



# **THE IMPACT OF TRICYCLES ON TRANSPORTATION AND ECONOMIC ACTIVITIES IN GHANA, A CASE STUDY OF THE HO MUNICIPALITY**

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## **Abstract**

*The study sought to study the impact of tricycles on economic activities and transportation in Ghana, using Ho Township as a case study. The objectives of the study were (1) to identify how tricycles have enhanced economic activities, (2) to identify ways in which tricycles have enhanced transportation, (3) to examine ways to address challenges related to the operation of motor-tricycles in Ghana. Using a qualitative approach, interviews and focus group discussions*



were conducted among operators and owners of tricycles, farmers, and business owners. The collated views and opinions revealed that the benefit outweighed the risk involved in tricycle use. The significant impact of tricycle use is the enhancement of transportation and economic activities and the creation of jobs. Tricycles have enhanced economic activities through their ability to cart farm produce to the market, reducing post-harvest losses. The government and stakeholders in the transportation sector should work to ensure improvement in the use of tricycles and their sustenance. Further studies ought to be conducted to determine how the tricycle business can be improved in order to make it more lucrative.

**Keywords:** Economic activities; Ho Municipality; Transportation; Tricycle

## INTRODUCTION

Transportation is the movement of goods and persons from place to place and the various means by which such movement is accomplished (Britanica, 2018), which commonly are by rail, air, water, road, and pipelines (Manoj, 2019). Transportation is central to every economy. It aids in the smooth movement of people, goods, and directly affects service delivery. Commuters consider safety, availability, affordability, reliability, comfortability, and efficiency in deciding on means of transport (Litman, 2017). Transportation is a crucial element in development, and this affects the socioeconomic and political interaction that most people take for granted (Button & Hensher, 2001). Transportation has a significant influence on human lives. For instance, various means of transport have dramatically impacted businesses, homes, and schools, thereby making a unique contribution to industrial development, living arrangement as well as the physical and social movement of people. Cars, motorbikes, bicycles, trains, and airplanes are popular means of transportation across the world. Tricycles have become an increasing and acceptable means of transport especially in the developing world.

Tricycles as a means of road transport are vehicles similar to a bicycle, but having three wheels, two at the back and one at the front (Oxford Press, 2017). Tricycles have become more vital to the socio-economic development of individuals and society. In several fragments of the world, including China, India, France, the Philippines, and Nigeria, tricycles are widely used. Some reasons for its adaptability include its affordability and availability. It is also efficient amidst heavy vehicular traffic.

In Ghana, there are several means of transportation, such as cars, vans, buses, motorbikes. Recently, the tricycle was introduced in many parts of the country and has caught up in many of the urban and rural areas. The use of tricycles has become popular in the Ho

township, even though it has been used in Tamale, Wa, Bolgatanga, Accra, and Kumasi. Tricycles have different names in different localities in the country. They are called 'Pragya' in Accra, 'Motto Kia' in Kumasi, 'Yellow-Yellow' in Tamale, 'Mahama Cambo' in Wa, and 'Cambo' in Ho. The Microfinance and Small Loans Centre (MASLOC), a state institution responsible for implementing programs targeted at poverty reduction, has taken over the duty of assisting the youth in acquiring tricycles for commercial purposes. This scheme first started in the northern part of the country namely, Upper West, Upper East, and Northern Region (Mensah, 2017)

The main reason for its introduction and acceptance was the need to augment the traditional commercial vehicles popularly called 'trotro.' It got adopted because of its affordability and tendency to provide jobs to several youths in the country. Tricycles, also known as paratransit, were also meant to make transportation cheaper for inhabitants replacing the commonly used motorbikes but held to be a cause of accidents on major roads (Sun, 2009). The increase in the human population, particularly those residing far away from urban centers, needs the services of flexible modes of transportation. Some passengers, however, prefer tricycles to 'trotro' as a result of its readiness (Sun, 2009). Because of riders' neglect for traffic rules, particularly in the Northern Region, the National Road Safety Commission (NRSC) came out with an exercise on road traffic regulations amongst road users in Tamale to educate riders, drivers and pedestrians on road traffic regulations in order to ensure soundness on the roads (BFTO, 2017)

This system of transportation is believed to have considerably improved the lives of many people, including the operators, owners, and users. However, the question is whether this alternative mode of transport has solved the existing problems such as limited access and higher fares charged by taxi cabs, trucks, buses, and motorbikes. Also, has there been any improvement or increase in economic activities because of the introduction of tricycles? These thoughts have received little attention from researchers, particularly in the Ghanaian context, since Ghana is becoming an economic hub in West Africa. This study, therefore, seeks to identify how the introduction of tricycles has impacted transportation and economic activities. The main research question to be answered is; is there a positive impact on the introduction of tricycles in Ghana? Other questions the study seeks to answer are; (1) in which ways have the introduction of tricycles in Ghana enhanced economic activities? (2) To what extent has tricycles enhanced transportation in Ghana (3) how can the challenges related to the operation of tricycles in Ghana be addressed? In order to answer these questions, the study follows with a literature review on the impact of tricycles on transportation and economic activities. We then present a research methodology and an analysis of the data collected, followed by a discussion

on the findings. We present a conclusion based on the discussion and indicate the implications of the study to researchers, the public, and policymakers.

## LITERATURE REVIEW

The introduction of tricycles, whose role is being described as paratransit and as a gap filler in the public transportation system of most developing nations are helping to close the transportation gap. Paratransit, in this case, is referred to as an auxiliary service provider without routes or schedules (Cervero, 2000). Unlike the old traditional trucks, the tricycles are faster and more convenient (Asiedu, 2015). It is essential to say that most road users use buses, tricycles, and motorcycles, while some use taxis (Ismail, Adeniji, & Paul, 2018).

The increase in the city population, mainly those leaving in far and reduced neighborhoods away from business districts, is one of the main reasons why there is a demand for the services of tricycles. It is generally held that smooth movement is an indicator of development, with constructive economic and social outcomes from investment in transport (World Bank, 2009; Kopp, Block, and Iimi, 2013). As highlighted by the Transport Resource Centre (2002), appropriate transportation is required for achieving the Millennium Development Goals (MDGs).

Paratransit business is available not only in developing countries but also in some developed countries. The paratransit sector, generally speaking, ranges from one-person rickshaw to 25 passengers minibusses. Tanaboriboon and Madrona (1990) presented a range of paratransit services and their comparative benefits as well as drawbacks. These related studies have noted that the reason why such modes remain, if not continued to increase, is because of their socioeconomic values. Economically, as a source of employment for the driver and as well as the income it provides in the process of its operation.

Moreover, paratransit services, if poorly organized, cause vigorous and unhealthy competition leading to overloading and indiscriminate pick-up or drop off of passengers away from designated areas, thus lowering the quality of service (Shimazaki & Rahman, 1996). The tricycle business operation is a source of urban employment for both young and old because it offers job opportunities for skilled and unskilled persons, many of whom have migrated from rural areas (Shimazaki et al., 1996; Cervero, 2000; Vuchic, 2007). However, the condition and performance of public transport are ineffective and are inefficient, ineffective, and in decline. This, in turn, left people and the market to develop alternatives and creative solutions in addressing their daily travel needs, hence, adopting tricycles as a means of movement in addition to public transport (Button & Hensher, 2001).

To some extent, tricycles in Ghana are used for merchandise transportation except in some cases where they are used to transport passengers in villages. According to Aikins & Akude (2015), passengers spend less on transportation and can make considerable savings with regards to using tricycles. Etwire et al. (2014) argued that motor tricycles over the years have gained substantial patronage and have helped to overcome transportation challenges that farmers face. They help to convey people from rural areas to market centers to market their farm produce (Aikins & Akude, 2015). Noting the substantial impact of tricycles in the country on the economy, the government through the Micro Finance and Small Loans Centre (MASLOC) has purchased tricycles for distribution to young and other people who are unemployed in the Upper West Region for transport business which would be used as an urban empowerment transport scheme to help improve on the movement of people and merchandise (GNA, 2015). The tricycles can convey three to four commuters depending on their sizes (Shimazaki et al., 1996; Cervero, 2000; Vuchic, 2007). It also comes along with other auxiliary opportunities, which includes the provision of employment to the operators, mechanics, washing bay operators, spare part dealers, source of revenue generation through taxes and offense fines on tricycle owners as well as registration and licensing (Ismail et al., 2018).

According to Gwilliam (2011), most cities in Africa are undergoing rapid population growth (approximately 3-5%) annually. Over the past decade, the increasing growth in the number of tricycles has enhanced the movement of many commuters who regularly face problems with sparse road networks and inadequate public transport.

## **METHODOLOGY**

### **Study Area**

Ghana is located in the western part of Africa, with a population of about 30.4 million, contributing 0.39% of the world's total population (Worldometers, 2019). Ghana has a total of 16 administrative regions, with Accra being the capital city. The Volta Region is one of the 16 administrative regions of Ghana, with a population of 2,118,252, and 62 percent of the population resides in urban areas (GSS, 2012). According to the 2014 Ghana Living Standards Survey (GLSS), about 76.3% of all female adults and about 82.4% of all male adults in the Region had been to school (GSS, 2014). Regarding sanitation, the two significant facilities accessible to households in the region are public toilets (30.0%) and pit latrine in the house (18.7%). Some homes have no toilet facility and consequently recourse to the use of bushes and the beach, specifically in the coastal districts (Keta and Ketu South) (Ghana Web, 2018.).

The study was carried in the township of Ho, the capital city of the Volta Region because the following reasons; the Volta Region is a border region that connects to the Republic of Togo which makes it easy for the dealers get them to Ghana and for that matter Ho; the town is one of the towns where the tricycle business is being ventured into by many youths as a source of livelihood; no study had been done previously in that area. The city is between Mount Adaklu and Mount Galenukui. It used to be the administrative capital of the British Togoland now part of the Volta Region. The municipality has a population of 177,281, which represents 8.4 percent of the region's total population (GSS, 2014b). The Municipality shares boundaries with Ho West District to the North, Adaklu, and Agotime-Ziope Districts to the South and West and the Republic of Togo to the East. The total land area is about 2,361 square kilometers (912 sq. m), which represents 11.5 percent total land area of the region. In general, the mean periodic temperature in ranges 22.0 °C - 32.0 °C (71.6 to 89.6 °F) however yearly mean temperature ranges from 16.5 °C to 37.8 °C (61.7 to 100 °F). Temperatures are usually high all through the year, which is suitable for farming. The rainfall pattern in Ho has two rainy seasons referred to as the major and the minor seasons beginning from March to June and July to November, respectively (Encyclopedia, 2019.)

About 65.4% and 63.6% of the total population of males and females respectively are economically active, representing 64.5% of the total population in the municipality, whereas a total of 35.5% of the entire population is not economically active. These figures include those in full-time education, pensioners, disabled or sick, and children. Economic activities and employment opportunities by industry base available to age 15 years and older are but not limited to the following; agriculture, transport, information and communication, manufacturing, real estate, food, education, construction, public administration, defense, arts and entertainment (GSS, 2014b).

According to the Ghana Statistical Service 2015 Labor Force Report, the Volta Region has a total unemployment rate of 9.9% comprising people from 15 years and older of with males constituting 7.2 % and 12.1% for females (GSS, 2016). Literacy rates in the Volta Region in Volta Region are high because the population 11 years and above has 90.3% who are literates and 9.7% being illiterates (GSS, 2014b).

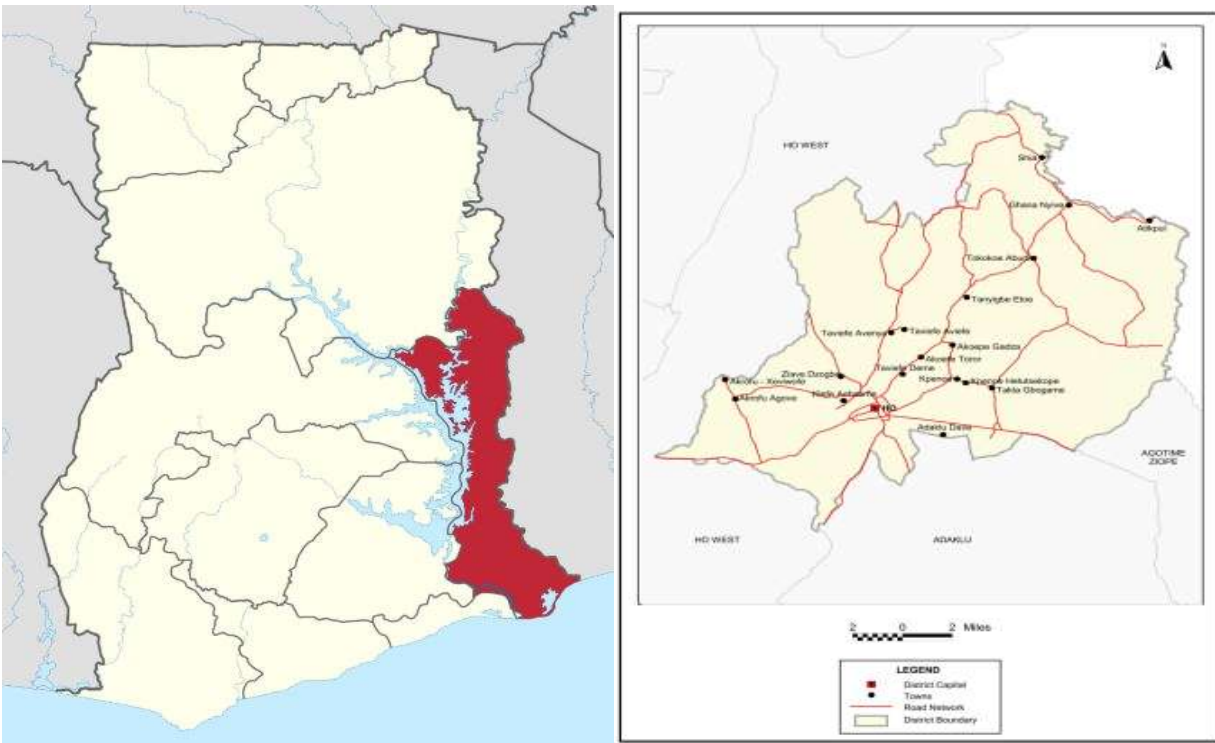


Figure 2 the map of Ghana and a sectional map of Ho

Source: (Ghana Statistical Service, 2014)

### Sampling and data collection

The qualitative research method was employed for the study, which gathered non-numerical data. Data were acquired from both primary and secondary sources. The primary data was based on field surveys using various techniques such as interviews and observation, whereas the secondary data was acquired from already existing information held by various institutions such as the DVLA, and platforms such as the internet and journals. The study sampled 40 residents using the convenient sampling technique, which is non-probabilistic, and out of the 40 respondents, 21 were males, and 19 were females. The sample frame for the study was the tricycle operators/riders and passengers including, farmers/traders, as well as general users. The operators are those who ride the tricycles, farmers and traders are passengers who move their products to retail and sell in the market while the general users are other passengers who board the tricycles for other reasons. The largest in the sample of respondents was operators representing 37.5 %, and the least was general users representing 30%. Interview guides or unstructured questionnaires were used for the data collection, which generated information relevant to the study in order to meet the stated objectives and to address the research questions. Key informant interviews were conducted with the officers at the Ho regional office of the Driver and Vehicle Licensing Authority (DVLA) and some tricycle dealers to ascertain

relevant information regarding the tricycle operations. Table 1 gives details of the background of respondents.

Table 1 Background of respondents (N=40)

Respondents	Gender	Frequency	Percentage (%)
Operator	Male	13	32.5
	Female	2	5
			<b>37.5</b>
Traders and Farmers	Male	4	10
	Female	9	22.5
			<b>33.5</b>
General users	Male	4	10
	Female	8	20
			<b>30</b>

## RESULTS AND DISCUSSIONS

### Convenience, Safety, and Cost

The study was able to draw the relation between convenience, safety, and cost and the ultimate objective being to identify the significant impact of tricycles in Ho. Convenience in transportation is the ability of passengers to feel comfortable at any time when dealing with the tricycles. Safety has to do with the protection of life and property through regulation and management. Cost is the payments involved in moving products, people, or assets from one place to another, which are often passed on to consumers. During the study, a question was asked about what the preferred means of transportation is for the respondents. Most of them responded that they preferred the tricycles to the other means of transport like taxi cabs and motorbikes. This prompted the need to find out about its convenience, safety, and cost.

### Convenience

The convenience of passengers is essential. The interview solicited views from users of the tricycles at its convenience. A question such as “*how often do you patronize the services of the tricycles?*” and “*how easy is it assessing the operators at night?*” 80% of the respondents were



of the view that they patronize it very often with a few of them who patronize them once a while and also at night, it is with ease getting their service.

A general user responded that

*"I am a nurse, and I go to work almost everyday, I cannot remember the last time I boarded a taxi cab to work, I board tricycles whenever I close from work at any time of the day."*

A farmer also responded that

*"Normally, because of the relationship between me and the retail traders at the market, I send my farm produce to them in the market, and at any point in time, I patronize the services of the tricycle operators to meet my customers on time."*

A trader also responded that

*"I usually patronize the services of the tricycles whenever I buy new stock from the market, and I need to transport the stuff to my shop in Dome."*

A farmer also responded that

*"I usually patronize the services of the tricycles whenever I need to transport my farm produce to the market for sale."*

Based on the responses given, it was established that there is an ease with which passengers get access to tricycles at night. These were what some said.

*"I have most of the rider's telephone numbers, so anytime I need their service at night, I call any, and he comes, because I usually go out with my friends during weekends."*

Another respondent also said, *"They are almost everywhere and every time, so it is straightforward to access their service at night."*

However, a few also responded to the difficulty in obtaining tricycles under challenging situations. A respondent said, *"it is not that easy because if unfortunately you do not meet on your way or you do not have access to any operator's number, you will be stranded especially on campus."*

## **Safety**

On safety, almost all the respondents responded negatively with the view that the safety aspect of the tricycles is nothing to write home about. Respondents were asked the question, *"How will you evaluate the level of safety involved in using tricycles?"* These were some of the responses gathered in the course of the interview

*"it is precarious because it has no doors to protect the passengers,"*

*"it is not safe at all because most riders are reckless and inexperienced, and because of competition among them, carelessness has to set in the way the ride."*

*“too many tricycles have led to pressure on the road, thereby increasing the number of accident cases among tricycles.”*

*“it is effortless for some passengers to fall out from the tricycle especially when the vehicle is overloaded, it put lives at risk; therefore, I think doors should be fixed on the tricycles in order to avert the situation where people are bound to fall.”*

Many of the riders operate the tricycles without helmets. Some of these riders are too careless on the road often putting lives at risk One respondent was of the view that

*“Authorities must ensure that riders wear crash helmets in order to protect them because riders’ safety is also critical.”*

An operator also said

*“Most of my colleague riders do not put on helmets, and the speed at which they ride is bad sometimes, I think the police should check that aspect regularly because they know, but they just do not want to do the right thing.”*

### **Cost**

As part of the study, the cost involved in patronizing services of tricycle operators is one factor that cannot be ignored. Most of the riders revealed that the cost of buying a new tricycle is about GH¢ 13,700 (\$2,529). We also sought to find out from passengers the fares charged by the operators. On average, most of the respondents reported that the fare charged is moderate as compared to other means of transportation. These were some responses from the interview.

*“It is fairly moderate and most especially cheaper when we are boarding in a group.”*

*“In terms of evaluation, the cost involved is moderate, and they have no limit to their services; they take you wherever you to go and at any time and you still pay GH¢1.00 or GHC1.50”.*

One farmer also responded that; *“it is not expensive at all and mostly, it is just GH¢1.00 charge”.*

On the hand, one respondent reported that the fare charged sometimes is not fair, this is precisely what she said;

*“The riders most at times do price discrimination; they look at your face and appearance and charge.”*

The costs incurred by the tricycle operators themselves include fuel, maintenance, washing, offense fines by the police. An operator said

*“I try to cut down the cost, so I wash my tricycle by myself, but fuel is one thing that most of us spend on because fuel prices are high, and also, we sometimes pay some fines for road offenses.”*

Another operator lamented over the price fuel that

*“Normally, the atmosphere determines the amount of money we spend on fuel, but currently, a liter of fuel is GH¢5.38 which is very expensive. Maybe the government should do something about the fuel prices to make it more affordable.”*

From the interview, it was realized that the positive responses outnumbered the negative ones a reason, they usually patronize it. This gives more jobs to the operators and in the long run, turns to have a positive impact on both transportation and other economic activities in Ho and the Municipality as a whole.

### **Impact on Economic Activities**

The study sought to identify how the introduction of tricycles has enhanced economic activities in the Ho Municipality of the Volta Region. In the course of the study, it was revealed by our respondents that economic activities have improved, which has led to job creation for the youth. These are what other respondents said concerning job creation.

*“As a rider, the tricycle job has helped me to be able to cater for my younger brother and also pay his school fees, which were not the case in the past.”*

*An operator gave the revelation that*

*“I make between GH¢90.00 and GH¢120.00 and some times higher on market days. From that, I am supposed to make my daily sales of GH¢50.00 to my master. So averagely, when I deduct money for fuel and other minor expenses, my daily take-home is not less GH¢30.00, and personally, it is perfect because you will not think of doing any criminal think for survival.”*

A woman also revealed that not only did the introduction of the tricycle helped her to transport her goods to the market with ease, but her two sons, who used to be jobless, are also now employed, and there is not much pressure on her at home.

During the field survey, lots of new developments with regards to the introduction of tricycles were observed. Now, there are lots of even new mechanic shops around the city, which are popularly known as “fitter shops,” which, in the long run, has also created jobs for the mechanics and not only the riders. Also, new spare part dealers are now gainfully employed, and this is making the sphere of economic activities grow more substantial in the Ho Municipality. It was observed in the course of the field survey that, due to the massive increase in the number of tricycles in the Municipality, fuel stations have also made more sales. Lastly, it was observed that the introduction has also led to people opening more washing bays, and we specifically saw most tricycles packed at various washing bays either already washed or in the process of being washing. This has boosted the creation of jobs and therefore economic activities in the Municipality

## CONCLUSION

The focal objective of the study was to identify the significant impact of tricycles in Ghana using the Ho Municipality of the Volta Region as a case study. For our study, tricycle operators, traders, the public, and farmers were interviewed. From the interview, positive responses were gathered, and it outnumbered the negative responses, which concludes that the introduction of tricycles in the municipality has a positive impact on the socio-economic development and wellbeing of residents.

The significant impact of tricycles is that transportation and economic activities have been enhanced, and several jobs have also been created, and the youth in the Municipality have a reliable source of livelihood.

## RECOMMENDATIONS

The following recommendations are essential for the improvement, strengthening, and sustainability of the operations of tricycles in Ho: The government can ensure a reduction in fuel prices in order to make the tricycle as well as other means of transportation cheaper and affordable. The activities of the operators need to be checked in order to promote efficiency and effectiveness; therefore, unions should be formed in various communities in the Municipality to regulate their activities. With that, fares can be regulated, and operators adequately controlled. Government regulators such as the NRSC, MTTD, and the DVLA should ensure that the activities of tricycle operators in the transportation sector are improved, sustained, and adequately regulated. To ensure safety, manufacturers should improve the quality of the tricycles by fitting doors to enhance the safety of passengers.

Further studies should focus on determining how the tricycle business can be enhanced in order to make the business more lucrative in the future without compromising safety.

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APPENDIX

