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Impact of Renewable Energy Projects on Job Creation and Poverty Reduction in Selected Rural Communities in Doma LGA Nassarawa State, Nigeria

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Abstract: *Many rural communities in Nigeria are struggling with socio-economic development, in line with the desire to increase energy access remains a strong driving force for poverty alleviation. This study therefore examines and investigates the impact of renewable energy projects on job creation and poverty reduction in selected rural communities in Doma Local Government, Nassarawa State, Nigeria. The objectives are to examine the impact of renewable energy project on job creation in Doma Local Government, Nassarawa State, Nigeria; examine the impact of renewable energy project on poverty alleviation in Doma Local Government, Nassarawa State, Nigeria. The study reviewed relevant theoretical and empirical literature, drawing its theoretical framework from sustainable livelihood framework. The research design employed a descriptive survey research technique, with a close-ended questionnaire serving as the principal instrument for data collection. Utilizing Stratified sampling technique to selecting five (5) communities in Doma LGA; Rukubi, Okpatta, Yelwa, Akura and Fadama. These communities were selected considering their predominantly rural characteristics and the presence of ongoing renewable energy projects. Hypotheses were tested using Pearson correlation analysis as the selected statistical method. The study found a significant negative relationship between renewable energy projects and job creation but a significant positive relationship between renewable energy and poverty alleviation. It was therefore recommended that, there is need for training programs to equip local communities with the necessary skills for jobs in renewable energy projects such as installations, maintenance and operation.*
Keywords: renewable energy, job creation, poverty reduction

INTRODUCTION

In rural areas of developing nations, access to energy holds significant importance, enhancing the standard of living and aiding in poverty alleviation. Furthermore, it enhances quality of life by enabling the acquisition of modern amenities such as radios, televisions, and mobile phones

(Jacobson, 2016; World Bank, 2023). The global shift towards renewable energy is recognized as a crucial strategy for sustainable development (Kaufmann, 2020). For countries like Nigeria, this transition not only addresses environmental concerns but also offers substantial socio-economic advantages.

Poverty and energy accessibility are intertwined challenges in Nigeria. With over 50 million Nigerians estimated to be living in poverty and unemployment prevalent in rural areas (NBS, 2010), addressing these issues is paramount. Poverty encompasses various dimensions, including social, psychological, and material deprivation, highlighting the urgent need for resources. Consequently, reducing poverty and unemployment remains a central goal in both international and national development agendas. Nigeria's renewable energy sector is guided by policies aimed at diversifying the energy mix and promoting sustainability. Initiatives like the Rural Electrification Agency (REA) (2019) focus on delivering electricity to underserved communities through renewable energy solutions.

A significant portion of Nigeria's rural population lacks consistent access to energy, impeding social cohesion and economic growth. Renewable energy projects offer a viable solution by providing clean energy, stimulating local economies, and generating employment opportunities. The potential for these projects to address poverty and unemployment in rural Nigeria is explored in this background research. Notably, Nigeria's national grid faces challenges in delivering consistent electricity, particularly in remote rural areas like Doma LGA, where solar power projects have been predominant due to the region's high solar irradiance.

Nigeria, endowed with abundant natural resources, holds immense potential for renewable energy sources like solar, wind, and biomass. However, the nation grapples with significant energy access challenges, especially in rural areas. The predominant focus of the national energy infrastructure on urban centers has left numerous rural communities without dependable electricity, adversely affecting economic activities, education, healthcare, and overall well-being. Therefore, renewable energy emerges as a promising solution to bridge this energy gap and promote sustainable rural development. A key challenge in rural areas is the high cost and technical complexity of extending the national grid to remote or geographically challenging areas, resulting in unreliable electricity access for many rural communities (Karekezi, 2017).

The lack of reliable electricity access in rural communities hampers economic activities and essential services. Electricity plays a crucial role in operating modern farming equipment and irrigation systems, impacting agricultural productivity and food security. Additionally, it is indispensable for various basic medical equipment such as vaccine storage refrigerators and diagnostic devices like X-ray machines. The absence of consistent power restricts the range of available treatments, thereby diminishing healthcare quality. Moreover, operational limitations faced by rural firms dependent on energy for lighting or equipment hinder growth and employment development.

Doma Local Government Area (LGA), situated in central Nigeria, predominantly relies on agriculture, yet struggles with high poverty rates, limited economic opportunities, and inadequate infrastructure. Renewable energy projects in Doma hold the potential to transform

these rural communities by providing a reliable power supply essential for economic activities, education, and healthcare services. Despite numerous studies examining the impact of renewable energy projects on poverty alleviation and job creation nationwide (Asfaw, 2020; Olanrewaju, 2020; Osinubi, Agboola, & Amole, 2018; Adeniran, 2019; Adeleke, Oyedele, & Alabi, 2022, among others), little to no research has been conducted specifically in Doma LGA, Nasarawa State. This underscores the need for localized studies to better understand the potential benefits of renewable energy in addressing socio-economic challenges in rural areas like Doma. 2022; amongst others) but little or no studies have been carried out in Doma Local Government, Nasarawa state.

The aim of this research is to investigate impact of renewable energy projects on job creation and poverty reduction in selected rural communities in Doma Local Government, Nassarawa State, Nigeria. The specific objectives are to;

i. Examine the impact of renewable energy project on job creation in Doma Local Government, Nassarawa State, Nigeria.
ii. Examine the impact of renewable energy project on poverty alleviation in Doma Local Government, Nassarawa State, Nigeria.

Based on the objectives of the study, the following hypotheses were raised:

H_{01}: There is no significant relationship between renewable energy project and job creation in Doma Local Government, Nassarawa State, Nigeria

H_{02}: There is no significant relationship between renewable energy project and poverty alleviation in Doma Local Government, Nassarawa State, Nigeria.

This research on the impact of renewable energy projects on job creation and poverty reduction in Doma Local Government, Nassarawa State, Nigeria has the potential to be significant and also enlighten the public about the limited access to electricity and how it hinders economic development and perpetuates poverty in rural areas. Which can provide an understanding of how renewable energy offers a solution for electrification and poverty reduction. The research will be necessary to understand how the jobs created can have an impact on income levels, the research can highlight how renewable energy projects empower rural communities. Which can encourage further investment in renewable energy solutions tailored to local needs and skillsets.

LITERATURE REVIEW

Conceptual Review

Renewable Energy (RE) resources encompass various energy types derived naturally from the environment, including solar, biomass, wind, hydropower, and geothermal energy. Nigeria's abundant renewable energy resources provide ample capacity for developing an effective national energy plan. Integrating renewable energy resources, particularly solar, wind, and geothermal energy, into the nation's energy mix can significantly impact its energy budget (Akinbami, 2021). However, realizing the vast potential of renewable energy, especially solar, wind, and geothermal, has remained elusive over the years (Abam, Nwankwojike, Ohunakin & Ojomu, 2014). The benefits of renewable energy are manifold. These sources are sustainable and

do not deplete, offering long-term energy security. They also hold promise for job creation, as renewable energy technologies are expected to generate numerous employment opportunities in the future. Moreover, they are environmentally friendly, producing fewer greenhouse gas emissions compared to traditional fossil fuels. However, renewable energy projects may require significant land for large-scale installations, and the initial investment in technology can be costly.

Renewable energy sources are characterized by their ability to be replenished at a rate faster than their consumption on a human timescale, rendering them essentially inexhaustible (David MacKay, 2018). Hermann Scheer (2020) similarly defines renewable energies as those that can be continuously replenished within a human timeframe, offering sustainable and environmentally sound solutions to meet our energy needs. In reference to rural electrification, renewable energy projects, such as solar mini-grids and off-grid systems, hold immense potential. These projects not only address the challenges of extending the national grid to remote areas but also contribute to job creation, poverty reduction, and sustainable development in rural communities.

Job Creation

Job creation is the process of generating employment opportunities for both the unemployed and those seeking additional employment (Umar, 2021). It plays a pivotal role in mitigating poverty risks associated with unemployment and is essential for the expansion and recovery of economies in developing nations (Decker, 2019). However, achieving net job creation requires robust policies and implementation efforts (Haltiwanger, 2023; Ram, 2020). Net job creation is measured by subtracting the total number of old jobs from the total number of new jobs to gauge a nation's job growth (Shane, 2019). Ensuring job creation opportunities are available not only reduces the risk of skill loss but also contributes to continuous skill enhancement (Wei, 2020). In countries aiming to achieve a competitive advantage in the economic sector, job creation is crucial for fostering prosperity. This often involves the establishment of projects and investments to generate new employment opportunities.

Poverty Alleviation

Poverty alleviation refers to all the methods, ways or techniques adopted by government, non-governmental organizations or wealthy individuals to reduce or eradicate poverty from a collectivity. Poverty alleviation/eradication is best approached as an exercise in raising people's capabilities or enhancing freedoms. The corollary of this approach to development is empowerment, which is, helping people in poverty to acquire the tools they need to meet their basic needs as the long-term solution to poverty. Poverty is the most crucial problem facing developing countries because of its effect on livelihoods. Poverty refers to an individual's (or family's) lack of access associated primarily with inadequate income to basic human needs such as food, shelter, fuel, clothing, safe water, sanitation, health care and education. Poverty is manifested as the inability to achieve a minimum standard of what is needed for material well-being. Human poverty also entails the denial of opportunities and choices most vital to human development-including a long, healthy, creative life, knowledge (access to reading and communication) and a decent standard of living. The number of Nigerians living under poverty is staggering- over 70 million (NBS, 2019). Thus, poverty reduction is undoubtedly one of the

highest-ranking issues in the national strategies of many less developed countries and the most potent issue in the current international development agenda.

The relationship between Renewable Energy Project and Job Creation

Renewable energy projects play a significant role in job creation, both directly and indirectly. Direct employment opportunities arise from roles related to the installation, operation, and maintenance of renewable energy systems, requiring technical skills and training (Obi & Callistar, 2022). These jobs not only provide avenues for local employment but also foster skill development within communities. Indirect job creation results from the economic activities stimulated by improved energy access. Reliable electricity enhances agricultural productivity, enables small businesses to operate more efficiently, and enhances services in healthcare and education (Jacobs, 2014). For example, solar-powered irrigation systems can boost crop yields for farmers, while extended working hours facilitated by reliable electricity can increase income for local artisans. However, realizing the job creation potential of renewable energy necessitates effective policies and investments to ensure a smooth transition from fossil fuel-based employment (Jacobs, 2014). The Power for All - Powering Jobs Census 2022 (Nigeria Focus) highlights the significant role of the decentralized Renewable Energy (DRE) sector in job creation in Nigeria, nearly rivaling the oil and gas sector (Power for All - Powering Jobs Census 2022). It estimates that over 50,000 people are currently employed in the sector, with projections indicating the creation of over 76,000 new jobs by 2023.

The types of jobs created by renewable energy projects can be categorized as follows:

1. Direct Jobs: These involve construction, installation, operation, and maintenance of renewable energy facilities, such as solar panel technicians.
2. Indirect Jobs: These are generated in supporting industries that supply materials, equipment, and services for renewable energy projects, such as manufacturing of solar panels.
3. Skilled vs. Unskilled Jobs: These refer to the skill levels required for various roles created by renewable energy projects and potential training needs for local communities.

The relationship between Renewable Energy Project and Poverty Alleviation

Poverty reduction is intricately linked to job creation, as employment opportunities lead to higher incomes and improved living standards. Access to affordable and reliable energy reduces the time and effort spent on traditional energy sources, such as firewood collection, thereby freeing up time for productive activities and education. Additionally, renewable energy projects can lower energy costs, enabling households to save money and invest in other essential needs. Energy shortage and regional poverty are two critical issues restricting global sustainable development. According to the World Bank, as of 2018, there were still 750 million people worldwide without access to electricity, with 600 million residing in rural areas (Wang et al., 2022). This has resulted in a significant portion of the population facing dual poverty in terms of energy and income, hindering their ability to achieve sustainable development (Twumasi et al., 2021).

Due to their contribution to environmental protection and sustainable attributes, renewable energy sources have been entrusted by the public with the expectation of promoting rural electrification and poverty alleviation. Countries worldwide have been actively exploring the application of renewable energy and have developed numerous renewable energy poverty alleviation policies. The World Bank (2021) has organized several renewable energy projects to increase access to clean energy in rural areas of developing countries. These cases serve as strong evidence of the tremendous potential of renewable energy projects in providing clean energy and reducing poverty.

Consequently, numerous scholars have conducted extensive research and discussions on the effectiveness, impact, formulation, and implementation of policies regarding renewable energy-based poverty alleviation. International scholars have primarily approached research on the impact of renewable energy-based poverty alleviation from anthropological and sociological perspectives. They focus on how the benefits derived from renewable energy projects contribute to the well-being of the poor, such as improving economic activities and social lives (Mitscher & Ruther, 2012; Burney et al., 2020), enhancing the quality of life for socially marginalized individuals, and increasing the sense of happiness and security among community residents.

In contrast, Chinese scholars tend to emphasize the evaluation of the implementation performance of renewable energy projects. This includes assessing the environmental impact on rural poor, economic impact on the region, poverty alleviation efficiency, and satisfaction of the poor (Zhang et al., 2020). Regarding the formulation and implementation of poverty alleviation policies, the United Nations has long advocated for achieving global energy access by 2030 as part of the Sustainable Development Goals (SDGs), with a specific emphasis on photovoltaic poverty alleviation. Many countries have introduced a series of renewable energy poverty reduction policies, such as establishing dedicated funds, implementing electricity price incentives, and strengthening social security measures to provide robust policy support for promoting renewable energy poverty alleviation. Nnaji et al. (2020) highlighted Nigeria's abundant renewable energy resources, such as wind and solar energy, and concluded that integrating mature and emerging renewable energy resources holds great prospects for poverty reduction and sustainable development in the country.

Theoretical Review

This study will be anchored on Sustainable Livelihoods Framework (SLF)

Sustainable Livelihoods Framework (SLF)

The sustainable livelihoods framework, propounded by The Department for International Development (DFID) of the UK government (1992), emphasizes enhancing assets, capabilities, and activities necessary for sustainable livelihoods while ensuring resilience to stresses and shocks. Renewable energy projects play a crucial role in enhancing various forms of capital—natural, physical, human, financial, and social—essential for sustainable livelihoods in rural areas. This framework helps organize the factors that constrain or enhance livelihood opportunities and illustrates their interrelationships. Central to this approach is the recognition that different households have varying access to livelihood assets, which the sustainable

livelihood approach aims to expand. Livelihood assets, which the poor often need to make trade-offs and choices about, encompass:

Human Capital Development: Renewable energy projects not only provide employment opportunities but also contribute to human capital development. Training programs associated with renewable energy installation, maintenance, and management empower individuals with valuable technical skills. Moreover, access to clean energy sources improves health outcomes by reducing indoor air pollution, which in turn enhances workforce productivity and overall well-being.

Social Capital Enhancement: Community engagement lies at the heart of many renewable energy projects, leading to the formation of social networks and collective action. Collaborative efforts to develop and manage renewable energy infrastructure build social cohesion and trust within communities.

Natural Capital Preservation: By harnessing renewable resources such as sunlight, wind, and biomass, renewable energy projects contribute to the preservation of natural capital. Unlike fossil fuels, renewable energy sources are inexhaustible and have minimal environmental impact, thereby promoting sustainable resource management.

Physical Capital Infrastructure: Investment in renewable energy infrastructure stimulates economic growth and creates employment opportunities throughout the value chain. From manufacturing and construction to installation and maintenance, renewable energy projects generate a diverse array of skilled and unskilled jobs.

Financial Capital Mobilization: Access to finance is crucial for the successful implementation and scaling up of renewable energy projects. Innovative financing mechanisms, such as micro-finance, crowdfunding, and public-private partnerships, enable households and communities to invest in renewable energy technologies.

Empirical Review

Asumadu, Bekoe, & Agyei (2020) identified that renewable energy projects have the potential to create jobs in Sub-Saharan Africa. They emphasized the importance of skills development programs to ensure local communities benefit from these opportunities. Asumadu-Sarkodie et al. (2020) also Conducted a systematic review on the impact of renewable energy on rural livelihoods in Sub-Saharan Africa. They highlighted the need for further research to understand the specific impacts of renewable energy technologies on rural communities in Nigeria.

Amole, (2017) Reviewed the role of renewable energy in rural development across Nigeria. The study underscored the need for additional research focusing on specific renewable energy technologies and their impact on rural communities. Adeniran (2019) who assessed the impact of renewable energy technologies on livelihoods in rural Nigerian communities found that renewable energy projects can influence livelihoods positively, potentially contributing to poverty reduction. Recommended the development of strategies to maximize these positive impacts.

Osinubi, Agboola, & Amole (2018) Investigated the impact of solar PV mini-grids on poverty reduction in a rural community. Discovered that increased access to electricity resulted in extended business hours, improved productivity, and new income generation opportunities. Recommended the implementation of social impact assessments alongside renewable energy projects. Olanrewaju (2020) likewise explored the connection between solar PV mini-grids and poverty reduction in Nigeria. Found insights into the impact of solar PV mini-grids on poverty reduction in Nigerian communities and recommended wider adoption of such systems in rural areas for poverty alleviation.

Asfaw (2020) Examined if renewable energy fosters local economic development in developing countries, using Ethiopia as a case study. Provided valuable comparative insights from a neighboring country with similar challenges. In relation to the above study, Soava (2020) Investigated the economic impacts of grid-connected solar PV systems on rural communities in Nigeria. Found that increased access to electricity led to improved business operations and job opportunities. Recommended the development of supportive policies for the long-term sustainability of grid-connected solar PV systems.

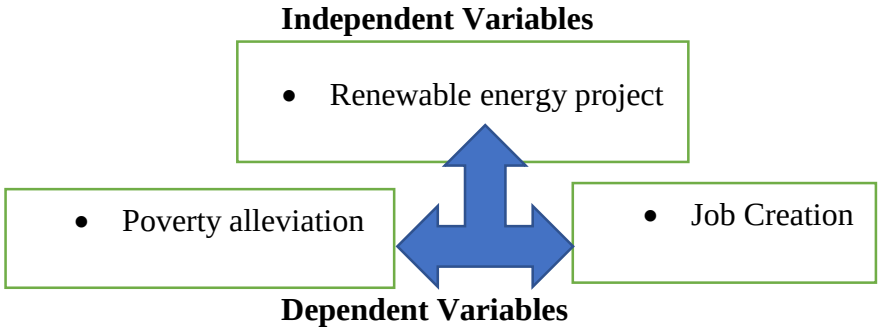
Ogwumike (2019) Assessed the willingness of rural communities in Nigeria to participate in renewable energy projects. Found high willingness to participate, with factors like perceived economic benefits and community ownership playing a significant role. Recommended engagement with communities throughout the project development process to ensure their buy-in.

Overall, these studies underscore the potential of renewable energy projects to create jobs, alleviate poverty, and improve livelihoods in rural communities in Nigeria and across Sub-Saharan Africa. However, they also highlight the importance of targeted interventions, skills development, and community engagement to maximize the positive impacts of renewable energy initiatives.

Conceptual Framework

The figure below illustrates the conceptual model of the study. Job creation and Poverty alleviation indicators are a function of renewable energy enlisted. In other words, improving renewable energy projects will improve job creations and reduce poverty.

Figure 1: A diagram showing the relationship between Renewable energy and Job creation and Poverty alleviation.



Source: Researcher's Computation, 2024

METHODOLOGY

This study adopts a survey research design to examine the relationship between poverty alleviation, job creation (dependent variable) and renewable energy project (independent variable). Data was collected from a sample of residents at the selected rural communities in Doma Local Government, Nassarawa state. The instrument of data collection is a close-ended questionnaire. The target population under study includes residents of five distinct communities within Doma Local Government, Nassarawa State: Rukubi, Okpatta, Yelwa, Akura and Fadama. These communities were selected considering their predominantly rural characteristics and the presence of ongoing renewable energy projects. Furthermore, these communities have been recipients of various renewable energy initiatives aimed at addressing energy poverty and promoting sustainable development. Stratified sampling technique is used. Within each group, the study will utilize simple random sampling to select respondents. This method ensures that every resident of five distinct communities has an equal opportunity to be chosen as part of the sample elements. From each community, a random sample of 20 residents will be selected using a systematic sampling approach. Respondents will be conveniently selected from the selected communities.

Table 1: Sample Distribution

Communities	**Sample Size**
Rukubi	20
Okpatta	20
Yelwa	20
Fadama	20
Akura	20
Total	***100***

Source: Author's Computation, 2024

The sample size is therefore 100

In analyzing the data for this study, descriptive statistics such as percentages and frequencies are used for analyzing the research questions while hypotheses testing was done with Pearson correlation. Statistical Package for Social Sciences (SPSS) computer software was used to run the analyses.

DATA ANLYSIS AND DISCUSSIONS

Table 2: Socio-Demography of the respondents

S/N	VARIABLE	FREQUENCY	PERCENTAGE %
1.	**SEX**		
	MALE	63	63
	FEMALE	37	37
2.	**AGE**		
	18-27	29	29
	28-37	37	37
	38-47	22	22
	48 and above	12	12
3.	**MARITAL STATUS**		
	MARRIED	33	33
	SINGLE	66	66
	DIVORCED	0	0
	WIDOWED	1	1
4.	**RELIGION**		
	CHRISTIANITY	39	39
	ISLAMIC	61	61
	TRADITIONALIST		
5.	**EDUCATION**		
	PRIMARY	2	2
	SSCE	31	31
	NCE/ND	22	22
	BSC/HND	43	43
	POST GRADUATE	2	2

Author's Computation, 2024

The table above illustrates the socio-demographic characteristics of the respondents. It reveals that, majority (63%) of the total sample sizes were male while the remaining 37% were female. The table also reveals that 29% of the total respondents fall within the age bracket of 18-27 years, 37% within 28-37 years while 12% within 48years and above. The table also reveals that 33% of the total respondents are Married, 66% are Single, and just 1% is widowed. It also shows that 31% of the respondents were Christians while the remaining 69 were Muslims. Lastly the table showed the educational levels of the respondents, were just 2% of the respondents have primary school leaving certificate, 31% have secondary school leaving certificates, 22% have NCE or ND certificate and 43% which was the majority were either BSC or HND certificate holders and just 2% were post graduates.

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Analysis of Research Objectives

Objective One: Examine the impact of renewable energy project on job creation in Doma Local Government, Nassarawa State, Nigeria.

Table 3: table illustrating the impact of renewable energy project on job creation

S/N	VARIABLES	SA %	A %	UD %	D %	SD %	REMARKS
1	Renewable energy projects have increased local employment opportunities	57	43	-	-	-	AGREED
2	Have gotten jobs from a renewable energy project before	40	44	16	-	-	AGREED
3	It helps to create good jobs with attractive salaries	29	71	-	-	-	AGREED
4	It has encouraged local businesses to expand and hire more employees	45	55	-	-	-	AGREED
5	They offer job training programs for local workers	36	47	13	4	-	AGREED
6	It provides both local and foreign investments in our community which in turn boosts local job market	66	34	-	-	-	AGREED
7	It creates and develop youths in high-tech jobs	33	61	6	-	-	AGREED

Author's Computation, 2024

The table 3 above shows the impact of renewable energy projects on job creation in Doma Local Government, Nassarawa State, Nigeria. It reveals that majority (57%) of the respondents strongly agreed that renewable energy projects have increased local employment opportunities. It also shows that majority of the respondents strongly agreed that they have gotten jobs from a renewable energy project before, 71% of the respondents agreed that it helps to create good jobs with attractive salaries. Majority, 55% of the respondents agreed that it has encouraged local businesses to expand and hire more employees. 47% of the respondents which was the highest agreed that renewable energy projects offer job training programs for local workers. It also provides both local and foreign investments in our community which in turn boosts local job market. Lastly, 61% agreed that It creates and develop youths in high-tech jobs. Hence it can be concluded that renewable energy projects have a significant impact on job creation.

Objective One: Examine the impact of renewable energy project on poverty alleviation in Doma Local Government, Nassarawa State, Nigeria.

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Table 3: table illustrating the impact of renewable energy project on poverty alleviation

S/N	VARIABLES	SA %	A %	UD %	D %	SD %	REMARKS
1	Renewable energy projects contribute to reducing poverty in our community	69	31	-	-	-	AGREED
2	Renewable energy projects improve the quality of life for low-income households	31	55	14	-	-	AGREED
3	It helps to improve access to essential services for impoverished areas	80	20	-	-	-	AGREED
4	It has attracted additional investments in poor communities	71	29	-	-	-	AGREED
5	They offer supports to educational attainment in poor areas	16	57	13	14	-	AGREED
6	It addresses inequalities that contributes to poverty	96	4	-	-	-	AGREED
7	It improves access to clean water in impoverished regions	19	71	10	-	-	AGREED

Author's Computation, 2024

The table 3 above shows the impact of renewable energy projects on poverty in Doma Local Government, Nassarawa State, Nigeria. It reveals that majority (69%) of the respondents strongly agreed that renewable energy projects contribute to reducing poverty in our community. It also shows that majority of the respondents strongly agreed that it improve the quality of life for low-income households, 80% of the respondents agreed that it helps to improve access to essential services for impoverished areas. Majority, 71% of the respondents agreed that it has attracted additional investments in poor communities. 57% of the respondents which was the highest agreed that they offer supports to educational attainment in poor areas. It also addresses inequalities that contributes to poverty. Lastly, 71% agreed that It improves access to clean water in impoverished regions. Hence it can be concluded that renewable energy projects have a significant impact on poverty alleviation.

Hypothesis One

H_{01}: There is no significant relationship between renewable energy project and job creation in Doma Local Government, Nassarawa State, Nigeria

Table 4: Correlation Matrix for Hypothesis one

	JE	**REP**
JE	1	
REP	0.056023	1

Source*:* SPSS Output Data 2024

Decision rule: Reject H_0 if $P_{sig} \leq 0.05$, otherwise accept H_0 (significant at 2-tailed) Vice versa.

From table 4 showed the relationship between independent Variables and the dependent Variable. The correlation estimation between renewable energy project and job creation showed correlation estimates of 0.056023

This means there is an insignificant relationship between renewable energy project and job creation.

Hypothesis Two

H_{02}: There is no significant relationship between renewable energy project and poverty alleviation in Doma Local Government, Nassarawa State, Nigeria.

Table 5: Correlation Matrix for Hypothesis two

	PA	**REP**
PA	1	
REP	0.024175	1

Source*:* SPSS Output Data 2024

Decision rule: Reject H_0 if $P_{sig} \leq 0.05$, otherwise accept H_0 (significant at 2-tailed) Vice versa. From table 5 showed the relationship between independent Variables and the dependent Variable. The correlation estimation between renewable energy project and poverty alleviation showed correlation estimates of 0.024175. This means there is a significant relationship between renewable energy project and poverty alleviation.
Hence the following Hypotheses were concluded on:

H_0: There is no significant relationship between renewable energy project and job creation in Doma Local Government, Nassarawa State, Nigeria

H_1: There is a significant relationship between renewable energy project and poverty alleviation in Doma Local Government, Nassarawa State, Nigeria.

Discussions

The empirical evidence from the inferential analyses yielded two key results based on the tested hypotheses. Firstly, the study found no significant relationship between renewable energy project and job creation. Secondly, the study found a positive significant relationship between renewable energy project and poverty alleviation. This result is in line with a previous study conducted by Adeniran (2019) who assessed the impact of renewable energy technologies on livelihoods in rural Nigerian communities found that renewable energy projects can influence livelihoods positively, potentially contributing to poverty reduction.

CONCLUSION AND RECOMMENDATION

Nigeria's renewable energy sector is guided by policies aimed at diversifying the energy mix and promoting sustainable resources. Initiatives like the Rural Electrification Agency (REA) focus on delivering electricity to underserved and unserved communities through renewable

energy solutions. In Doma LGA, renewable energy projects have primarily centered on solar power due to the region's high solar irradiance. Projects range from small-scale solar home systems to larger community-based solar mini-grids. These projects have been implemented through the collaborative efforts of local and international non-governmental organizations (NGOs), government agencies, and private sector partners. The involvement of these stakeholders is crucial for the successful implementation and sustainability of renewable energy projects. Renewable energy projects hold significant promise for addressing the dual challenges of energy access and socio-economic development in rural Nigeria. This study will contribute to the growing body of evidence on the impact of renewable energy on job creation and poverty reduction, providing valuable insights for scaling up successful interventions and ensuring that the benefits of renewable energy are equitably shared among rural populations.

The following recommendations were made;

i. There is need for training programs to equip local communities with the necessary skills for jobs in renewable energy projects such as installations, maintenance and operation
ii. Prioritize hiring from local communities to maximize job creation and stimulate economic growth in areas where renewable energy projects are implemented
iii. Encourage the growth of local businesses by providing opportunities for them to participate in the supply chain of renewable energy projects
iv. Implement community-owned renewable energy projects to generate local revenue and empower communities economically while creating job opportunities and reducing poverty
v. Establish mechanisms to monitor and evaluate the socioeconomic impact of renewable energy projects, to inform evidence-based decision making and improve project implementation

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