DonnishJournals

Donnish Journal of African Studies and Development
Vol 5(1) pp. 001-005 November, 2023.
http://www.donnishjournals.org/djasd
ISSN: 2984-8903

Original Research Paper

Assessment of Employment and Social Impact of Energy in Rural Areas of South - West Nigeria

Hamzat Kazeem Adewale

Department of Electrical/Electronic Engineering, Osun State College of Technology, Esa-Oke

Accepted 31st October, 2023.

Lack of access to electricity is one of the major impediments to the growth and development of rural economies in developing countries like Nigeria. Energy in particular is critical in achieving virtually all the sustainable development goals; it can be used to support important development like access to education, improved health, communication and women empowerment. The research work is descriptive statistic and the data for the study were sourced from the primary source using a structural questionnaire. The sampling framework is in multiple stages. The obtained data were analyzed using descriptive statistics method of data using pie and bar charts. The study shows that availability of energy in rural areas generates employment in the rural inhabitant as well as improves the social well-being of the people living in the rural arrears. The result is in agreement with goal seven of the Sustainable Development Agenda 2030.

Keywords: Employment, Energy, Social Impact and Rural Areas

INTRODUCTION

Energy is a fundamental resource that drives the economy and almost all activities are required for the growth of the economy. Consequently, economic growth is directly related to energy consumption. As (Alam, 2016) puts it, energy is indispensable and it is the driving force for all economic activities. It is widely regarded as a propelling force behind any economic activity and indeed industrial production. (Okeoma et al, 2023). Therefore, high access to energy by inhabitants of a community will amplify the impact of technology and create tremendous economic growth

The unavailability of energy in rural communities is one of the major impediments to the growth and development of rural economies in developing countries like Nigeria because rural electrification is not considered a basic human need like water and food etc. (Wasiu, 2013). Several recent studies provide insight into how access to electricity by rural arrears helps in the betterment of rural society in various ways (Tarujyoti, 2012). The World Bank in their study of 11 countries reveals that rural electrification results in great benefits such as improvements in health facilities, better health from cleaner air as households reduce the use of polluting fuels for cooking, lighting and heating, improved knowledge through increased access to television and better nutrition from improved knowledge and storage facilities from the refrigerator (Sunday,2012). According to Global Network on Energy for Sustainable Development (GNESD, 2007) without adequate supplies of affordable energy, it is impossible to improve health, education and reduction of poverty (Tarujyoti, 2012).

About 1.6 billion of the world's population have no access to electricity of which about 80 per cent of these people live in the rural areas of developing countries of the world, and this number is not likely to go down without a concerted effort (Buragohain, 2012). In 2001, the 9th session of the Commission on Sustainable Development (CSD-9) gave special attention to energy. It concludes that “Energy is the central in achieving the goals of sustainable development, (http:www.gnesd.org, 2007).

Access to clean modern energy services is an enormous challenge facing developing countries like Nigeria and it is fundamental for socioeconomic development and poverty eradication (Sunday, 2012). About 60 per cent of Nigeria's population has no access to electricity, and 90 per cent of them live in rural areas (Pedro Antmann 2009). Electricity helps to satisfy the basic needs of people and is also an important catalyst for rural development.

The majority of the rural inhabitants have low access to energy and therefore retard social and economic development. Obstacles such as dispersed population, difficult terrains, geographical remoteness, low commercial energy consumption and limited income of consumers make an extension of the

Correspondence: Kazeemadewale41@gmail.com

electricity network to rural areas economically inefficient for both public and private organizations (Wasiu, 2013).

The lack of electricity raises a list of negative effects that dramatically limit a community's potential rate of growth, as well as its residents' basic quality of life. Some of the most pressing effects are listed below (Dominic and Peter, 2014).

Development is a socio-economic-technological process to raise the standard of living of the people (Wasiu, 2012). For this process to be successful there is a need for an adequate supply of energy to facilitate the growth in every sector of the economy. It is essential to consider the sustainability of the development and plan it in a manner that does not endanger the environment**.** There is little hope for improvement in the standard of living of the rural inhabitants without the support of modern energy technology (Samuel V. Brown, David G. Nderitu, Paul V. Preckel, Douglas J. Gotham, Benjamin W. Allen,(2011), The wide range of energy services, such as cooking, water pumping, water heating, lighting and health access to information technology and internet education, can bring about development, which in turn can facilitate sustainable livelihoods, improve health and education and significantly reduce poverty in rural communities (Wasiu Orewale, 2013)**.**

For the rural people to contribute meaningfully to the socio-cultural and economic development of the country there is a need for rural development programs, towards a sustainable modern energy production model. Energy plays the most vital role in the economic growth, progress, and development, as well as poverty eradication and security of any nation (Okoye A.C, Dioha I.J, Ezeonu F.C, Eboatu A.N, and Onuegbu T.U, 2011). Uninterrupted energy supply is a vital issue for all countries today. Future economic growth crucially depends on the long-term availability of energy from sources that are affordable, accessible, and environmentally friendly. Security, climate change, and public health are closely interrelated with energy (Oyedepo, 2012). Energy is an important factor in all the sectors of any country's economy. The standard of living of a given country can be directly related to the per capita energy consumption. The recent world's energy crisis is due to two reasons: the rapid population growth and the increase in the living standard of whole societies.

Energy supports the provision of basic needs such as cooked food, a comfortable living temperature, lighting, the use of appliances, piped water or sewerage, essential health care (refrigerated vaccines, emergency, and intensive care), educational aids, communication (radio, television, electronic mail, the World Wide Web), and transport (Sunday Olayinka 2012). Energy also fuels productive activities including agriculture, commerce, manufacturing, industry, and mining. Conversely, a lack of access to energy contributes to poverty and deprivation and can contribute to economic decline. Energy and poverty reduction are not only closely connected but also with socioeconomic development (Oyedepo, 2012).

Most developing countries have abundant renewable energy resources, including solar energy, wind power, geothermal energy and biomass, as well as the ability to manufacture the relatively labour-intensive systems that harness these. By developing such energy sources developing countries can reduce their dependence on oil and natural gas, creating energy portfolios that are less vulnerable to price rises (Dilip Ahuja1 and Marika Tatsutani 2009). In many circumstances, these investments can be less expensive than fossil fuel energy systems. In isolated rural areas, electricity grid extensions are often not economical. Off-grid renewable technologies provide a sustainable and cost-effective alternative to diesel generators that would otherwise be deployed in such areas. (https://en Wikipedia.org). The sun emits an enormous amount of energy that is sometimes hard for us to comprehend. In theory, the sun can easily provide a more than sufficient amount of energy to meet the worldwide energy demand, providing that we have the appropriate solar energy-capturing devices. In reality, though, solar power alone is not the answer to the world's energy challenge due to the technological limitations of solar power technology. That being said, it has been proven to be one of the best solutions for rural areas electrification (Dominic and Peter, 2014). A solar cell is a semiconductor, solid-state electronic device that converts radiant energy directly into electrical energy by employing the photovoltaic effect (Robert Ehrlich, 2013). A solar panel's power output depends on the load resistance, irradiance and temperature. Several techniques can be employed to create a reliable energy output by attempting to control these three parameters (Mohammad Omar Abdullah, 2013),

METHODOLOGY

The study area is two villages/rural areas in each of the states in South West Nigeria which comprises Osun, Oyo, Ogun, Ondo, Ekiti and Lagos. The questionnaire was produced to collect data from the field (rural area inhabitants, artisans- barbing saloon, cobbler and business center). The method chosen are due to the following benefits; Questionnaires are absolutely one of the most affordable ways to gather qualitative and quantitative data, Large amounts of information can be collected from a large number of people in a short period of are time and relatively cost-efficient**,** Questionnaires are a practical way to gather the data needed, can be targeted to groups of choosing area and administered in various forms, It's quick and easy to collect results and the result can easily and quickly quantified by a research or through the use of appropriate software**,** Scientific analysis and predictions are achieved when questionnaire are used than any other forms of method**.** The analysis of the data was carried out by use of descriptive statistics methods.

RESULT AND DISCUSSION

Employment and Energy availability

It was detected that 36.67% engaged in garri production, 30% engaged in palm oil production,15 % engaged in phone charging business,11.66% in pepper grinding and 6.67 engaged black smiting .(Fig: 1.0). The result is in agreement with Oduyele (2020) where he confirmed that there is a positive correlation between employment opportunity and energy availability in the rural area. The study is also in agreement with Olabisi (2021) where he uses factor analysis to evaluate various types of employment opportunity created by presence of electricity in the rural area. (Fig: 2.0)

Social activities and Electricity availability

It was seen and discovered that 20% listen to Radio, 18.33% watch television, 15% make use of electricity to charge phones, 30% use lightening from electricity in the village square while listening to stories and tales. 16.67% use microphone electronic appliance for church and mosque programs (Fig 4.0).

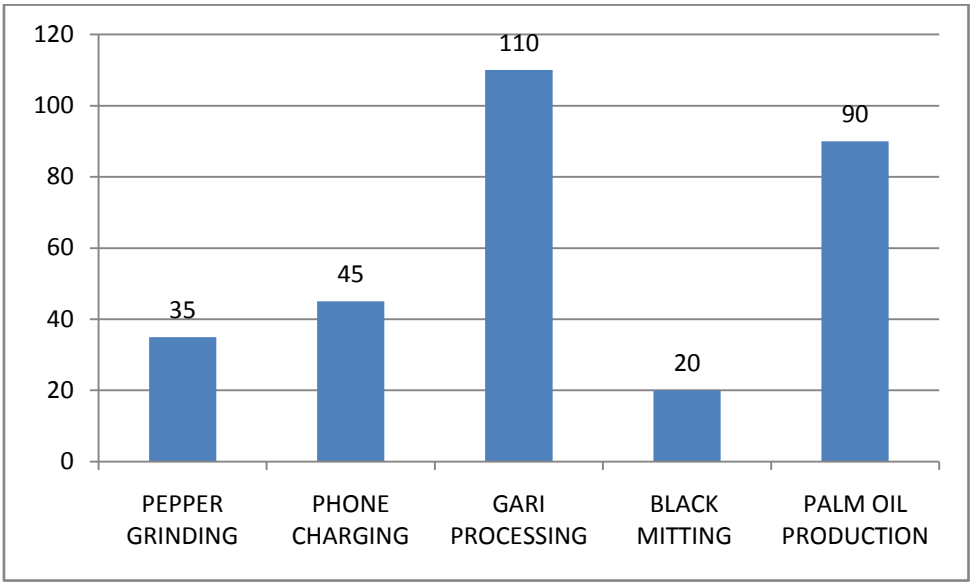

Fig 1.0: Employment Opportunities in the Study Area

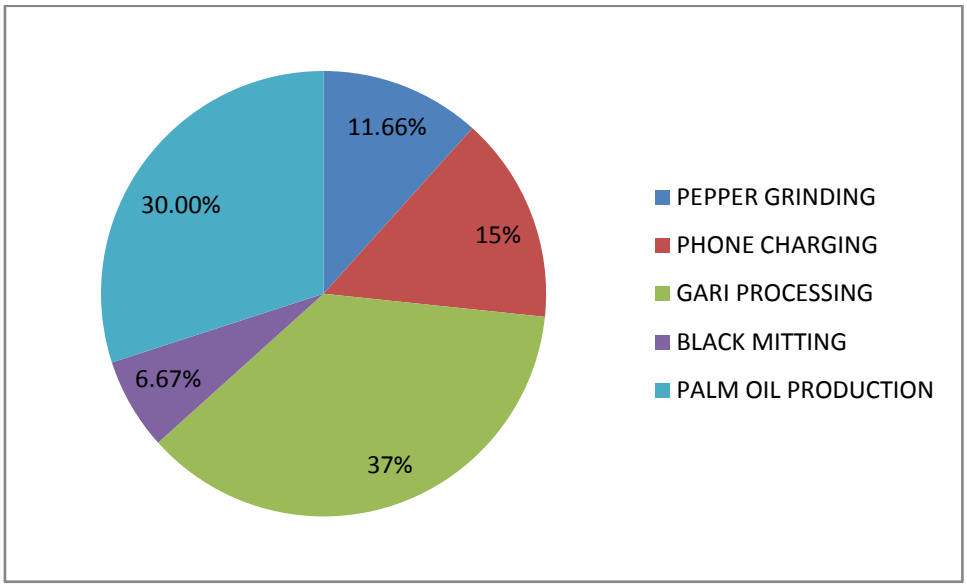

Fig 2.0: Energy availability and Employment in the Study area

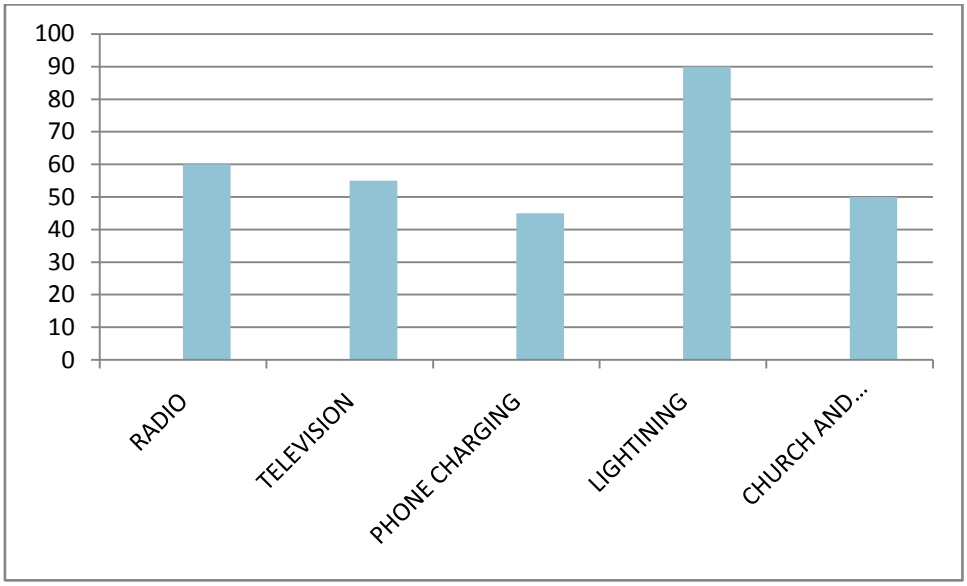

Fig 3.0: Social activities in the Study Area

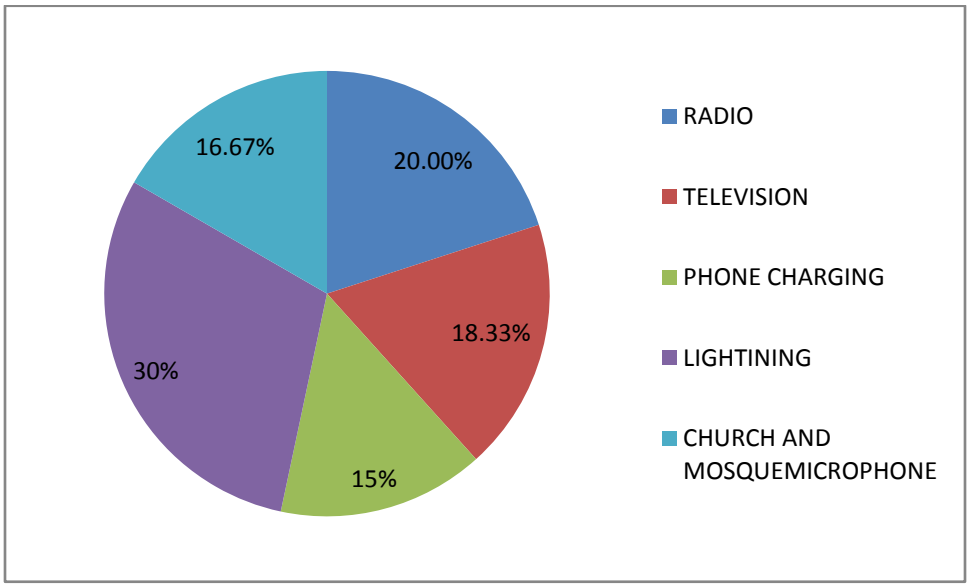

Fig 4.0: Energy availability and social activities in the study area

The research is in alignment with (Ajani 2019) where he used regression analysis to evaluate the various types of social activities the people in the rural area engaged in with available electricity. (Fig 3.0)

CONCLUSION

This study has examines the link between energy availability and social economic life of the selected rural arrears in south west Nigeria. The study revealed that energy consumption has a significant impact on economic growth and social well-being of the rural area as indicated by the research findings, it is therefore recommended that as a matter of policy and to achieve goal 7 of the Agenda 2030 all the rural areas in the country must be provided with any form of energy that will be sourced from any dominant natural resources found in the area.

REFERENCES

Ahmmed F. Zobaa and Ramesh Bansah (2011) Handbook of renewable energy Published by World Scientific Publishing Co. Ltd.5 Toh Tuck Link, Singapore 596224

Alam M.S (2016). Economic Growth with Energy. MPRA Paper No. 1260.

Antmann Pedro (2009) " Reducing Technical and Non-Technical Losses in the Power Sector" Background Paper for the World Bank Group Energy Sector Strategy

Dilip Ahuja and Marika Tatsutani (2009), "Sustainable energy for developing countries" Surveys and Perspectives Integrating Environment and Society, Vol.2, No. 1, (S.A.P.I.EN.S)

Dominic Fong and Peter Meisen (2014)," Sustainable Energy Solutions for Rural Areas and Application for Groundwater Extraction" Global Energy Network Institute (GENI), www.geni.org 18/11/2016, 19"00

Mohammad Omar Abdullah, (2013), Applied Energy An Introduction", by Taylor & Francis Group, LLC

Okeoma, T.F, Nwachukwu E. I Ezeonye, C.S, and Osatemple M (2023)A Study on the Impact of Energy Consumption on the Nigerian Economy, Journal of Energy Technology and Environment Vol. 5(1) 2023 pp. 40 - 52 ISSN-2682-583x

Okoye A.C.1, Dioha I.J.2, Ezeonu F.C.3, Eboatu A.N.4 and Onuegbu T.U (2011), Energy Crisis and Attendant Poverty and Environmental Problems: The Role of Renewable Energy Nigerian Journal of Solar Energy Volume 22, Solar Energy Society of Nigeria (SESN)

Robert Ehrlich (2013), "Renewable Energy: A first course" by Taylor & Francis Group, LLC

Samuel V;Brown; David G; Nderitu; Paul V; Preckel; Douglas J. Gotham; Benjamin W; Allen (2011), "Renewable Power Opportunities for Rural Communities" United States Department of Agriculture

Sunday Olayinka Oyedepo (2012), "Energy and sustainable development in Nigeria: the way forward" Energy, Sustainability and Society, http://www.energsustainsoc.com/content/18/11/16 20:15

Tarujyoti Buragohain (2012), "Impact of Solar Energy in Rural Development in India" International Journal of Environmental Science and Development, Vol. 3, No. 4.

Wasiu Orewole (2013) "Solar Energy A Sustainable Solution to Rural Electricity Problems in Nigeria" B.Eng. Thesis Helsinki Metropolia University of Applied Sciences