



Impact of Rural Electrification on Performance of Micro Enterprises in Chikun Local Government Area, Kaduna

¹ G. Z. Kwasau, ²A. O. Bernard, ³Y Alfa & ⁴J. O. Ikubor

^{1,3& 4} Department of Economics, Nigerian Defence Academy, Kaduna– Nigeria
Department of Economics, Air Force Institute of Technology, Kaduna– Nigeria

Corresponding Author's; E – mail: kwasielhove@gmail.com

Abstract

Sizable section of the rural populace in Nigeria relies on micro enterprise to survive, and micro enterprises are thought to depend on access to electrical supplies. Despite the importance of electrifying rural areas, micro enterprises continue to struggle with inadequate supply of energy. In the light of this, this study investigates how rural electrification affects micro enterprise performance in Kaduna state's Chikun LGA. Primary data collected via questionnaires was employed. The logit model, the ordinary least square (OLS) and frequency distribution table were used to analyze the data. The results indicate that the most prevalent enterprise type is hairdressing (16.8%), tailoring (14.1%), printing/photocopying (12.4%), and barbershops (7.9%). The findings further demonstrate that micro enterprise performance adversely impacts on the electricity supply billing system. However, the profitability of micro enterprise is positively impacted by the use of electricity, years of operation, length of power supply, and investment in alternative energy sources. Therefore, the study suggests that the government step up efforts through the Rural Electrification strategy to give rural populations access to affordable and dependable electrical services, which are essential for micro enterprises.

Keywords: Rural Electrification, Micro Enterprises, Chikun LGA, Kaduna

JEL Classification: M21, 018

Contribution to/Originality Knowledge

1.0 Introduction

Electricity is used for lighting, heating and supply of power to machines used in the production process. It has been argued that efficient supply of electricity is positively correlated with the output of enterprise firms (Kunor, 2017). This implies that a enterprise firm is likely to be technically efficient in production if its power supply is adequate to serve the firm optimally.

In Africa, the supply of electricity varies widely across the continent with some African countries exporting power supply to neighbouring countries: from Ethiopia to Tanzania, from Uganda to Rwanda and from Kenya and Ivory Coast to Mali and Togo, and others lacking even the basic system to acquire electricity (World Bank, 2022). World Bank (2022) shows that, 32 countries out of the 48 in African continent are in electricity crisis. They seek to connect 300 million people to electricity by 2030. This is attributable to policy failure, corruption and the nonchalant attitude of government across the countries. Hence, the output of the power sector in the continent is still low (Duncan 2025).



Electrification of rural communities is receiving attention in the contemporary era. This is against the backdrop that access to electricity among the rural population is instrumental to efficient rural development and income-generating activities in the rural setting. In developing nations, rural electrification is focused on renewable energy sources that offer a more affordable and environmentally friendly means of raising the standard of rural population. According to Karekezi and Kithyoma (2012), governments in different countries have encouraged the growth of rural electrification initiatives in a variety of ways by collaborating with commercial power utility companies to supply energy to rural regions. Such countries that have partnered with private electricity utilities include India, Niger, Saudi Arabia, and Ghana (Cenpower 2022).

In Nigeria, rural electrification project has been one of the government's ways of resolving the problem of acute electricity supply in rural communities. It involves supplying isolated and rural places with electricity (Reinemann, 2018). This is to ease access to electricity facilities in order to facilitate economic prosperity. It is also intended to foster greater efficiency and productivity. This is because, with rural electrification, enterprise firms will be able to keep their doors open for longer and generate additional revenue.

In Kaduna State, rural electrification project has been imbibed by the government over the years as one of the ways to improve the production capacities of the micro enterprises in the rural areas. For example, in 2013, the government of Kaduna State was able to connect some rural communities with electricity through the rural electrification project. The benefiting communities spread across the 23 Local Government Areas of the state including Chikun, Soba, Kubau, Sanga and Kagarko.

In Chikun Local Government Area, Kujama/Tokace and Manini were most targeted rural communities. Thus, rural electrification project in the area covers Udawa, Ungwar Zallah, Ungwar Wakili, Farin Kasa, Famada, and Rimi in the study area. The choice of the selected area is because of the development in the area. This project was undertaken in order to provide reliable and sustainable electricity to these rural communities, so as to improve the quality of life, fosters economic growth, and enhance the performance of micro enterprises in the area. In this study however, the micro enterprises that will be the focus of the study are barbing saloon, printing press, printing/photocopying, welders and hair dressing saloon. The choice of the selected enterprise is due to its large population as they are the most popular enterprises in the area. This is because electrification is a vital component of operations in these enterprises. Its contribution to the capitals and the standard of living of the owners of the enterprises cannot be overemphasized.

Despite substantial progress made towards electrification of the rural communities in Kaduna State, availability, accessibility and affordability of electricity for the rural population is still a major challenge in the state. This has led to slow social and economic progress within the State (Sanusi, 2015). Micro enterprises in Chikun local government area continued to be bedevilled by social and infrastructural issues ranging from low-capacity utilization, hike in the costs of operation, expanding trade imbalances and fierce competition from bigger enterprises. Given the foregoing, this study broadly examines the impact of rural electrification on operational

efficiency of micro enterprises in Chikun LGA. The specific objective of the study is to examine factors determining the adoption of rural electrification by micro enterprises in Chikun LGA and to examine the impact of rural electrification on performance of micro enterprise in Chikun LGA. This study will explore the role rural electrification plays on the performance of small scale enterprises and by so doing, provide technocrats, academia, and furnish student researchers with knowledge about the connection between electrification and the productivity and profitability of an enterprise in Chikun LGA. The study therefore includes literature review, methodology, results of discussions of findings, conclusion and recommendation.

2.0 Literature Review

2.1 Conceptual Review

2.1.1 The Concept of Rural Electrification

Ikechukwu et al (2024) defines the concept as the process of extending electricity to underserved and remote areas to support socioeconomic development and improve the quality of life. They emphasize the role of communities in facilitating rural electrification efforts in order to boast standard of living and leading to socioeconomic development.

Nneka and Florence (2023) defines rural electrification as a fundamental tool for promoting industrialization, education, health improvement in Nigerian rural areas and bridging the gap between rural and urban development. They highlight the transformative role of electrification in fostering sustainable development.

Fauzzan (2022) defines rural electrification as a method of bringing electricity to remote and rural areas that lacks access to it, and is important to support the improvement of living circumstances and the socioeconomic development of communities. It is expected to increase educational achievement, through allowing young people to study early in the morning or late at night. It also brings greater efficiency and productivity by allowing enterprises to be open to operate efficiently and farmers to have access to equipment and techniques that improve their productivity, such as irrigation, processing, or food preservation.

Euler (2017) posited that the goal of rural electrification management is to improve rural living conditions and reduce the micro enterprise rural-urban migration of Americans. Under the initiative, almost 98 percent of farms in the United States had electric power installed. The rural electrification administration offered low-interest loans to agricultural cooperatives so they could build and run power connections and plants in remote areas. The automation of many farm operations and the introduction of urban amenities like electric lighting and radio to sparsely populated areas were made possible by rural electrification.

The researcher defines rural electrification as the process of extending access to electricity in underserved and remove areas aiming to improve living standards, drive economic activities and reduce developmental disparities between rural and urban communities.



2.1.2 The Concept of Micro Enterprise

Neji and Osisioma (2024) defines micro enterprises as ventures that play a significant role in entrepreneurship development and poverty reduction in local communities. They focused on how micro enterprises influence entrepreneurship in order to reduce poverty in Makurdi, Benue State.

Different definitions of micro enterprises are arbitrary rather than reflecting the level and nature of economic development. There is no single, universally accepted definition for small and medium-sized enterprises. Current criteria have been revised, and they are constantly being evaluated (CBN, 2021).

Even among international organizations, there is no agreement or inclination toward approximation when it comes to definitions. The definition of small and medium-sized enterprises is useful for statistical purposes such as assessing economic performance within a country, across sectors, and between states. Dalberg (2019) posits, that Egypt considers micro enterprise as consisting of more than 5 and less than 50 employees while Vietnam considers micro enterprise of consisting of 10 and 300 employees. Nonetheless, there are a few standard definitional indices, including turnover, asset value, and staff count (Onyewu, 2018).

Small firms employ less than 50 and 100 people, respectively, CBN (2023). Small and medium-sized enterprises have asset bases of less than one million and 150 million naira, respectively (IFC, 2012, cited in Sanusi, 2015).

According to the National Council of Industries (2018), small and medium-sized enterprises are those with between eleven and seventy full-time employees and total expenses under one hundred million naira, excluding land. A medium-sized enterprise is one that employs between 771 and 2 hundred full-time employees and has a total cost of no more than 300 million naira, excluding land costs (Garba, 2022).

According to Nigeria's Small and Medium Industries Equity Investment Scheme (SMIEIS) (2020), micro enterprise are those that employ between 10 and 300 people and have a total capital outlay of at least N1.5 million but not more than 200 million naira, including working capital but excluding land costs (Basil, 2008).

The researcher defines micro enterprises as enterprises typically characterized by a 50 to 100 number of employees, low capital investment, limited annual revenue and primarily operating at a local community level to meet specific market demands.

2.2 Theoretical Review

2.2.1 Resource Based Theory of Small-Scale Firm

The theory rest on two empirical generalizations, and two assumptions derived from economics. They are: - That there are systematic differences across firms in the extent of control of resources for implementation of strategies and that those differences are stable. The two assumptions are that differences in the resource endowments of a firm cause performance

differences and that firms seek to increase their economy and achieve strong performance through the building reacquisition of certain resources, (Foss, 1997). These resources skills, competence, knowledge, and duality of the knowledge experience. These are the latent variables of this research. In other word, this study will be anchored on the resource based theory of small-scale firms.

2.3 Empirical Review

Salisu (2025) discussed examined cost-effective strategies for electrifying un-electrified communities within the Kaduna Electricity Distribution Company. The study coverage area, including Kaduna, Kebbi, Sokoto, and Zamfara States. The study estimates that by 2025, electrifying 18,182 settlements will require an investment of approximately US\$4.97 billion, highlighting mini-grid photovoltaic systems as the least-cost technology for 58.82% of these communities. Employs a robust, data-driven approach to rural electrification planning, offering actionable insights for policy makers. It focuses on a specific geographic region, which may limit the applicability of findings to other areas with differing socio-economic and infrastructural contexts.

Musa and Adegoke (2025) assessed the impact of renewable energy adoption on rural livelihoods in Nigeria. This research examines how renewable energy adoption has improved income generation and education access in select rural areas. It uses data from 2020 to 2024 to evaluate the long-term socio-economic impacts of rural electrification projects. The study provides promising data on socio-economic benefits but lacks a thorough evaluation of environmental impacts or energy sustainability. It underrepresents the role of gender in rural electrification, despite evidence suggesting that women often benefit the most from access to reliable electricity.

Tunde and Chioma (2024) studied the impact of the Renewable Energy Fund (REF) in deploying solar mini-grids across rural communities in northern Nigeria. It highlights the role of private-public partnerships in scaling mini-grid projects and identifies gaps in community engagement and policy enforcement. The study heavily emphasizes the REF's successes without adequately addressing implementation failures or resistance from local communities. It does not delve into the affordability of mini-grid electricity for rural households, especially those with low income.

Hawa and Adam (2022) assessed the impact of rural electrification adoption on the expansion of microenterprises in Tanzania, with a case study of a grain milling firm in Kisarawe district. A non-probability sampling strategy was used, and the necessary sample chosen using a purposive sampling method. The collected data was analysed according to descriptive analysis. Socioeconomic parameters were found to have a strong significant link with rural electrification uptake in the study area. Also, there is a considerable strong association between energy reliability and the adoption of rural electrification while users' perceptions have significant and moderate effects on the adoption of rural electrification.



Hassen and Fenti (2021) explore the effect of rural electrification on the creation of new enterprises in Ethiopia. Using a difference-in-differences approach, the results show that access to grid electricity has no significant impact on enterprise creation in the short run; whereas, in the long run, it increases rural households' enterprise openings by 5%. Off-grid electricity access via low-powered technologies such as solar lanterns has negligible short- and long-term impacts.

Dimoso and Andrew (2021) examined the effects of rural electrification programs on the SMEs' performances measured proxied by revenues collected by these SMEs. The study was done in Mvomero district, Morogoro. The Ordered Logistic Regression (OLR) model was employed in the data analysis. Findings revealed that 59.385 percent of SMEs with larger revenues use electricity, although education has just an 8.29 percent influence on electrical adoption among SMEs' owners. Furthermore, Distance to the closest transformer, willingness to pay for REA, affordability of REA programs, and adoption of REA electricity among SMEs all significantly improve SMEs' performance, according to research on how rural electrification programs affect SMEs' performance.

Gerald et al., (2018) examined the significance of rural electrification in Zimbabwe. Key respondents from the provincial stakeholders, the rural electrification agency, and Mudzi district beneficiaries were selected from a population frame that included local leaders, enterprises, families, and government offices. The report claims that while rural electrification has had little effect on economic growth, it has had a significant impact on social development. The construction of electrified rural service centers has led to the emergence of numerous cottage industries, including welding and tailoring, as well as grocery stores and workshops. This has shortened turnaround times for the majority of activities by enabling self-sufficiency and repairs to be completed within the main growth point.

Despite enormous studies on rural electrification, to the best of the researcher's knowledge, most of the studies were conducted outside Nigeria. Examples of these studies include Hawa and Adam (2022) for Tanzania, Kalisa and Tarus (2021) for Rwanda, Hassen and Fenti (2021) for Ethiopia, Dimoso and Andrew (2021) for Moroko and Tanesco (2016) for Tanzania. Therefore, there is the need for a similar study on the Nigerian environment. Similarly, even for the few studies, such as Adam and Zahradeen (2016) and Sanusi (2021), that were conducted in Nigeria, none of the studies prioritized Kaduna State. This is despite the fact Kaduna State is one of the States in Nigeria that has prioritized rural electrification project since 2006. To fill these gap, this study will examine the impact of rural electrification on the performance of small-scale enterprises in Chikun Local Government area of Kaduna State.

3.0 Methodology

The research design used is the survey method. The survey method involves using structured questionnaire to obtain relevant information from the respondents. The multi-stage sampling technique was employed in selecting sampled micro enterprises for the study. At the first stage, Kaduna State, consisting of 23 Local Government areas, was divided into three geo-political zones, which are the Northern, the Central and the Southern senatorial districts. The second

stage involved purposive selection of Chikun Local Government Area from central geo-political zones for the study. The selection of Chikun is based on the development of the area. In the third stage, micro enterprises were purposively selected from the rural villages that cut across Chikun Local Governments in the study area, this is because the enterprises are the most popular in the area. The population of the study is unknown; therefore, the Cochran sampling size formula was used to get a sample of 381. Thus, questionnaires were administered to the respondent according to the sample size that was used by the study. The study used primary data, and the data was collected through administration of structured questionnaires. Socioeconomic characteristics were examined using descriptive statistics of micro enterprises' owners in Chikun LGA. A Probit model and ordinary least square method was employed in analyzing the data. The enterprises performance was measured using sales and profit from the enterprise. Out of the 381 questionnaire distributed, 339 were returned and was used for the analysis.

3.1 Model specification

This study uses the logit model to examine the impact of rural electrification on the performance of micro enterprise in Chikun LGA of Kaduna State. The theoretical logit model is specified as;

$$F_t = f(Z_t) = \frac{1}{1 + e^{-(\alpha + \beta X + \mu)}} \quad (1)$$

Where;

e is the natural logarithm to base e; Z_t is the probability that the dependent variable responds to one-unit change in the independent variables, f is the functional notation, α is the intercept, β is the slope parameter, X is a vector of independent variables, μ is the stochastic error residual. The expression in (1) above can be re-specify as log-likelihood ratio as;

$$e^{Z_t} = \frac{P_i}{1 - P_i} \quad (2)$$

linearizing the expression in (2) above, we obtain

following the work of Mudi (2013), the empirical model for this study is given as

$$\ln\left(\frac{P_i}{1 - P_i}\right) = Z_t = \alpha + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_{10} X_{10} + \mu \quad (3)$$

Where; P_i = Prob value

P_i = Prob value

$\varepsilon \sim N(0,1)$

x_1 = Years of schooling

x_2 = Connection charge

x3 = Distance of enterprise to transformer (Km)

x4 = Nature of enterprise (D rep 1 if related to electricity and 0 if otherwise)

x5 = Alternative source of energy (D rep 1 if yes and 0 if otherwise)

x6 = Duration of power outage in a month (number)

x7 = Share of electricity bills with others (D rep 1 if yes and 0 if otherwise)

The model for this study is therefore modified and specified below.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_m X_m + u_i$$

Y= profit of microenterprise (measured in terms of net profit of the enterprise)

X1 = explanatory variables

β_0 = constant

β_1 = regression parameters to be estimated.

u_i = error term

The explanatory variables included in the model

are:

X1 = Number of employees

X2 = Enterprise adopt grid electricity connection (D=1, if Yes; 0 otherwise)

X3 = Number of years in enterprise

X4 = Monthly expenditure on electricity

X5 = Nature of enterprise (D=1 if Individual; 0 otherwise)

X6 = Durations of power supply (number of hours daily)

X7 = Durations of a monthly power outage (numbers)

X8 = Monthly billing method (D=1, if estimate billing; 0 otherwise)

X9 = Access to an alternative source of power supply (D=1, if Yes; 0 otherwise),

X10 = Monthly expenditure on alternative energy sources

4.0 Results of Discussions of Findings

Table 1

Variables	Frequency	Percentage
Educational Level		
No formal Education	63	18.6
Primary Education	153	45.1
Secondary Education	81	23.9
Tertiary Education	42	12.4
Total	339	100
Enterprise Ownership Structure		
Individual	213	62.8
Family	27	8.0
Partnership	99	29.2
Total	339	100
Monthly Total Income		
<10,000	84	24.8

10,100- 20-000	69	20.4
20,100-30,000	102	30.1
30,100-40,000	33	9.7
>40000	51	15.0
Total	339	100
Years of Enterprise Operation		
1-5	189	55.8
6-10	66	19.5
11-15	60	17.7
>15	24	7.1
Total	339	100

Socio-Demographic Characteristics of the Respondents **Source:** Field Survey, 2024

Table 1 presents the respondents' educational backgrounds. According to the results, 45.1% have completed elementary school, around 23.9% have completed secondary school, 12.4% have completed university education, and 18.6% have not received any official training. Given how crucial education is to the success of any commercial endeavour, this discovery is crucial. The vast majority of those surveyed (34.2%) had completed elementary school. Enterprise owners' educational attainment is a measure of their human capital; it has improved their management abilities and comprehension of production and market dynamics, all of which have an effect on the enterprise's success. One important determinant of the appropriate performance level and market involvement is the ownership structure of the enterprise.

The majority of the enterprises (62.8%) were held by people, according to the respondents' ownership structure distribution. Approximately 8% of the enterprises were family-run, while 22.1% were partnership-owned. This outcome illustrates the importance of respondents' self-esteem and social recognition. This implies that the owners have a significant role in making decisions on the day-to-day operations enterprise.

Additionally, the bulk of respondents (30.1%) income rates between ₦20,100 and ₦30,000 per month, with around 20.4% earning between ₦10,000 and ₦20,000. Also, around 15% of the respondents earn ₦40,000 or more per month, and 28.7% earn less than ₦10,000. Most enterprises (55.8%) have been operating for one to five years. The results show that a sizable portion of enterprises are more than five years old, suggesting that the study area's enterprise survival rate is strong and steadily rising.

This outcome also suggests that the enterprise owner seems to possess enough experience to improve the enterprise success.

Table 2: Nature and Types of Small-Scale Enterprises owned by Respondents

Variables	Frequency	Percentage
Nature and Types		
Hairdressing	60	16.8
Tailoring	48	14.1

Printing/photocopying	42	12.4
Barbing saloon	27	7.9
Welder	24	7.1
Retail shop	24	7.1
Total	339	100

Source: Field Survey, 2024

In the study area, hairdressing (16.8%) is the most thriving enterprise activity, tailoring (14.1%), printing/photocopying (12.4%), and barbershops (7.9%), followed by welders and retail stores (7.1%).

Table 3: Analysis of Factors Determining the adoption of Rural Electrification

Variables	Coefficient	Standard Error	P > /Z/	Marginal Effect
Years of formal schooling	0.027	0.040	0.68**	0.005
Connection charge	-0.151	0.084	1.18*	-0.028
Nature of enterprise	0.333	0.477	0.7	0.068
Access to alternative energy	0.061	0.069	0.89	0.011
Duration of power outage	-0.008	0.000	1.09*	-0.030
Share of household electricity	0.071	0.037	1.89**	0.013
Constant	0.118	0.804	0.15	
log likelihood -37.071 LR chi2 (10) 46.97 Prob>chi2 0.00 Pseudo R2 0.404				

Note: ** and * are significance level at 5%, and 10% respectively.

Source: Field Survey, 2024

The table 3 above shows the probit analysis. The result shows that the chi-square is significant, this can be seen from the p-value which is less than 0.05%. The result shows that 4 out of the 7 independent variables were significant and are perfect in determining usage of electricity among micro enterprise. From the above table it can be seen that years of formal schooling, connection fee, length of power outage and sharing of electricity bills with others is less than 0.05%.

The years of schooling of respondents is positive and significantly related to adoption of electricity in the study area. This implies that a percentage increase in year of schooling of respondents will significantly leads to increase in passage of power among enterprise owner by 0.54%. This indicates that the higher the level of education of the enterprise owner, the better for the enterprise owner to make good decision in adopting electricity connection. This is supported by the study of World Bank (2015) that people with low education in urban area is better than those in the rural area.

In addition, connection charge of the respondents has a negative and significant effect on the adoption of electricity in the study area. This indicates that a unit increase in the connection charge will significantly decrease the adoption of power among enterprise owners by 0.0302. This also implies that the higher the connection charges of an entrepreneur, the less the adoption electricity connection. This is in line with Leegwater and Shaw (2008) that people in

urban area are likely to pay for electricity than the people in the rural area. This is further supported by World bank (2002) and Modi (2005) that high electricity tariff, low power supply has negative effect on adoption of electricity.

Also, enterprise share of electricity with others is positive and significantly related to adoption of electricity in the study area. This implies that a percentage increase in enterprise share of electricity with others will significantly leads to increase in adoption of electricity among enterprise owner by 0.0142%. This indicates that the higher the enterprise share of electricity with others such as family members, the better for the enterprise owner to make good decision in adopting electricity connection. Finally, the duration of power outage is negative and significantly related to adoption of electricity in the study area. This implies that a percentage increase in power outage will significantly leads to decrease in adoption of electricity among enterprise owner by 0.0016%. This indicates that the higher power outage, the lower for the enterprise owner to make good decision in adopting electricity connection.

Table 4: Result of the impact of rural electrification on profitability of small-scale enterprise

Variable	Coefficient	Standard Error	t-value
Connection to grid electricity	0.043**	0.125	1.68
Number of years in enterprise	0.009*	0.015	0.60
Monthly expenditure on electricity	-0.027	0.669	-0.41
Nature of enterprise	0.031	0.012	0.26
Durations of power supply	0.022**	0.014	1.55
Durations of monthly power outage	-0.002	0.716	-0.23
Billing method	-0.048*	0.095	-0.05
Access to alternative source of power	0.016	0.104	0.02
Expenditure on alternative energy	0.013***	0.558	2.40
Constant	0.005	0.021	0.25
F(10, 101) 2.17 Prob > F 0.000 R2 0.643 Adjusted R2 0.607			

Note: ***, ** and * are significance level at 1%, 5%, and 10% respectively.

Source: Field Survey, 2024

The table 4 above shows the ordinary least square result on critical factors influencing the probability of micro enterprise in the study area. The result shows that electricity of rural enterprise owner has positive and significant effect on profitability, this implies that a percent increase in electricity will increase profitability of enterprise owners in the study area by 0.0437. The implication of this is that adoption of electricity take a crucial role in determining profitability of micro enterprise. The result is in accordance with Kariuki et.al (2014) that micro enterprise with electricity adoption perform better when compared with micro enterprise who does not have electricity adoption.

Furthermore, the result shows that year of experience of rural enterprise owner has positive and significant effect on profitability, this implies that a percent increase in years of experience will increase profitability of enterprise owners in the study area by 0.009. The implication of



this is that the longer the years of experience the more profitability of micro enterprise. The result is in accordance with Akpan et.al (2013) that the longer a person stay in enterprise the better the owner of the micro enterprise make profit.

In addition, the result shows that duration of power supply of rural enterprise owner has positive and significant effect on profitability, this implies that a percent increase in electricity will increase profitability of enterprise owners in the study area by 0.0216. The implication of this is that duration of power supply take a crucial role in determining profitability of micro enterprise. The result is in accordance with Fredrick and Josephine (2016) that availability of power supply for longer duration increase production which give room for higher profitability in micro enterprise.

More so, the result shows that electricity billing method of rural enterprise owner has negative and significant effect on profitability, this implies that a percent increase in electricity billing method will decrease profitability of enterprise owners in the study area by 0.0483. The implication of this is that electricity billing method take a crucial role in determining profitability of micro enterprise.

In addition, the result shows that alternative energy of power supply of rural enterprise owner has positive and significant effect on profitability, this implies that a percent increase in electricity will increase profitability of enterprise owners in the study area by 0.0134. The implication of this is that alternative of power supply take a crucial role in determining profitability of micro enterprise because alternative energy of power supply saves time and makes customers receive their goods when needed. The result is in accordance with Akpan (2013) that enterprise owners who can afford alternative energy power supply make more profit.

5.0 Conclusion and Recommendations

The study presents empirical information on how rural electrification affects profitability in micro enterprise in Chikun LGA. The study reveals that respondents' years of education, connection charge, enterprise portion of home electricity bill, and duration of power outage all contributed to enterprise owners' acceptance of electricity service. The study goes on to show that the billing mechanism for power supply has a detrimental impact on enterprise profitability. On the other side, electricity adoption, years in operation, power supply length, and expenditure on alternative energy sources all have a major beneficial influence on a enterprise's profitability. As a result, the report advises that the government should strengthen work in providing rural populations with dependable and inexpensive power services, which is an essential instrument for enterprise formation, development, expansion, and profit. Furthermore, enterprise owners could examine other sources of electricity, which would aid in increasing profitability.

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