RECEIVED: 06.07.2026| ACCEPTED: 30.09.2026 | PUBLISHED: 02.10.2026

Citations: SAMUEL, M. & IDRIS, M. (2026) Effect of Tricycle Business on Poverty Reduction in Jalingo Metropolis, Taraba State GAIJMGT Vol: 2.No. 1. P 1-18

https://globreshub.org/index.php/gaijmgt DOI: https://doi.org/10.5281/zenodo.23218072

EFFECT OF TRICYCLE BUSINESS ON POVERTY REDUCTION IN JALINGO METROPOLIS, TARABA STATE

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Abstract

This study examined the effect of tricycle business on poverty reduction in Jalingo metropolis, Taraba State. The study employed a survey research design and collected primary data from commercial tricycle operators using structured questionnaires. The sample size of 352 respondents was determined using the Krejcie and Morgan (1970) procedure. Statistical and econometric techniques such as frequency distribution, simple percentages, tables, charts, and multivariate logit regression were used for presentation and analysis. Findings revealed that 70.7% of tricycle operators earned a daily income of ₦8,000 and above — more than three dollars per day — thus living above the poverty line by World Bank standards. It was also revealed that after engaging in the tricycle business, most operators could afford three standard meals per day, access good healthcare facilities, and afford zinc-roofed houses. However, there was no significant change in the clothing pattern of operators before and after engaging in the business. Furthermore, number of meals taken, access to clothing, access to improved medical services, improved house type, and small family size during tricycle operation showed a negative relationship with poverty reduction, while family members' access to education, access to loans, and tricycle ownership showed a positive relationship with poverty reduction among operators in Jalingo metropolis.The study identified police and road safety harassment, multiple taxation, lack of an effective union, lack of financial support, high cost of spare parts and tricycles, absence of operational policy, and lack of terminal parking facilities as major challenges. Based on the findings, the study recommended that: government should partner with tricycle manufacturers to provide hire-purchase schemes at low-interest rates to enable ownership; operators should form effective unions and cooperative societies to pool resources for maintenance, insurance, and bulk spare parts purchase; security heads in Jalingo Local Government should check the excesses of security officials to curtail unnecessary harassment; and daily fees charged by unions and local governments should be regulated to prevent extortion.

KEY WORDS: Commercial Tricycle, Poverty, Logistic Regression,Jalingo Metropolis, Commercial Transport

1.0 INTRODUCTION

The persistent challenge of poverty has remained a global concern, particularly in developing countries like Nigeria, where socioeconomic inequalities are prevalent. Poverty in Nigeria has deepened due to factors such as unemployment, lack of access to basic infrastructure, and limited entrepreneurial opportunities (World Bank, 2023). These challenges are even more pronounced in states like Taraba, where many urban dwellers struggle to meet their daily needs.

Poverty in Taraba State, Nigeria, presents a significant developmental challenge, with the state frequently ranked among the poorest in the country despite possessing substantial natural and agricultural resources. The state is characterized by high levels of rural poverty, with an estimated 87.72% poverty prevalence rate reported in some studies, indicating a severe, multifaceted crisis. Approximately 70% of rural populations in the region live below the poverty line, with the highest incidence found among households relying on subsistence agriculture (Naibi, Hussaini & Saleh, 2025). Persistent conflicts, particularly in agrarian areas, have forced youth to abandon the rural areas for fear of attack, contributing significantly to rural-urban migration, food insecurity and poverty. Limited industrialization and lack of diversified income opportunities have led to high unemployment rates, particularly among young people. A large percentage of the population suffers from low standards of living, including poor access to safe drinking water, education and healthcare.

Against this backdrop, the tricycle business, popularly known as "Keke Napep," has emerged as a significant contributor to poverty alleviation by providing a means of livelihood for many residents of Jalingo metropolis. The tricycling business in Taraba State has emerged as a critical coping mechanism for poverty alleviation and employment generation in North-Eastern Nigeria. Despite a poverty prevalence rate of 87.72%, making Taraba the 2nd poorest state in Nigeria, the tricycle business has become a major source of livelihood for over 13,000 operators in the Jalingo metropolis alone (Oromareghake, et al 2025). Despite the expansion of the tricycling business as an intervention to combat unemployment in Taraba State, A significant number of operators do not own their tricycles but operate them for middlemen or investors. They often make daily or weekly payments that constitute high-interest hire purchase agreements, which reduce their take-home income.

1.1 Statement of the Problem

Inflation has significantly increased the price of purchasing new tricycles. This, combined with the rising cost of fuel and spare parts, creates intense pressure on operators to overwork, often in poor road conditions, which accelerates machine failure and eats into their earnings. Commercial tricycle operators continue to report frequent extortion by police and local government officials. Additionally, high daily levies levied by transport unions reduce the operator's net income. Bad road conditions in inner city and suburban areas limit the lifespan of the tricycles and increase maintenance costs, making it difficult for operators to move out of the informal poverty trap. While the tricycle business significantly improves daily income compared to unemployment, the systemic challenges specifically the reliance on hire purchase and high overhead costs often ensures that operators, though earning a living, remain

financially vulnerable and exposed to poverty rather than escaping it. Though Commercial Tricycle has become a phenomenon and an assumed leeway out of poverty, not much research has been carried on this claim in Jalingo metropolis hence the need for this study.

1.2 Research Questions

The study seeks to answer the following research questions:

I. To what extent does tricycle ownership contribute to income generation among commercial tricycle operators in Jalingo Metropolis?
II. To what extent does income generated from tricycle business improve operators' ability to afford basic needs in Jalingo Metropolis?
III. To what extent does income generated from tricycle business improve operators' affordability of medical services in Jalingo Metropolis?
IV. To what extent does access to loans influence tricycle ownership and the economic well-being of operators in Jalingo Metropolis?
V. What challenges do commercial tricycle operators face in accessing loans and sustaining their businesses in Jalingo Metropolis?

1.3 Objectives of the Study

The broad objective of the study is to examine the impact of commercial tricycle business on poverty reduction among operators in Jalingo Metropolis.

The specific objectives are to:

I. assess the effect of tricycle ownership on income generation among commercial tricycle operators in Jalingo Metropolis;
II. examine the extent to which income generated from tricycle business contributes to operators' ability to meet their basic needs in Jalingo Metropolis;
III. determine the effect of income generated from tricycle business on operators' affordability of medical services in Jalingo Metropolis;
IV. assess the influence of loan accessibility on tricycle ownership and the economic well-being of operators in Jalingo Metropolis; and
V. identify the major challenges faced by commercial tricycle operators in accessing loans and sustaining their businesses in Jalingo Metropolis**.**

1.4 Research Hypotheses

The following null hypotheses will be tested at the appropriate level of significance:

H_{01}: Tricycle ownership has no significant effect on income generation among commercial tricycle operators in Jalingo Metropolis.

H_{02}: Income generated from tricycle business has no significant effect on operators' ability to meet their basic needs in Jalingo Metropolis.

H_{03}: Income generated from tricycle business has no significant effect on operators' affordability of medical services in Jalingo Metropolis.

H_{04}: Loan accessibility has no significant effect on tricycle ownership among commercial tricycle operators in Jalingo Metropolis.

H_{05}: Loan accessibility has no significant effect on the economic well-being of commercial tricycle operators in Jalingo Metropolis.

2. Literature and Theoretical Reviews

2.1.1 Conceptual Clarification

Declan (2012) described tricycles as vehicles with powerful diesel engines, and fuel tank capacity of 10.5 litres. They have passenger capacity of four people, and payload capacity of 320kg. Also, they have adequate room for passenger luggage and speed up to 80km per hour. The vehicles are suitable for intra-city commuting and commercial passenger carriage with low fuel consumption of 38km per litre. Distinct from the earlier diesel engine types, there are now petrol engine tricycles in operation. Quellin (2011) explained that, tricycle as a form of transportation system is one of the vehicles on road transportation system which has recently taken a pave in the transport system especially in Asia and Africa. A tricycle, often abbreviated to trike, is a human-powered or gravity-powered three-wheeled vehicle. Some tricycles, such as cycle rickshaws (for passenger transport) and freight trikes, are used for commercial purposes, especially in the developing world, particularly Africa and Asia.

On the other hand, George (1988) defined poverty as a lack of material goods or services. Poverty consists of a core of basic necessities as well as a list of other necessities that change over time and place. People 'need' things such as food, clothing, fuel or shelter and considered being poor because they do not have something they need, or because they lack the resources to get the things they need. In the same vein, United Nation (1995) defined poverty as a condition characterized by severe deprivation of basic human needs, including food, safe drinking water, sanitation facilities, health, shelter, education and information. It depends not only on income but also on access to services. Poverty is a plaque which affects people all over the world, though generally considered as one of the manifestations of underdevelopment. There is hardly a universal way of defining poverty because it affects many aspects of human conditions. However, the conventional concept of poverty depicts it as a condition in which people live below a specified minimum income level and are unable to provide the basic necessities of life needed for an acceptable standard of living.

2.1.2 Theoretical Review

The study was anchored on the vicious circle of poverty theory formulated in the early 1950s by Ragner Nurkse and basic needs theory introduced by the International Labour Organization's World Employment Conference in 1976**.** According to Ragner Nurkse (1953), the vicious circle of poverty is a continue process in such a way as to keep a poor country in a state of poverty. The vicious circle of poverty presupposes that, poverty is a serious human problem that is self-perpetuating which, if not properly handled, can become intergenerational as well as capable of affecting prosperity of another person. The theory shows how the vicious circle can condition a person to continue to wallow in the circle of poverty and remain externally tied to it. The ILO on the other hand published a study that defined basic human needs that people in developing countries have and which may be addressed by those who seek to help people where these needs are not well met. They are; food, clothing, housing, education and public transportation. The basic needs theory is one of the major approaches to the measurement of absolute poverty in developing countries. It attempts to define the absolute minimum

resources necessary for long-run term physical well-being, usually in terms of consumption goods. There is a strong theoretical linkage between income earned and the basic needs and services enjoyed. Increase income is secured through economic activities including commercial tricycle operations especially in a densely populated city like Jalingo where there is high demand for effective and a more convenient means of transportation. Thus, the study sought to use the above theoretical underpinnings to assess how the involvement of people into commercial tricycle has enhance their income, to meet their basic needs so as to break the yoke of poverty in Jalingo metropolis.

2.1.3 Empirical Review

Gbemisola (2021) conducted a research on the role of tricycle transport business in alleviating poverty in Ibadan, Oyo State. The aim of the study was to examine how the tricycle business impacts poverty reduction in the city. A descriptive research design was employed to provide an in-depth understanding of the subject. The study focused on a population of 450 tricycle operators in Ibadan, which was representative of the larger group of operators in the city. Descriptive statistics and factor analysis were used as the method of data analysis to identify patterns and relationships in the data. The findings revealed that tricycle operators in Ibadan significantly improved their income levels, contributing to poverty reduction. The steady daily earnings from the business were highlighted as a key factor in enhancing the financial stability of operators.

Ibrahim (2022) conducted a research on the economic impact of tricycle businesses in rural poverty reduction in Kaduna State. A cross-sectional survey design was used, focusing on 400 tricycle operators in rural parts of Kaduna State. Descriptive statistics and regression analysis were employed to analyze the data collected. The findings revealed that tricycle businesses played a vital role in reducing poverty in rural areas. The operators earned enough income to sustain themselves and support their families, thereby improving their economic status. The study highlighted that the mobility provided by tricycles was essential for rural residents, offering reliable transportation to markets, schools, and health facilities. This increased access to goods, services, and opportunities, leading to improved living conditions.

Kola (2020) conducted a research on the impact of tricycle operation on poverty reduction in Abia State. The research utilized a descriptive and exploratory design to gather detailed insights into the influence of tricycle businesses. The study targeted a population of 350 tricycle operators in Abia State, who were surveyed to gather relevant data. To analyze the data, the study employed descriptive statistics and Pearson correlation analysis to understand the relationships between the tricycle businesses and poverty alleviation outcomes. The findings revealed that tricycle businesses significantly contributed to poverty reduction by providing operators with a steady source of income. It was discovered that tricycle operation provided employment opportunities and financial stability, thereby improving the livelihood of many individuals who depended on it for their daily income.

Kehinde (2022) conducted a research on

the impact of the tricycle business on employment and poverty alleviation in Calabar, Cross River State. The research employed a survey design, utilizing a structured questionnaire to gather data from 250 tricycle operators in Calabar. Descriptive statistics and chi-square analysis were used to analyze the data. The findings revealed that many tricycle operators were able to support their families and significantly reduce poverty through the consistent income generated from their business. The study emphasized that the tricycle business not only provided affordable transportation to the community but also created much-needed employment opportunities for many individuals, contributing positively to poverty alleviation.

Bello (2021) conducted a research on the role of informal transport systems, particularly tricycles, in poverty reduction in Lagos State, Nigeria. Using a cross-sectional survey design, the research focused on a population of 300 tricycle drivers operating in Lagos State. Data analysis was carried out using frequency distribution and correlation analysis to understand the relationship between tricycle business operations and poverty reduction. The findings revealed that tricycle operators consistently reported that their business provided regular income, which contributed to improving their household living standards and, by extension, reducing poverty.

Solaja, Kalejaiye, and Itsuokor (2015) examined the challenges facing commercial motorcycle occupation in Edo State, Nigeria. A descriptive survey design was adopted. Data were collected through questionnaires and in-depth interviews (IDIs) among selected motorcyclists, police officers and road safety officials in Etsako West Local Government Area, Edo State. A total of 255 questionnaires were administered and 10 in-depth interviews were conducted. Data analyses involved univariate and content analyses. The findings revealed that social stigmatization due to the use of motorcycles for criminal activities, lack of protection and inadequate clothing for riders, recklessness, impatience, over speeding and non-compliance to traffic rules, ban and arrest of innocent motorcyclists and payment of incessant levies are the major challenges of commercial motorcyclists in Etsako West, Edo State.

3. 1 Methodology Issues

The research design adopted for this study was survey design. This method was chosen because of it capability of obtaining data from large samples of the population. The target population for this study was comprised of all the operators of commercial tricycle in Jalingo metropolis. The total number of registered tricycle operators in Jalingo local government area is thirteen thousand six hundred and seventy two (13,672) (Motorcycle Agency Office Jalingo, 2020). This formed the population of the study. Data were collected on respondents' demographic characteristics. In addition, information was sought on respondents' average income, access to food, clothing, medical care, housing and questions that bordered on the challenges faced by commercial tricycle riders in Jalingo metropolis. The study employed purposive sampling procedure for the selection of the study area. In the first stage, all the registered tricycle operators in Jalingo metropolis were purposively selected. In the second stage, Krejcie and Morgan (1970) sampling procedure was employed to determine the sample size of 352 from

13,672 total numbers of registered operators of commercial tricycles riders in Jalingo metropolis. A random sampling was employed to pick the respondents. The study employed statistical and econometrics techniques for the presentation and analysis of the study findings. The statistical tools considered were; frequency distribution, simple percentages, tables and charts while the econometrics technique was a multi-variant logit regression to test the hypothesis of the study using the maximum likelihood estimation technique.

3.2 The Empirical Model

Multivariate logit regression model was used for the study. This was considered useful to analyze the determinants of poverty. In a logit model, the endogenous variable is a dichotomous or dummy variable, with (1) representing the household (commercial tricycle operator) as poor and (0) if the household is not poor (Chaudhry, Malik & Hassan, 2009). This approach is in line with Chaudhry et al, (2009); Hasshmi and Sial (2008); Yusuf, Adesanoye and Awotide (2008). According to Yusuf, Adesanoye and Awotide (2008), logistic regression is a model in which a dichotomous variable representing whether or not a household is poor is regressed on a set of supposedly exogenous explanatory variables.

Yusuf et al (2008), implicitly specified a logit regression model as thus;

$p(Y) = E$……..1

If Y represents poverty status, Y might be poor (1) or non-poor (0). By this taking logs of both sides and simplifying equation 1, the log likelihood model is simplified as thus;

$LnYi = pi/i\text{-}pi = ß_0 + !ß_k X_{ki} + Ui$……..2

Where;

LnYi = natural log of P (poverty status)

X_{ki} = A set of independent variables included in the model.

B_k = Parameter estimate

Ui = a random disturbance term.

From the specified model, the model for this study was explicitly specified as thus;

$POV = f(X_1, X_2, X_3, X_4, X_5, X_6, X_7, X_8)$……3

Where POV is poverty status and calculated as;

$$POV = \frac{\text{Average Annual Income of Commercial Tricycle Operators from their Tricycle}}{\text{Total Number of Days in a Year (365 days)}}$$

If the result is less than 3 United State dollars a day in accordance to the World Bank (2025), it means the household is poor in which, assign 1. If the result is ≥ 3 United State dollars a day, it means the household is not poor in which assign 0. Poverty measured at the international poverty line of $3 a day is used to track progress toward meeting the World Bank target of reducing the share of people living in extreme poverty to less than 3 percent by 2030 using the 2025 updated poverty lines threshold, announced in June 2025, accounting for new purchasing power parity (PPP) data from the International Comparison Program (ICP) and aim to more accurately reflect current economic realities. It is importance to note that, one US dollar is assumed to exchange for ₦1437 been the official dollar to naira exchange rate (CBN, 2025).

The independent variables of the model

are defined as thus;
X_1 = Access to three square meal (0 if respondents have, 1if otherwise)
X_2 = Access to clothing (0 if respondents purchase at least 1 new cloth in a year, 1 if others wise)
X_3 = Access to improve medical services (0 if respondents visit dispensaries, federal medical centre or specialist hospital, 1 if otherwise).
X_4 = Family members education (0 if family members have access to education, 1 if otherwise)
X_5 = House type (0 if Zinc roof with cemented wall and floor, 1 if otherwise)
X_6 = Access to loan (0 if respondents have access to loan, 1 if otherwise)
X_7 = Family size (0 if small family size, 1 if otherwise)
X_8 = Ownership of Tricycle (0 if tricycle owns by the operator, 1 if otherwise)

The stochastic model is specified as thus;
$POV = ß_0 + ß_1X_1 + ß_2X_2 + ß_3X_3 + ß_4X_4 + ß_5X_5 + ß_6X_6 + ß_7X_7 + ß_8X_8 + U$ ……..….4
Where;
$ß_0$ = The intercept
$ß_1 – ß_8$ = The Parameters to be estimated
U = The error term.

4. Results and Discussion

4.1 Assessment of the Impact of Commercial Tricycle on Basic Needs of the Respondents

4.1.1Assessment of the Impact of Commercial Tricycle on Square Meals

Assessment of the impact of commercial tricycle on square meals by the respondents before and after engaging in to commercial tricycle was conducted and the result is presented in figure 1.

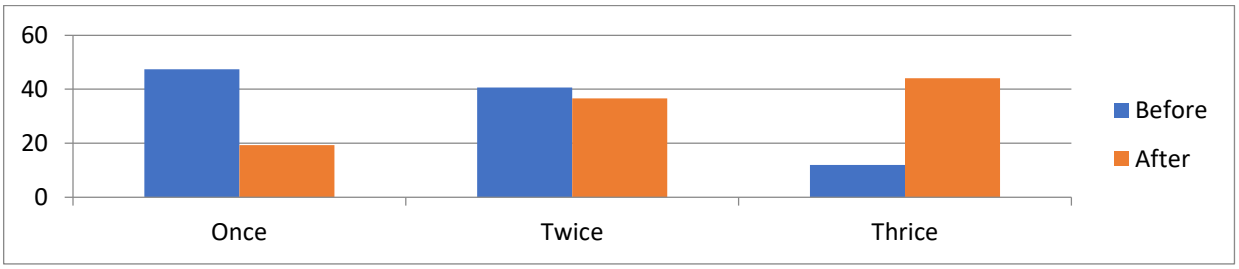

Fig 1: A Bar Chart Showing the Rate of Square Meal of Respondents before and after Engaging in Commercial Tricycle Venture

Figure 1 show that, 11.9% of the respondents were able to meet the 3 standard meals per day before engaging in to commercial tricycle business. However, after engaging in to the business, a total of 44.1% were able to meet the 3 standard meals per day. This is an indication that, commercial tricycle has potential of reducing poverty status and improving the feeding pattern of the respondents.

4.1.2 Assessment of the Impact of Commercial Tricycle on Change in Clothing

Assessment of the impact of commercial tricycle on Change in Clothing by the respondents before and after engaging in to commercial tricycle was examined and the result is presented in figure 2.

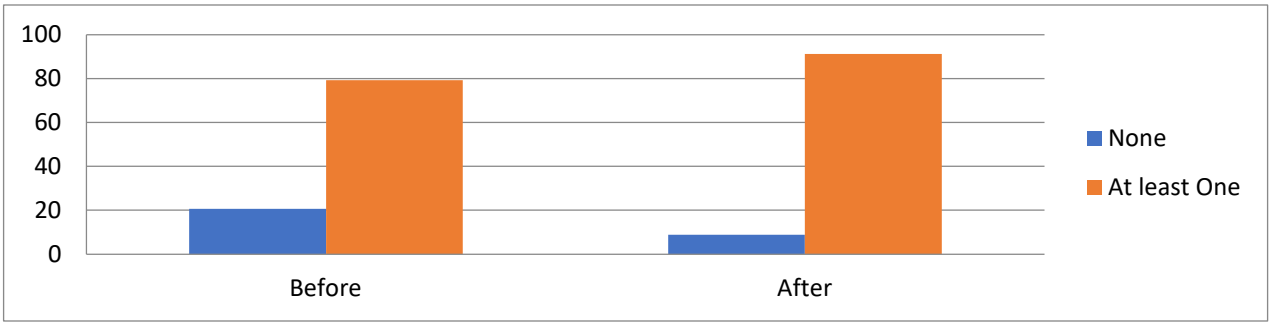

Fig 2: A Bar Chart Showing the Rate of change in clothing of Respondents before and after Engaging in Commercial Tricycle Business

From figure 2 it is revealed that, 79.3% and 91.2 % of the sampled respondents were able to purchased at least one new clothe before and after engaging in commercial tricycle venture respectively. It evidently clear that, no significant change in clothing patent of respondents before and after inclusion in to the social safety nets programme. However, there is an indication of a reduction in poverty status and improvement in the clothing pattern of the respondents.

4.1.3 Assessment of the Impact of Commercial Tricycle on Medication

Assessment of the impact of commercial tricycle on medication by the respondents before and after engaging in to commercial tricycle was examined and the result is presented in figure 3.

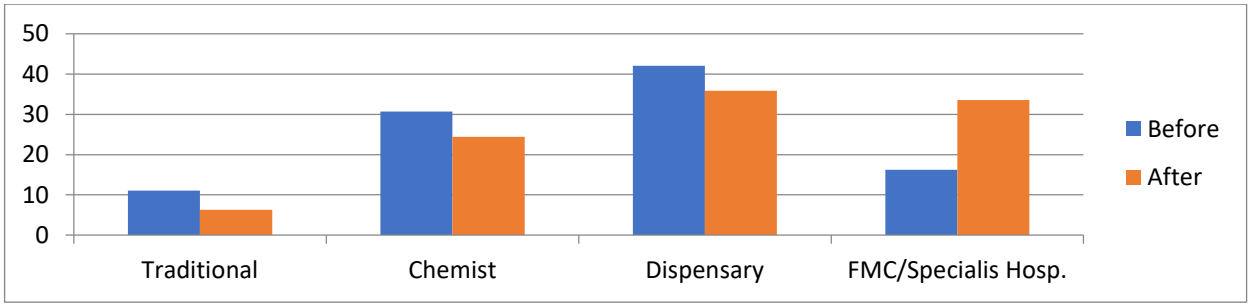

Fig 3: A Bar Chart Showing the Rate of change in Medication of Respondents before and after Engaging in Commercial Tricycle Business

The above chart shows that majority of the sampled respondents representing 35.8% and 33.5% patronized dispensary and Federal Medical center/Specialist hospital respectively with their income from commercial tricycle more than any other health facility. In other words more than half of the sampled respondents have access to good health; this will improve their physical and mental ability to work very well.

4.1.4 Assessment of the Impact of Commercial Tricycle on House Type

Assessment of the impact of commercial tricycle on house type by the respondents before and after engaging in to commercial tricycle was examined and the result is presented in figure 4.

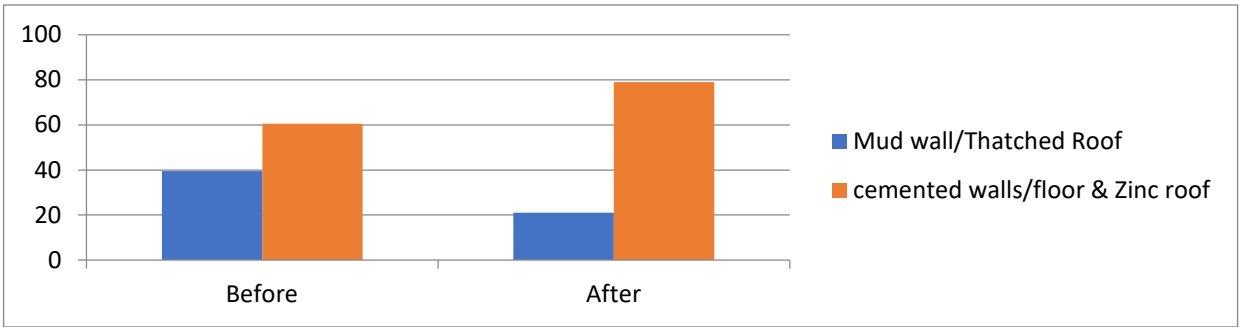

Fig 4: A Bar Chart Showing the Rate of change in Medication of Respondents before and after Engaging in Commercial Tricycle Business

Figure 4 shows that house type of the respondents before and after their involvement in commercial tricycle business. The result shows clearly that after their engagement in to commercial tricycle business, their house type improved as it shows that majority of the respondents with 79% are capable of affording zinc houses.

4.1.5 Assessment of the Impact of Commercial Tricycle on Tricycle Ownership

Assessment on tricycle ownership by the respondents was carried out and the result presented in table 1

Table 1: Distribution of Sampled Respondents on Tricycle Ownership

Ownership Status	Number of Respondents	Percentage (%)
Yes	74	21
NO	278	79
Total	**352**	**100**

Source: Field Survey, 2026

Table 1 shows that 74 respondents representing 21% agreed that, the commercial tricycle they are riding is their own while majority of the respondents representing 79% disagreed that, the commercial tricycle they are riding is own. This implies that, most of the commercial tricycles plying the street of Jalingo metropolis are operated on hire bases. The operators are required to pay a daily balance ranging between ₦2500 to ₦4, 000 depending on the lifespan of the tricycle.

4.1.6 Assessment of the Impact of Commercial Tricycle on Income Generation

An assessment was carried out to ascertain the impact of commercial tricycle on daily income generation by the operators and the result is presented in table 2.

Table 2: Distribution of Sampled Respondents on Income Earned

Daily Income Earned	Number of Respondents	Percentage (%)
<₦5,000	-	-
₦5,000- ₦ 8,000	103	29.3
₦ 80001-₦ 10,000	191	54.3
>-₦10,000	58	16.4
Total	**352**	**100**

Source: Field Survey, 2026

Table 2 reveals that, majority of the sampled respondents representing 54.3% earned ₦ 8001-₦ 10,000 daily, 29.3% of the sampled respondent earned less than ₦ 5,000 daily while 16.4% earned more than ₦10, 000 daily from commercial tricycle in Jalingo metropolis. This implies that, majority of the sampled respondents representing 70.7% earned daily income of more than three dollar per day, hence living above poverty line in accordance to the World Bank standard

4.3 Assessment of Challenges of Commercial Tricycle in Jalingo Metropolis

The study identified some of the challenges of commercial tricycle in Jalingo Metropolis as presented in table 3

Table 3: Distribution of Sampled Respondents on the Challenges of Commercial Tricycle

Challenges	Number of Respondents	Percentage (%)
Police and Road safety Harassment	104	29.5
Multiple taxies	54	15.3
Lack of effective Union	13	3.7
Limited hours of operation due to imposed curfew	79	22.4
Lack of financial support	18	5.1
High cost of spare parts and tricycle	34	9.7
Absence of policy for them to operate effectively	39	11.2
Lack of terminal parking facilities	11	3.1
Total	**352**	**100**

Source: Field Survey, 2026

Table 3 reveals that, 29.5% of the sampled respondents identified police and road safety harassment of commercial tricycle operators as a challenge for commercial tricycle in Taraba state, 15.3% respondents recognized multiple levies by union as a major challenge, 3.7% of the respondents considered lack of effective union to defend the interest of the member as a barrier, 22.4% of the respondents are of the views that, limited hours of operation due to imposed curfew which commerce by 8:pm daily in Jalingo metropolis, 5.1% identified lack of

financial support, 9.7% viewed high cost of spare parts and tricycle, 11.2% and 3.1% identified absence of policy for them to operate effectively and lack of terminal parking facilities respectively as some of the challenges facing commercial tricycle in Jalingo Metropolis

4.4 Result of the Logistic Regression Model

The result of the logistic regression which estimates the impact of commercial tricycle on poverty reduction in Jalingo metropolis is presented in table 4.

Table 4: Logistic Regression Result

Dependent Variable: POV

Variable	Coefficient	Std. Error	z-Statistic	Prob.
X1	-0.097567	0.248888	-0.392012	0.6950
X2	-0.990208	0.373848	-2.648693	0.0081
X3	-0.399422	0.284126	1.405790	0.1598
X4	0.276910	0.278439	-0.994508	0.3200
X5	-0.646226	0.305515	2.115200	0.0344
X6	0.423010	0.261017	-1.620620	0.1051
X7	-0.202002	0.300452	-0.672326	0.5014
X8	1.207476	0.269144	-4.486357	0.0000
C	-24.51186	7.766712	3.156015	0.0016
McFadden R-squared	0.659654	Mean dependent var		0.027619
LR statistic	31.49993	Avg. log likelihood		-0.074302
Prob(LR statistic)	0.010234			
Obs with Dep=0	275	Total obs		352
Obs with Dep=1	77			

Source: **Author's Computation using *E-View 9.0***

Table 4 shows that, the estimated coefficient of X1(number of meals taken per day) is negative. This implies that, improvement in the number of meals taken per day has the probability of reducing poverty. This further implies that, the more an individual feed daily, the more it indicate that he or she is living well. This indicates a reduction in poverty status of the commercial tricycle riders in the study area. The estimate is however statistically insignificant at 5% level.

In a related development, the estimated coefficient of X2 (Access to clothing) is negative and statistically significant at 5% level. This implies that, access to clothing is an indication of poverty reduction by the commercial tricycle riders in the study area. The higher the number of cloths bought by the respondents, the less poor they are believed to be.

More ever, the estimated coefficient of X3 (Access to improve medical services) is negative but statistically insignificant at 5% level. This implies that, access to improved medical facilities has the probability of reducing poverty among the sampled respondents. This is an indication that, as commercial tricycle riders' obtained income from commercial tricycle business, better health facilities were sought indicating their good standard of living.

In addition, the estimated coefficients of

X4 (Family members access to education) is positive and statistically insignificant at 5% level. This shows that, family member's access to education has the probability of increasing poverty among the sampled respondents. This implies that, the incomes earned from commercial tricycle business were not utilized on education for the family members of the sampled respondents

However, the estimated coefficient of X5 (House type) is negative and statistically significant at 5% level. This implies that, the type of houses used by the sampled respondents were able to acquired through earnings from commercial tricycle business by the riders. It therefore has the probability of reducing poverty among the sampled respondents. This shows that, better housing has the probability of reducing poverty among commercial tricycle rider in the study area.

On the other hand, the estimated coefficient of X6 (Access to loan) is positively signed and statistically insignificant at 5% critical level. This implies that access to loan has the probability increasing poverty among the sampled respondents. This shows that commercial tricycle riders do not have access to loan to burst their businesses.

The table further reveals that, the estimated coefficient of X7 (Family size) is negative and statistically insignificant at 5% level. This is indications that, the family size of the sampled respondents were not large enough to compete for the income earned by the commercial tricycle riders in the study area. This could be due to the fact that, majority of the sampled respondents are single and yet to raise a family of their own.

Nevertheless, the estimated coefficient for X8 (Ownership of Tricycle) is positive and statistically significant at 5% level, indicating that, ownership of commercial tricycle has the probability of increasing poverty among the operators in the study area. This attests to the fact that, majority of the operators does not own commercial tricycle of their own. The income earned by the operators is paid to the owners of the tricycle as daily balance and what is remaining is used by the operators to meet their daily needs.

The negative sign of the intercept (C) in the result indicates that, if all the regressors are held constant, the dependent variable (Z; poverty status of the respondent) would reduce by 24%. This is a pointer to the fact that, commercial tricycle reduces poverty level among operators in the study area.

The McFadden R- squared of approximately 0.66 implies that, all the explanatory variables included in the model explained total variations in the dependent variable by 66%. The Pro (LR statistic) of 0.010234 indicated the reliability of the explanatory variables with regards to the dependent variable.

4.5 Diagnostic Test

Andrews and Hasmer-Lemeshow diagnostic test was carried out and the result is presented in table 5

Table 5: Andrews and Hasmer-Lemeshow Diagnostic Test

	Quantile of Risk		Dep=0		Dep=1		Total	H-L
	Low	High	Actual	Expect	Actual	Expect	Obs	Value
1	0.0393	0.0694	33	33.0355	2	1.96446	35	0.00068
2	0.0710	0.1115	31	31.7986	4	3.20142	35	0.21926
3	0.1115	0.1293	31	30.7441	4	4.25588	35	0.01751
4	0.1293	0.1672	28	29.8242	7	5.17580	35	0.75451
5	0.1672	0.1880	31	29.6836	5	6.31642	36	0.33274
6	0.1880	0.2094	30	27.8571	5	7.14289	35	0.80771
7	0.2133	0.2611	25	26.8133	10	8.18670	35	0.52426
8	0.2611	0.2964	27	25.2039	8	9.79609	35	0.45730
9	0.2964	0.4254	20	22.5967	15	12.4033	35	0.84201
10	0.4254	0.6508	19	17.7516	17	18.2484	36	0.17320
		Total	275	275.309	77	76.6914	352	4.12919
H-L Statistic			4.1292		Prob. Chi-Sq(8)		0.0245	
Andrews Statistic			7.5119		Prob. Chi-Sq(10)		0.0176	

Source: **Researcher's Extract from E-Views 9.0**

Table 5 reveals the diagnostic test result of Andrews and Hasmer-Lemeshow. It predicted risk for goodness of fit in evaluating binary specification. The H-L Statistic value of 5.1233 and Andrews Statistic value of 20.1859 indicates the goodness of fit for the logit or binary specification at 5% significance level.

4.6 Test of Hypothesis

The null hypothesis of the study stated as; commercial tricycle has no significant impact on poverty reduction among operators in Jalingo metropolis was tested using the p-value procedure.

Decision Rule: Since the prob (LR statistic) 0.010234 is less than the 0.05 critical value, the study rejects the null hypothesis in favour of the alternative and concludes that, tricycle business has significant impact on poverty reduction among operators in Jalingo metropolis of Taraba state.

4.7 Discussion of Findings

The discussion of the findings is line with the objectives of the study and the result obtained from both the descriptive and inferential statistics. The first objective of the study was to assess effect of tricycle business on income generation among operators in the study area. The result obtained from the descriptive statistics indicated that, majority of the tricycle business operators representing 70.7% earned daily income of between 8000 and 10000 Naira which is more than three Dollars per day, hence living above poverty line in accordance to the World Bank standard. This implies that, the tricycle business is a significant engine **for** poverty reduction**,** job creation**, and** economic empowerment **for** the people, particularly in developing economies. It suggests that the business provides a reliable, consistent daily income that often exceeds minimum wage levels, acting as a functional tool to elevate individuals above the poverty line. The finding is in line similar studies conducted by Gbemisola (2021) in Ibadan, Oyo State and Ibrahim (2022) in Kaduna State whose findings also revealed that, tricycle business plays a crucial role in income generation, particularly in urban areas as it has significantly improved their income levels, provided enough income to sustain themselves and support their families, thereby improving their economic status

The second objective of the study seeks to evaluate the extent to which tricycle business contributed to improving access to basic needs among operators in the study area. The result of the descriptive statistics further indicated that, majority of tricycle business operators were able to meet three standard meals per day, have access to good healthcare facilities and are capable of affording renting a zinc houses after engaging into tricycle business. However, it was evidently clear that, no significant change in clothing patent of the tricycle operators before and after engaging in tricycle business. This implies that tricycle operation acts as an effective, immediate poverty alleviation mechanism that satisfies foundational survival needs but does not necessarily lead to immediate upward social mobility or significant changes in lifestyle patterns. Increased earnings are often offset by high maintenance, fuel costs, and rental fees (if not owner-operators), leaving little disposable income for clothing. The finding is in consonance with similar studies by Kola (2021) who revealed that tricycle operators experienced improved access to essential services such as healthcare, education, and other basic amenities due to the income generated from their businesses in Abia State.

The third objective of the study sought to examine the impact of tricycle business on poverty reduction in the study area. The result of the logistic regression revealed that, number of meals taken, access to clothing, access to improve medical services, improved house type and small family size during tricycle riding indicated negative relationship with poverty reduction among tricycle operators in Jalingo metropolis. A negative relationship in this context means that as these factors increase, the likelihood of being in poverty decreases, indicating that tricycle riding is acting as a poverty reduction tool. Improved living standards (better food, housing, health) and smaller family sizes enhance the income-earning potential of riders, alleviating poverty. This corroborated with the findings of Bello (2021) conducted in in Lagos State, Kola (2020) conducted in Abia State and

Kehinde (2022) carried out in Calabar, Cross River State, Nigeria who unanimously revealed in their respective findings that, tricycle business provided regular income, which contributed to improving their household living standards and, by extension, reducing poverty. It was however discovered that, family members' access to education, access to loan and ownership of tricycle during tricycle riding indicated positive relationship with poverty reduction among tricycle operators in Jalingo metropolis. This implies that, as these factors increase or are present, the likelihood of an operator escaping poverty significantly increases, an indication that supporting tricycle operators through access to education, financial inclusion (loans) and empowering them to transition from hiring to owning their tricycles are effective strategies to reduce poverty.

The forth objective of the study was to identify the challenges faced by tricycle business operators in the study area**.** In the cause of evaluating the challenges faced by commercial tricycle operators in Jalingo metropolis through descriptive statistic, the study identified; police and road safety harassment, multiple taxies, lack of effective union, limited hours of operation due to imposed curfew, Lack of financial support from, high cost of spare parts and tricycle, absence of policy for the operators to operate effectively and lack of terminal parking facilities as some of the challenges of commercial tricycle in Jalingo metropolis. This conformed to the findings of *Solaja, Kalejaiye, and Itsuokor (2015) that also identified some of these factors as challenges affecting commercial motorcycle riders in Edo state, Nigeria.*

5. Conclusion and Policy Recommendations

In line with the findings, the study concludes that, commercial tricycle improved the income generation among operators in Jalingo metropolis of Taraba state. The study also concludes that tricycle business acts as an effective, immediate poverty alleviation mechanism that satisfies foundational survival needs but does not necessarily lead to immediate upward social mobility or significant changes in lifestyle patterns. However, based on the identified challenges militating against the operations of commercial tricycle business in Jalingo metropolis, the operators are not optimally operating in the study area. Taking measures to curtail these challenges will further improve the income generation of the operators, reduce unemployment and ultimately reduce poverty among the youth who are the major operators in Jalingo metropolis of Taraba state, Nigeria. Based on the findings of this study, the following recommendations are made;

1. Government should partner with manufacturers of tricycles to provide hire-purchase schemes at low-interest rates, allowing operators to own their tricycles, rather than working for owners who take the bulk of the profits.

2. Tricycle operators should form an effective union and cooperative societies to pool resources for maintenance, insurance, and bulk spare part purchasing, reducing daily operating costs. This will in addition enable them benefit from government policies and programmes targeted at alleviating poverty among youth and unemployed members of the society.

3. The excesses of some security officials need also to be checkmate by the security heads in Jalingo local government area to curtail unnecessary harassment of the tricycle operators. Security officials found wanting in the cause of performing their duties should be severely sanctions to serve as deterrent to others so as to bring sanity into security operations in the state.

4. With a high daily income, operators can contribute to the state, but daily fees charged by unions and local governments should be regulated to prevent extortion and ensure they do not exceed reasonable limits.

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