, Tanzania. Descriptive statistics and thematic qualitative analysis was used to create the role of public transport in enhancing the economic welfare of the drivers of motorcycles and minibuses. The study findings indicated that 93% of all the motorcycles and minibuses were male; youth aged 18-35 years were the main drivers of motorcycles and minibuses. Also drivers of motorcycles and minibuses had varied education levels whereby 36.8% had secondary education, 29.8% had primary education and 29.5% had tertiary education. Lastly 64.9% of drivers of motorcycles and minibuses diversified into other income generating activities including retail shop, agriculture and poultry production while 35.5% remained focused only on single source of income the driving of motorcycles and minibuses. The study recommends Tanzania Government the Ministry of Work, Youth and Employment and other stakeholders should provide seminar and workshop on opportunities offered through driving motorcycles and minibuses.*

**Keyword:** *Public transport, economic enhancement, motorcycles and minibuses*

## 1. Introduction

Transportation drives the economic and social development of a country, especially in enhancing the mobility of the people, goods and services (Afolabi and Akibo, 2020). The provision of good public transport enables cities to thrive and fulfil their economic, environmental and social aspirations. Good public transport was vital to successful urban areas, enabling people to access jobs and services, employers to access labour markets and business to reach the customers for their services. Moreover public transport involves the creation of urban infrastructures that enhances job creation and improves the livelihood of urban residents. Job creation by urban transport does not benefit only urban motorcycles and minibuses operators. The construction industry of public transport is a major employer in urban areas both to skilled and unskilled residents (Starkey and Hine 2014). But in some areas the design of the infrastructures ignores to accommodate residents employment opportunities as the focus was on vehicles passageway. In Kenya the Thika Highway Improvement Project failed to alter its design to accommodate or plan for the 3,000 small-scale business people of Githurai market, one of the largest regional markets in the Nairobi area (Klopp, 2012). This is a problematic design of most of public transport of urban and rural infrastructures in developing countries which focus more on what on vehicles rather than other livelihood strategies that contribute at large in poverty reduction to urban dwellers.

Official urban public transport is estimated to employ 7.3 million worldwide (UITP, 2011). The Asia Pacific region employs 2.8 million, Latin America 1.2 million, Middle East/North Africa 200,000 and Sub-Saharan Africa just 70,000 (UITP, 2011). In east Africa region especially Kenya, Uganda and Tanzania, the motorcycles famous known as 'boda boda' and minibuses common known as 'Dala Dala' in Tanzania and "Matatu" in Kenya and "Kigati" in Uganda the previous studies indicated they contribute at large to the economy. The name "Boda Boda" derived from the phrase "border to border", because of bicycle predecessors started their operations of transporting goods across the border between Uganda and Kenya in the 1960s (Goodfellow, 2015). These days, the name "Boda Boda" refers to both bicycle-taxis and motorcycle-taxis (Maho, 2017).

Motorcycle taxis presence has ensured the transportation of goods and passengers to distant places in numerous parts of Africa including Tanzania (Maho, 2017). Since year 2008 to 2014, Tanzania successfully registered about 700,000 new motorcycles which seem the business has attracted investors and offered employment to youth and the passengers preferred it to easy transport thus enabled people to perform their economic activities (Bishop and Amos, 2015). According to Kenya National Bureau of Statistics (KNBS) it was revealed that between January and September 2017, 163,883 motorcycles worth Sh9.2 billion (about US\$92 million) were purchased by Kenyans (Mtanga and McCamel, 2019). In Uganda it was affirmed to have 200,000 bicycle and 90,000 motorcycle 'boda-boda' drivers operating for hire (UITP, 2011). Despite of the significance of the public transport sector in Tanzania economy still it characterized by high cost, low quality of services due to various reasons including the existence of massive backlog of infrastructure maintenance and rehabilitation, inadequate capacity caused by low level of investment in resources, and low level of enforcement of safety, environmental sustainability and gender issues. These transport sector problems have by far impeded socio economic development and poverty reduction in Tanzania. Hence the analysis of the role of public transport towards social - economic development of the motorcycles and minibuses drivers at Mwanza in Ilemela Municipality Tanzania, using Pansiansi ward was useful to make a remarkable conclusion on whether the operators of minibuses and motorcycles had added any improvement in lives of the drivers of boda boda and dala dala in Ilemela Municipality.

## **2. Materials and Methods**

### **2.1 The study area**

The study was conducted in Pansiansi ward, Ilemela Municipality located at  $2^{\circ} S$ ,  $32^{\circ} E$  in Mwanza region with average altitude of 1,261 meters (4,137 feet). Ilemela district is among of the 8 districts of Mwanza region. It is bordered to the north by the Nyamagana Municipality, to the east by Magu district, to the east and south by Misungwi district and to the west by the Mwanza gulf of lake Victoria. Part of the region's capital, the town of Mwanza is within Ilemela district. Administrative the Ilemela municipality comprised of 11 wards and 147 streets/villages. Ilemela Municipality particularly Pansiansi ward was selected because of presence of tarmac road that connect with important services and neighbor areas including Mwanza airport, Nyamagana Municipality and Magu District.

### **2.2 Research design**

The study employed a cross-sectional research design where data was collected at one point in time. It was used because it's useful in determining how many individuals are affected by a situation and whether the occurrence differs across groups or population characteristics (Hemed, 2015). Also cross sectional research design was used because it allows the examination of associations between variables (Johnson, 2016).

### **2.3 Study population, sampling procedure, sample size and sampling frame**

The target population comprised of registered public transport drivers of motorcycle famous known as bodaboda and mini buses famous known as daladala. The study employed purposive sampling whereby the respondents were obtained from the lists of motorcycle drivers and mini buses registered in their respective areas of operations and their routes in Pansiansi ward. Fifty seven (57) drivers comprised of 40 motorcycle drivers and 17 mini buses drivers were selected purposively for the study. Motorcycle drivers were many as compared to minibuses drivers because of their ability to access places other minibuses have difficulty reaching, and their ability to manoeuvre on busy urban roads (Mtanga and McCamel, 2019). Sampling frame was a list of motorcycle and mini buses drivers registered in their respective routes of operations.

## 2.4 Data collection and analysis

The study used both primary and secondary data. Secondary data were collected through documentary review of government publications, journals, books and internal records from Land Transport Regulatory Authority. Primary data were gathered from respondents through interviews and observations methods with the aid of questionnaire and checklist tools. Data were analyzed by using Statistical Package for Social Sciences version 20. Quantitative data were analyzed by using descriptive statistics to obtain frequency counts and percentages of various coded responses. Additionally, qualitative data were analyzed by using content analysis. Content analysis involved logically evaluation of texts (e.g. documents, oral communication, and graphics), related to income generated by public transport operators, saving by public transport operators, income generated activities conducted by public transport operators, contributions of public transport to economic enhancement of public transport operators and operating costs.

## 3.0 Results and Discussions

### 3.1 Socio-economic characteristics of the respondents

The study revealed that the majority of the respondents were male 93% while female were only 7%. In terms of age the majority of the respondents aged between 18 and 35 years whereby those aged 18 -25 years were 40.4% and 26-35 years were 29.3% and the least 10.5% aged between 46 years and above. Furthermore the study findings shows varied level of education whereby 36.8% had secondary education followed by 29.8% of the respondents they had primary education and the least 13.3% had Bachelor degree level, 10.5% certificate and 7% diploma. Also 54.4 % of the respondents were married while 42.1% were single. This implies that in terms of education level of the respondents all of them joined the carrier of driving a motorcycles and minibuses after completion of their studies. The findings concur with that of Debra, (2007); Khotikna, (2007) and Ogunrinola (2010) found that riding of a motorcycle was a major employer of young school leavers.

**Table 1: Socio-economic characteristics of the respondents**

Variables	Frequency	Percent	
Sex of respondent	Male	53	93.0
	Female	4	7.0
Age of respondent	18-25 years	23	40.4
	26-35 years	17	29.8
	36-45 years	11	19.3
	46 years and above	6	10.5
Education level of respondent	Primary level	17	29.8
	Secondary level	21	36.8
	Certificate level	6	10.5
	Diploma level	4	7.0
	Degree level	7	12.3
	No Schooling	2	3.5
Marital status of respondent	Single	24	42.1
	Married	31	54.4
	Widower	1	1.8
	Divorced	1	1.8
Occupation of respondent	Minibus Driver	17	29.8
	Motorcycle Driver	40	70.2

Source: Field Data Survey (2019)

### 3.2 Income generated by public transport operators from public transportation per week

The study revealed small varied changes in earnings among minibus drivers and motorcycle drivers. Minibus drivers mainly 10.5% earned 105 000 -139 000 Tanzania shillings (Tsh) per week while motorcycle driver 22.8% earned between 105 000 -139 000 Tsh and 70 000-104 000 Tsh. Similarly the least 5.5% both the minibus and motorcycle drivers earned 175 000 Tsh and above. Additionally there were 15.8% of motorcycle drivers who earned between 35 000 -69 000 Tsh per week while no any minibus drivers earned lowest amount ranging between 35 000 -69 000 Tsh per week. This implies that minibuses drivers earned large amount of money per individual per week as compared to motorcycle (Table 2). This finding was attributed by large competition among motorcycle drivers that resulted to moderate earnings. This findings differ with the finding of Gumel *et al.* (2017) in their study on impact of commercial motorcycle transport in raising income in Nigeria found that the maximum income earned by motorcycle drivers was Naira (N) 36000 equivalent to 215 963Tsh. This amount was lower as compared to what motorcycles earned in Ilemela Municipality in Tanzania (Table 2).

**Table 1: Income generated by public transport operators per week in Tanzania shillings**

Earnings (Tshs.)	Occupation of respondent		Total
	Minibus Driver n=17	Motorcycle Driver n=40	
35,000 - 69,000	0.0	15.8	15.8
70,000 - 104,000	5.3	22.8	128.1
105,000 -139,000	10.5	22.8	33.3
140,000 - 174,000	8.8	8.8	17.5
175,000 and Above	5.3	0.0	5.3
Total	29.8	70.2	100.0

Source: Field Data Survey (2019)

### 3.3 Savings by public transport operators per week.

The study revealed varied range of amount of money saved per week by public transport drivers. In case of minibus drivers no anyone saved the smallest amount per week ranging between 0 -14 000 Tsh instead the foremost in saving were 35.8% saving the amount ranging between 92 000- 105 000 Tsh followed by 10.5% saved between 36 000 - 56 000 Tsh and least 5.3% saved 15 000 -35 000 Tsh. Additionally in other side the motorcycle mainly 22.8% saved 36 000 -56 000 Tsh and least 8.8% saved 57 000 -91 000Tsh while no any motorcycle drivers enabled to save the highest amount ranging between 92 000-105 000 Tsh per week as they did their counterpart the minibuses drivers.

This implies that motorcycles drivers were capable of saving small amount of money as compared to the minibuses drivers. This situation was attributed by high competition among motorcycles drivers who had many motorcycles stations as compared to minibuses. Focus Group Discussion with boda boda at Pansiansi Dampo Motorcycle Stop revealed the same that motorcycles business it has attracted many unemployed youth and it's cheap to be invested because of low price of buying motorcycles as compared to minibuses thus attracted many youth employment. This was confirmed during interview with boda boda driver at Pansiansi Dampo motorcycle stop said that;

*“In year 2017 we were around 7 drivers but currently we are fifteen. This scenario of the increase of motorcycles drivers has reduced my income I used to get those days as currently we are competing for customers”*

This finding differ from that of Gumel *et al.* (2017) which revealed that the majority of motorcycles drivers saved bellow N1000 equivalent to 41992.86 Tsh. Similarly the study by Bishop *et al.* (2018) revealed in Uganda boda boda rider earned \$8.10 per week equivalent to Tsh 18775.8 which was lower than the amount earned by boda boda riders in Tanzania.

**Table 2: Saving by public transport operators per week in Tanzania Shillings**



Amount saved per week in Tsh. (%)	Occupation of respondent	
	Minibus Driver n=17	Motorcycle Driver n=40
0 – 14 000	0	17.5
15 000 – 35 000	5.3	21.1
36 000 – 56 000	10.5	22.8
57 000 – 91 000	8.2	8.8
92 000 – 105 000	35.8	0.0

Source: Field Data Survey (2019)

### 3.4 Income generating activities carried out by public transport operators.

The study revealed that motorcycle drivers 14% preferred to expand other income generating activities by buying another motorcycle followed by 10.5% engaged with retail shops and least 5.3% participated in small business. On the contrary minibus drivers mainly 5.3% engaged with retail shops and poultry production while the least 1.8% decided to expand income generating activities by possessing their own minibuses. This finding implies that more motorcycle drivers were capable of saving and owning their own motorcycle as compared to minibus drivers. This scenario was attributed by low price of motorcycle as compared to minibus. This finding was similar with that of Urioh (2020) revealed that boda boda riders enabled to engage into other income generating activities including business of motorcycle spare parts, boda boda garage and established small business at their homes.

**Table 4: Income generating activities carried out by public transport operators**

Activities	Occupation of respondent		Total
	Minibus Driver n=17	Motorcycle Driver n=40	
Retail shop	5.3	10.5	15.8
Individual motorcycle	0.0	14.0	14.0
Buying land for agriculture activities	3.5	7.0	10.5
Poultry production	5.3	8.8	14.0
Small businesses	3.5	5.3	8.8
Buying another minibus	1.8	0.0	1.8
Do not have other activities	10.5	24.6	35.1
Total	29.8	70.2	100

Source: Field Data Survey (2019)

### 3.5 Contributions of Public Transport to Economic Improvement of the motorcycles and minibuses drivers.

The study results indicates that, 24.6% of the respondent specified that operation of public transport contribute to self-sufficient in meeting domestic basic needs (food, shelter, and clothing) as the economic improvement. This was followed by 17.5% of respondents, said the operation of public transport helped in payment of rent through income generated from operating public transport. Also, 14.0% of respondents built houses through these activities and 10.5% respondents said they pay tax, 8.8% respondents paid school fees for children and 8.8% respondents said it's their main source of income through operating public transport. However, a small number of respondents 1.8% said income from driving public transport especially motorcycles enabled them to buy their own motorcycles. This finding implies that motorcycles drivers and minibus drivers have successfully enabled to save amount of money from their main occupation thus improved their economic welfares. Additionally it was revealed that only few motorcycle drivers managed to buy their own motorcycles after saving some amount of money they obtained after paying their owners. Minibuses drivers did not managed to save amount of money that would enable them to own their minibuses. This finding is disagreeing with that of ILO (2003) conducted in South Africa noted that very few

minibus drivers managed to save their capital required to become an owner. But in terms of poverty alleviation especially economic improvement the findings agree with that of Karema (2015) revealed that drivers of commercial motorcycle contributed 10% towards poverty reduction due to gainful employment generated.

**Table 5: Contributions of Public Transport to Economic Improvement of the motorcycles and minibuses drivers.**

Contributions (%)	Occupation of respondent		Total
	Minibus Driver	Motorcycle Driver	
Self-sufficient in meeting domestic basic needs (food, shelter, and clothing)	5.3	19.3	24.6
To pay school fees for children	1.8	7.0	8.8
To pay rent	8.8	8.8	17.5
To build house	8.8	5.3	14.0
Transportation of goods to market	0.0	7.0	7.0
To buy another motorcycle	0.0	1.8	1.8
To earn income	1.8	7.0	8.8
To pay tax TRA	1.8	8.8	10.5
To save time	0.0	1.8	1.8
To buy another minibus	1.8	0.0	1.8
No response	0.0	3.5	3.5

Source: Field Data Survey (2019)

### 3.5 Operating Cost of Public transport in Ilemela Municipal Council.

From the research findings, most of respondents 40.4% who were drivers of minibuses and motorcycles said that, they buy fuel and did service of vehicles and motorcycles followed by 17.5% of respondents said that, they paid traffic charges. Also, 14.0% of respondents agreed that they paid weekly payments to the owner of vehicles and motorcycles. Similarly 12.3% of the respondent they purchased fuel only and 10.5% of respondents they did service of vehicles as indicated (Table 6).

**Table 6: Operation costs incurred by motorcycle and mini-bus drivers**

Activities cost (%)	Does your income help to afford operation cost of public transport? (%)	
	Yes	No
Fuel	12.3	0.0
Service of vehicles	10.5	1.8
Traffic charges	17.5	0.0
Owner's weekly payments	14.0	0.0
To buy fuel and to do service of vehicles	40.4	0.0
Other costs	0.0	3.5

Source: Field Data Survey (2019)

This implies that, minibus and motorcycle drivers afforded the operation cost of their minibuses and motorcycles. Similarly the study finding implies that both minibuses drivers and motorcycles did not adhered land and surface transports regulations as a result they were penalized with charges for their mistakes they committed. They paid penalties charges due to traffic cases not less than 30,000 Tsh per charge. For motorcycle drivers on average used 5,000 Tsh per day to buy fuel and use on average 10,000 Tsh for service per week while minibuses drivers

purchased fuel per day on average which cost 80,000 Tsh and above. The drivers of minibuses paid 50,000 Tsh per day and motorcycles paid 50,000 Tsh per week to their owners. The finding was contrary to that of Mbabazi (2019) who found that the operation costs of boda boda riders in Uganda was higher particularly in rural areas for example the costs of service and other repairs was \$ 6.58 (Tsh 15 252.44). Also revealed that the operation costs depended much on the quality of the road thus the poor quality of the road the more operation costs.

#### 4.0 Conclusions and Recommendations

##### 4.1 Conclusions

The study concludes that first the majority 93% of the drivers of public transport specifically of minibuses and motorcycles were male. Secondly youth aged between 18 -35 years were the main drivers of minibuses and motorcycles. Third, driving a public transport especially minibuses and motorcycles is no longer the career for people with low level of education as the study revealed the drivers had varied levels of education beginning from primary to tertiary education. Fourth, the public transport drivers especially minibuses earned more money per week as compared to motorcycles drivers. Fifth, the majority 64.9% of the drivers specifically minibuses and motorcycles diversified income generated activities while 35.1% they were only engaged in driving of minibuses and motorcycles. Seventh, the main operating costs incurred by minibuses and motorcycles drivers revealed that 40.4% purchased fuel and other services and 17.5% incurred traffic charges penalized by police. Lastly the study concludes that income earned by minibuses and motorcycles drivers enhanced them economically.

##### 4.2 Recommendations

The study recommends the government and other public transport stakeholders should conduct seminar and training to motorcycles and minibuses drivers on public transport safety rules and regulations. Secondly, minibuses and motorcycles drivers without alternative income generating activities should engage in other income generating activities that will supplement their income. Third, Tanzania Government the Ministry of Work, Youth and Employment and other stakeholders should provide seminar and workshop on opportunities offered through driving motorcycles and minibuses.

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#### REFERENCES

- Afolabi, O. J. and Akibo, K. O. (2020). Urban Challenges and Informal Public Transport Services in Nigeria. 21(3), 319–331.
- Bishop, T. and Amos, P. (2015). Opportunities to Improve Road Safety through “Boda-Boda” Associations in Tanzania. Uk Aid, United Kingdom. 59pp.
- Goodfellow, T. (2015). Taming the “Rogue” Sector: Studying State Effectiveness in Africa through Informal Transport Politics. *Comparative Politics*. 47 (2): 127-147.
- Gumel, G.B. Adam, I.M. and Rilwan, I.A. (2017). Impact of Commercial Motorcycle Transport in Raising Income: Evidence from Jigawa State, Nigeria. *CARD International Journal of Social Sciences and Conflict Management* .2 (3): 74-91.
- Hemed, M. (2015). Cross-sectional studies; Training Course in Sexual and Reproductive Health Research Geneva, Switzerland. 12pp.
- ILO (2003). Organizing in the Informal Economy: A Case Study of the Minibus Taxi Industry in South Africa Geneva, International Labour Office, 69pp.
- Karema, F. M. (2015). The role of Commercial Motorcycles in the Rural Economy: A Case Study of Laikipia East Sub-Country, Kenya. Unpublished Dissertation for Award of MA Degree at Nairobi University , Nairobi, Kenya , 72pp.
- Klopp J M, (2012). Towards a political economy of transportation policy and practice in Nairobi. *Urban Forum* 23:1–21

- Maho, F. (2017). Chinese Involvement in Tanzania and Its Local Impacts. Unpublished Honors Theses of the University of Bucknell University. 107pp.
- Mbabazi, E. (2019). Impact of unpaved road condition on rural transport services. Proceedings of the Institution of Civil Engineers – Municipal Engineer 172(4): 239–245.
- Mtanga, S. and McCamel, R. (2019). Motorcycle parts and aftermarket industry regional value chain in Southern Africa, WIDER Working Paper 2019/38 [<https://doi.org/10.35188/UNU-WIDER/2019/672-2>] site visited on 20/12/2020
- Sarah Lindstrom Johnson (2010). A Question of Time: Cross-sectional Versus Longitudinal Study Designs, *Pediatrics in Review* 31 (6):250-254
- Starkey, P. and Hine, J. (2014). Poverty and sustainable transport: How transport affects poor people with policy implications for poverty reduction, A literature review, UN habitat. 67pp.
- UITP, International Association of Public Transport (2011). Observatory of employment in public transport. Brussels, Belgium. [[http://www.uitp.org/sites/default/files/cck-focus-papersfiles/Employment\\_in\\_PT\\_13Mio\\_2011.pdf](http://www.uitp.org/sites/default/files/cck-focus-papersfiles/Employment_in_PT_13Mio_2011.pdf)] site visited 22/12/2020
- Urioh, N. (2020). Contribution of Bodaboda Business on Improving the Standard of Living among Youth in Tanzania: A Case of Ubungo District in Dar es Salaam. Unpublished Dissertation for Award of MBA Degree at Mzumbe University, Morogoro, Tanzania, pp.86.
- Zangirolami-Raimundo, J. Echeimberg, J. O. Claudio, L. (2018). Research methodology topics: Cross sectional studies, *Journal of Human Growth and Development*, 28(3):356-360

