

Amuda, Yusuff Jelili

Article

Islamic financial surplus for energy and gas investment : towards financial inclusion for improving living condition of needy and poor in Nigeria

International Journal of Energy Economics and Policy

Provided in Cooperation with:

International Journal of Energy Economics and Policy (IJEEP)

Reference: Amuda, Yusuff Jelili (2023). Islamic financial surplus for energy and gas investment : towards financial inclusion for improving living condition of needy and poor in Nigeria. In: International Journal of Energy Economics and Policy 13 (5), S. 394 - 406.
<https://www.econjournals.com/index.php/ijEEP/article/download/14514/7500/34387>.
doi:10.32479/ijEEP.14514.

This Version is available at:

<http://hdl.handle.net/11159/631291>

Kontakt/Contact

ZBW – Leibniz-Informationszentrum Wirtschaft/Leibniz Information Centre for Economics
Düsternbrooker Weg 120
24105 Kiel (Germany)
E-Mail: [rights\[at\]zbw.eu](mailto:rights[at]zbw.eu)
<https://www.zbw.eu/>

Standard-Nutzungsbedingungen:

Dieses Dokument darf zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden. Sie dürfen dieses Dokument nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, aufführen, vertreiben oder anderweitig nutzen. Sofern für das Dokument eine Open-Content-Lizenz verwendet wurde, so gelten abweichend von diesen Nutzungsbedingungen die in der Lizenz gewährten Nutzungsrechte. Alle auf diesem Vorblatt angegebenen Informationen einschließlich der Rechteinformationen (z.B. Nennung einer Creative Commons Lizenz) wurden automatisch generiert und müssen durch Nutzer:innen vor einer Nachnutzung sorgfältig überprüft werden. Die Lizenzangaben stammen aus Publikationsmetadaten und können Fehler oder Ungenauigkeiten enthalten.

Terms of use:

This document may be saved and copied for your personal and scholarly purposes. You are not to copy it for public or commercial purposes, to exhibit the document in public, to perform, distribute or otherwise use the document in public. If the document is made available under a Creative Commons Licence you may exercise further usage rights as specified in the licence. All information provided on this publication cover sheet, including copyright details (e.g. indication of a Creative Commons licence), was automatically generated and must be carefully reviewed by users prior to reuse. The licence information is derived from publication metadata and may contain errors or inaccuracies.



<https://savearchive.zbw.eu/terms-of-use>



Islamic Financial Surplus for Energy and Gas Investment: Towards Financial Inclusion for Improving Living Condition of Needy and Poor in Nigeria

Yusuff Jelili Amuda*

Prince Sultan University, Saudi Arabia. *Email: yusuffja@psu.edu.sa

Received: 20 April 2023

Accepted: 06 August 2023

DOI: <https://doi.org/10.32479/ijeeep.14514>

ABSTRACT

Undoubtedly, Nigeria is the topmost producer of energy and gas in the entire African continent. However, there is an abject poverty in the country and the global financial crisis and weaknesses of conventional financial system in predominant Muslim countries including Nigeria have not made the experts to critically explore Islamic financial surplus for energy and gas investment in order to solve the problems of needy and poor in the country. There is need to bridge the gap of financial inclusion with specific attention on energy and gas investment with specific attention on Islamic financial surplus in order to improve the living conditions of the needy and poor in the country. It is essential to utilize financial surplus derivable from energy and gas investment for sustainable financial inclusion for enhancing living condition of the needy and poor people in the society. Shari'ah compliant investment is emphatically stressed as a central climax of this study. Qualitative research design was employed in this paper using content analysis and systematic literature review. The results of the study demonstrated that Islamic financial surplus can be instrumentally related to energy and gas investment where the surplus can be adequately used for empowerment of the needy and poor people in the society. By emphasizing on Islamic financial surplus especially in connection with energy and gas investment, it will expand the understanding about Islamic economy system for financial inclusion beyond banking sector. Thus, adequate use of Islamic financial surplus in energy and gas sector will practically reduce high rate of abject poverty among the needy and the poor in the Nigerian society by attaining economic growth. Most studies on Islamic financial surplus are emphatically on banking sector. This study expands the understanding of the Islamic financial surplus by importantly relating it to energy and gas sector.

Keywords: Energy, Gas, Islamic Financial Surplus, Shari'ah-Compliant

JEL Classifications: A12 Relationship of Economics to other Disciplines; Q4 Energy

1. INTRODUCTION

Undoubtedly, Energy and Gas play a significant role towards achieving 2030 Agenda for Sustainable Development as being stipulated by the United Nations (2021). The United Nations (UN) attempts to promote access to affordable, reliable, sustainable and modern energy for all (UN, 2021). As an integral part of sustainable development, there is an emphasis on efficient use of energy and of which intensity is an essential measure efficiency (Chen et al., 2019). Indeed, at the global level, gas and energy have witnessed a decrease since past decade. Thus, there is need for efficiency policies in various developed and emerging economies in different

parts of the world that can address this problem. Literature identified global financial crisis and Islamic financial markets have been considered as prime solutions to the global financial crisis (Kenourgios et al., 2016).

In Nigeria, where Islamic financial surplus has been thriving and it has significantly penetrated the attention of the government where for instance, Islamic bonds (*Sukuk*) has been used to execute different social programmes such as construction of roads across the country. It is essential to elaborate of various determinants of Islamic financial surplus relevant to the gas and oil sector of the economy specifically by promoting financial inclusion in

improving condition of the poor in the society. Undoubtedly, gas and energy has attracted the attention of experts in the economy sector as well as international trade as an essential aspect of economic growth in various parts of the world including Nigeria (Olujobi et al., 2020).

Moreover, literature contends that awareness about the existence of Islamic financial surplus can positively contribute to the growth of economy especially in oil and gas. This assertion can be further buttressed with the position of Pan et al. (2019) that argued that financial development can positively influence the growth and productivity of economy. On the basis of this assertion, it can be deduced that since oil and gas sector is the core aspect of the Nigeria's economy (Pan et al., 2019). Thereby, the opportunities associated with Islamic financial surplus can be taken into consideration in order to enhance financial inclusion among the poor citizens as literature contends (Richardson, 2007). Studies have demonstrated that Islamic financial surplus have potential of stipulating multidimensional changes relating to socio-economic development especially in the aspects of lender-borrower relationship mitigation of financial risk, accessibility to financial capital, drastic reduction of borrowing costs, access to energy-efficient products and utilization of technology for financial and economy efficiency (Hairudinov, 2023). Undoubtedly, there is need to increase potential utilization of gas and energy consumption and investment in the sector as literature posits (Ostic et al., 2022). Hence, Islamic financial surplus has significant potential for expansion of business investment in gas and energy sector in the country.

More importantly, as an integral part of Islamic financial system, risk management is very important. In addition, integration of technology into Islamic financial surplus can contribute to efficiency of gas and energy sector. The improvement of Islamic financial surplus can be attained through funding of new technologies which will consequently lead to efficiency of energy and sector (Orieso, 2021). In order to improve the living conditions of the poor citizens, the wealth creation through the use of Islamic financial surplus in the energy and gas sector can provide adequate opportunity for creation of capital for the growth of business and stimulation of investment. Thus, Islamic financial instrument is an essential tool for funding innovative projects through an investment in power and gas sector which can help in promoting enterprises among the poor citizens in the country.

Studies have explored the significant impact of financial development on energy intensity of 98 countries between 1990 and 1994 and the result demonstrated that an advanced and developed financial sector can drastically reduce energy intensity. Nonetheless, less focus is given to utilization of Islamic financial surplus for improving investment in energy and gas sector of the economy in order to achieve financial inclusion for drastic reduction of poverty among the poor citizens in Nigeria. Literature posits that a developed financial sector significantly and directly influences production of energy intensity which consequently increases consumption of energy and however, capital markets have potential for its reduction (Olugbemi, 2020). Nonetheless, in most advanced countries, there is a fall in production of energy

intensity as a result of increase in financial development. Hence, most of developing countries like Nigeria also need to emulate the improvement in financial development.

Hence, Islamic financial surplus can serve as the best alternative in achieving the efficiency in power and gas investment in Nigeria. It should be established that in the context of Nigeria, the utilization of Islamic financial surplus in general and in power and gas sector in particular has not been firmly confirmed as result of the fact that studies in this area are still emerging. Nevertheless, there are few studies that been conducted on Islamic financial surplus (Abdul-Jalil et al., 2021); many others have been conducted on power and gas with an emphasis on efficient regulation and effective market strategy (Adegbite et al., 2021). Thus, the studies on Islamic financial instrument or surplus as well as on power and gas did not focus on financial inclusion for poverty reduction among the needy and poor in the context of Nigeria.

Most of the aforementioned studies did not create a nexus between the three variables explored in this study in the context of Nigeria. Nonetheless, the global research conducted by Chen et al. (2019) established that there is U-shaped link between energy intensity and financial development. This study attempts to connect between the three variables (Islamic financial surplus, power and gas and financial inclusion for poverty reduction) in order to demonstrate potential of efficient Islamic financial system in ameliorating poor conditions of citizens in the country.

Reiteratively, advocating for utilization of Islamic financial surplus for power and gas investment in Nigeria specifically for improving the living condition of needy and poor may be somehow complicated. It is as a result the complication that studies ought to be further conducted especially with specific attention on the utilization of Islamic financial surplus for investment in power and gas sector. Thereby, this study aims at exploring the potential of Islamic financial surplus in fostering power and gas investment with the sole target of providing financial inclusiveness to the needy and poor in the country. In addition, the study expands the existing understanding on the utilization of Islamic financial surplus towards expansion of investment in power and energy. Overwhelming studies have established the connection between Islamic financial system and financial inclusion. Nonetheless, the use of Islamic financial surplus for power and gas investment in ameliorating living condition of the needy and poor in the country.

Literature provides a conceptual framework for Islamic financial inclusion and emphasis is made on meticulous planning through combination of traditional Islamic institutions of Zakat and *awqaf* (Ahmed and Salleh, 2016). It is further noted that there are two factors that are directly related to the financial inclusion namely: financial planning and financial literacy are related to the concept of Zakat and *awqaf* which can be explicitly instrumental in achieving financial goals of the needy and the poor in the society. In connecting with Zakat and *awqaf*, the contributions of the rich individuals to the funds cannot be underestimated (Ahmed and Salleh, 2016). However, in the usage of the term Islamic financial surplus, the surplus obtained from power and gas sector can be invested upon with the prime focus on bettering the living

condition of poor households in the country. Reiteratively, proper application of Islamic financial surplus in relation to power and gas sector will adequately mitigate poverty among the needy and poor households in the country (Ahmed and Salleh, 2016). This can only be achieved when financial planning knowledge and skills about Islamic financial system are properly harmonized with power and gas sector.

Literature further acknowledges the significance of Islamic financial instrument for efficient alleviation of poverty in order to drastically reduce social inequality in the society with specific focus on Islamic social business (ISB) (Aziz and Mohamad, 2016). The framework of Islamic Social Business (ISB) advocates for multifarious approaches in solving the problem of sub-components of poverty such as: health, literacy, shelter, environmental-related issues among others (Aziz and Mohamad, 2016). It is emphatically stressed that there is need to promote efficient Islamic wealth creation and management in order to enhance sustainable and equitable distribution of wealth. The prevalence of abject poverty in the society has demonstrated that there is a deficiency in the utilization of surplus from power and gas sector of the economy. Introducing Islamic financial surplus instrument considering Islamic principles would make the surplus in the sector to be more used judiciously for investment in order to promote financial inclusion for bettering the living conditions of the needy and poor in the society.

Undoubtedly, the stakeholders and policy implementers specifically in the power and gas sector can collaborate with Islamic financial institutions by providing Islamic enterprises and investments that will maximize the potential of the poor or disadvantaged individuals in the society. The spirit of efficient management of resource will be cultivated among the needy and poor using Islamic Financial Surplus (IFS) model. Several studies have established the paramount importance of Islamic financial surplus. Nonetheless, there is a gap in the existing studies to connect Islamic financial surplus in energy and gas sector with specific focus on financial inclusion in enhancing the living condition of the poor citizens in Nigeria. The novelty of this is that, it has been harmonized Islamic financial surplus into power and energy sector with specific attention of achieving financial inclusion among the needy and the poor in the country.

2. MATERIALS AND METHODS

As part of methodological approach employed in this paper, qualitative research design was using content analysis and systematic literature review were taken into consideration. In so doing, three major variables are taken into account: Power and gas sector, Islamic financial surplus and financial inclusion. The study used secondary data which were most gotten from Google scholar journals and library sources. The study systematically and meticulously selected 46 scholarly articles for the review and analysis in this study which were mostly between 2011 and 2023. More specifically, it elaborates the opportunities derivable from Islamic finance in the oil and gas sector of economy. The study used a theoretical framework to establish the significance of the Islamic financial surplus. Essentially, different aspects covered in

the theoretical basis of the study were: Islamic economic system (IES), Socio-economic justice (SEJ), Islamic wealth distribution (IWD), and Islamic financial surplus (IFS), power and gas sector (PGS) and Islamic financial inclusion (IFI) (Saqib, 2018; Aigba et al., 2022; Amuda, 2023). Relevant data obtained from secondary sources elaborated the importance of power and gas investments in the context of Nigeria. The gap is bridged by emphatically stressing on the need to use Islamic financial surplus in the power and gas sector. Therefore, the paper provides significant aspects and the significance of the study has been identified and future researchers can further explore several aspects covered in the paper. The presentation of results was based on the theoretical framework, power and gas investment and Islamic financial surplus for financial inclusion. The subsequent subheading presents the overall results of the study. More essentially, the review focused on the efforts made to improve Nigeria's largest economy in Sub-Saharan Africa in order to improve the economy. The roles of Power Africa towards investment in the power sector were painstakingly elucidated. The roles Gas and Power Investment Company (GPIC), Gas Based Industries (GBIs), Nigerian National Petroleum Corporation (NNPC), Bureau of Public Enterprises (BPE), Nigerian Bulk Electricity Trading (BET) Plc among other were explained. Also, gender small investing by Power Africa in order to encourage or motivate women to partake in the power sector were stressed. In addition, Islamic law (*Shari'ah*) compliant investment were stressed specifically by avoiding detestable activities such as interest (*riba*), uncertainty (*gharar*) and gambling (*maysir*). Onwards, the paper stressed that the investment transactions can be a mix of application of *musharaka*, *mudaraba*, *ijara* etc. contracts in power and oil gas sector.

3. RESULTS

This part presents the overall findings of this study with specific focus on the content analysis of different identified variables. Thus, theoretical framework, power and gas investment and Islamic financial surplus for financial inclusion are lucidly elaborated in the subsequent subheadings.

3.1. Theoretical Framework

Islamic law (Shariah) provides a framework for taking care of welfare of citizens. The objectives of *Shariah* (*Maqasid Shari'ah*) cover safeguarding one's faith, life, intellect, property and their posterity. Out of the aforementioned objectives of Islamic legal system, safeguarding property or maximization of wealth is adequately relevant to the utilization of Islamic financial surplus specifically by focusing on power and oil investment in order to foster financial inclusion among the needy and the poor in Nigeria. In order to achieve the prime objective of this study, it is therefore paramount to note that theoretical basis of this study is built upon six prime variables and they are interconnected. The six variables are: Islamic economic system (IES), Socio-economic justice (SEJ), Islamic wealth distribution (IWD), and Islamic financial surplus (IFS), power and gas sector (PGS) and Islamic financial inclusion (IFI).

First, Islamic economic system is distinctive. There is a sharp distinction between conventional economic system and Islamic

economic system. On one hand, the former emphatically stresses or targets social objectives for the benefit of human beings and the entire society without meticulous attention on equitable distribution of wealth (Akram Laldin and Furqani, 2013). On the other hand, the latter is much concerned on the avoidance of exploitation of others in the accumulation of wealth with an emphasis on Shariah compliant principles in order to guide the life of human beings through the promotion of free trade and enterprises. Generally speaking, an in-depth exploration into classical Islamic jurisprudential and economic literatures attest to the fact that the usage of Islamic finance as a concept has been elaborately elucidated by the scholars. Nonetheless, the need for further development of the concept, expansive explanation and theoretical framework have attracted the attention of scholars and researchers in the recent time. This assertion has been further confirmed by the previous study that contends that classical explanation of Islamic finance lack required theories, models, expansion and implementation of its framework within Islamic conceptual explication (McMillen, 2008). As far as Islamic economic system is concerned, there are three fundamental elements relating to the Islamic economic paradigm namely: man as the viceroy of God, utilization of wealth for the benefit of others and avoidance of destroying fellow-human beings with injustice as literature contends.

Second, Socio-economic justice is a fundamental in the Islamic discourse of Islamic economic and financial system. This is fundamentally essential because Islam prohibits unlawful earning of money from detestable trading activities or socially harmful business transactions. This is because promoting socio-economic justice has moral implications such as enhancing equity and improving the living condition of needy and poor in the society as literature posits. Undoubtedly, an individual striving to make a living through his personal efforts is not only doing it alone as far as Islam is concerned. Indeed, the divine intervention in provision of socio-economic balance through *Zakat* and *Awqaf* cannot be underestimated (Iqbal and Mirakhor, 2011).

Third, Islamic wealth distribution, Islamic financial system for wealth and equitable distribution is based on equity. Indeed, in order to achieve the philosophy of wealth acquisition according to the perspective of Islam, scholars have elaborately explained the relevance of Islamic finance. It can be arguably said that socio-economic justice is the prime objective of Islamic wealth distribution. Thus, the rich individuals do not live for himself only but must be cognizance of the poor and needy in the society (Azeez, 2017).

Fourth, Islamic financial surplus is essential and integral part of Islamic financial system. There are various instruments that be explored to improve the financial system of the society. Surplus earnings can be invested in lawful businesses and trades activities (Amuna et al., 2017). Hence, Islam is frowned at making earning or investing in unlawful businesses such as usury (*Riba*) There is need for an enabling environment for the application of Islamic financial surplus (IFS) in catering for the needy and the poor.

Fifth, Power and gas sector is another aspect of economy in Nigeria. The policy of the government has been promoting

investment in this sector (Adegbite et al., 2022). However, there is confusion and unawareness about the concept by the majority of citizens particularly in Nigeria regarding the utilization of Islamic financial instrument in the power and gas sector with specific attention on the amelioration of poor condition of disadvantaged people in the society. Incorporation of Islamic financial system into the sector can bring greater opportunities to the sector specifically by clearly stating the roles of investors and their contributions to living conditions of the poor and the needy in order to minimize the high rate of abject poverty in the society. Every nation tends to maximize profit in the investment in oil and gas sector. However, in Islamic financial system, the prime target takes moral aspect of the investment into consideration.

Sixth, Islamic financial inclusion, improving poor conditions of the needy and disadvantaged people has occupied a central climax at the national and international levels. Financial inclusion that would take care of the needy and the poor have been advocated for. In so doing, Islamic financial inclusion is the pivotal takes moral implications into consideration (AbdulKareem et al., 2021). The foregoing has provided theoretical framework of the study as demonstrated in Figure 1.

3.2. An Overview of Power and Gas Investment in Nigeria

Undoubtedly, Nigeria continues to be the largest economy in Sub-Sahara Africa. However, the constraints in the power sector lucidly slower the economic growth. There are several mineral resources with which the country is endowed such as oil, gas, hydro, solar among others. With the aforementioned resources, literature acknowledges that the country has the capacity to generate 12, 522 MW from the existing plants. The current capacity of roughly 4, 000 MW being generated is not sufficient to cater for an approximate of 200 million people. As a result of this problem, there is potential investment in the sector in order to expand the economic growth and feasibility in the country. It is on this basis that Power Africa technical support to distribution companies in Nigeria has taken a bold and positive step towards increasing revenue in the sector with more than USD 250 million which can be reinvested in different aspects of power such as: distribution network, enhancing service and expanding access to the power supply whereby renewable energy plays significant role in attaining sustainable development in Nigeria (Ani and Igwe, (2017).

It is not arguable to posit that the sector is faced with many challenges relating to electricity, enforcement of policy, uncertainty of regulatory framework, gas supply, constraints relating to transmission system, shortfalls in the planning of power sector. Thus, addressing the aforementioned challenges can bring about improving commercial viability. Nonetheless, there is a gap in the existing approaches especially in utilizing Islamic financial surplus for improving the investment in the power and gas sector of the economy. Literature specifically the study by Power Africa identified social exclusion and it advocated for integration of social inclusion and diversity across the power sector as a crucial tool for creating an equitable access to the power among the end-users of the products. Nevertheless, the high rate of power and inability of

the needy and poor to take care of their daily needs indicated that there is presence of financial exclusion among the disadvantaged people in the society which study has advocated for global policy in enhancing technological innovation into financial development in order to maximize the potential of renewable energy and non-renewable energy (Khan et al., 2021). Thus, this study has emphatically stressed on the social inclusion of the needy and poor citizens specifically while utilizing Islamic financial surplus in power and gas investment in the country.

Gas and Power Investment Company (GPIC) is a subsidiary under Nigerian National Petroleum Corporation (NNPC). The subsidiary has been incorporated since 2016 with the prime target of promoting utilization of gas and maximization of value derivable from investments and Gas Based Industries (GBIs). In order to have efficient management and maximize profit, the Federal Government transferred two joint Ventures (JVs) Independent Power Plants (IPPs) (i.e., Okpai IPP and Afam IV) to the NGPIC. Okapi IPP has capacity to generate 48MW power while Afam has capacity to generate 650MW power. In so doing, the investment in the sector would attract investors and the gas and power businesses will attract positive growth in order to foster profitability and improve the share of market. On one hand, it is reiterated that in the power investment, there is need to create special purpose vehicles (SPVs) as well as to manage the interest of NNPC in the IPP. On the other hand, there is need for expansion of investment in gas-based industry such as petrochemicals, methanol, fertilizer etc. Recent studies have also advocated for promoting gender small investing in the country specifically Power Africa has been creating enlightenment in this regard through a workshop that tended to provide a framework for off-grid clean energy in the late 2021 as literature contends. Similarly, the workshop tried to incorporate and promote gender equality into investment in the sector. Power Gender smart investing targets at increasing and practicing how women can have access to energy services with prime aim of boosting equal participation in the power or energy sector (USAID, 2023).

Furthermore, despite the fact that there are several efforts towards restructuring and reforming the power sector, it has not yielded positive and desired result. In addition, USAID has also tried to provide technical support to the Bureau of Public Enterprises (BPE) as well as the Nigerian Bulk Electricity Trading (BET) Plc. There are several aspects that are taken into consideration such as reviewing of project agreements; credit and reimbursement agreements, partial risk guaranteed and other related documents. In spite of the aforementioned explanations concerning the power and gas investment and several challenges identified, the incorporation and integration of Islamic financial surplus can adequately mitigate against the conditions of the needy and the poor.

3.3. Islamic Financial Surplus for Financial Inclusion in Power and Gas Sector

Since more than a decade, Islamic banking and finance in particular and Islamic financial system in general have been growing. Islamic financial surplus is a recognizable financial instrument in Islamic legal system. It has been gaining popularity in Muslim and non-Muslim countries especially as an integral part of capital markets.

The interest of the stakeholders, general public, policymakers and researchers on the utilization of Islamic financial surplus cannot be over-exaggerated. Indeed, few studies to connect Islamic financial surplus to oil and gas sector are conducted in countries like Malaysia, United Kingdom, GCC countries such as Saudi Arabia as an alternative and emerging financing small projects and economic growth (Grassa, and Gazdar, 2014). Studies have demonstrated that natural gas is significantly related to economic development in countries like China, Japan among others (Furuoka, 2016). Little effort is made in the context of Nigeria in this regard. Literature acknowledges the relationship between Islamic financial development and energy intensity and it has been confirmed that Islamic financial surplus has a tendency of significantly increasing energy and gas investment. The previous study provided a connection between Islamic development and energy intensity (Canh et al., 2020). Islamic financial system is an emerging market that can be invested on in order to achieve global Sustainable Development in 2030. There is little attention in connecting promotion of interest-free economy in achieving global Sustainable Development by the year 2030.

Thus, there a general assumption that it is difficult to achieve an interest-free economy and most of the needy and poor are not confident to partake in interest-free-economy. In order to connect Islamic financial surplus with power and gas sector, interest-free transaction becomes a central aspect of it. However, some citizens uphold religious belief that detests involvement in interest-based activities according to Islamic legal provision. Similarly, studies have clamoured for elimination of interest from economic activities and business transactions have not yielded desired result. This is due to the fact that people are not adequately motivated to disengage from involving the interest-based business activities. There is need for a shift of strategy for trade diversification in order to achieve capital formation and economic growth as an integral part of financial system development (Amjed and Shah, 2021). In addition, several efforts have been made to enhance investment in power and gas sector of the economy in the country and there is yet to achieve positive result in this regard. Yet, there is need to address the challenge by advocating for Islamic financial surplus especially in power and oil sector. The prevailing situation of abject poverty among Nigerians requires a drastic action and a well-prepared strategy in curtailing the ugly situation has drawn the attention of global poverty monitoring in the recent past (Andrés et al., 2019). Similarly, literature posits that security in the energy sector is an essential aspect for achieving sustainable development in Nigeria.

Contrarily, few studies have established that lease is not originally mode of financing There two basic principles of Islamic finance namely: asset-based financing and element of risk. On one hand, asset-based financial is a principle of *Shari'ah* that is contrary to the conventional monetary dealing. This inferably means that power and gas can be considered as asset whereby power or energy can be supplied for use among citizens while gas and its different components ethanol, fertilizer among others can be sold in order to maximize profit for economic growth and sustainable development through energy security as literature suggests (Ani and Igwe, 2019). Moreso, Islamic financial surplus can used to

boost power and gas sector because it emphatically stresses on the investments that are compliant with Islamic law (*Shari'ah*) (Askari et al., 2011). Indeed, money according to *Shari'ah*, is not considered as an asset but it a yardstick for measuring value of a particular asset. *Shari'ah* negates involvement in detestable activities such as interest (*riba*), uncertainty (*gharar*) and gambling (*maysir*) which are harmful to the society as literature contends.

This indicates that Islamic financial instruments are very important that can be used in the market in promoting investment and living condition of the needy and the poor. For instance, more essentially, it can be used to foster household demands of the disadvantaged people (Azeez, 2017). In this regard, the Islamic financial instrument can be applied in relation to surplus accrued in the power and gas sector. However, it can be posited that it is not all Islamic instruments that are majorly concerned with financial claims. Literature identified three prime instruments which are used for transaction purposes, precautionary purpose and obstinance of gains in capital value (Beck et al., 2013). Reiteratively, this study specifically related investment in power and gas sector to how gains can be gotten from the capital value of investment through which expectation from the market can be achieved. It should be noted that the use of Islamic financial instrument can be employed in order to painstakingly predict future income in the power and gas sector.

Furthermore, *Murabaha*, *Istithna*, *Musharakah*, *Mudarabah* etc. contracts can be employed in power and gas sector whereby the income from commercial transactions can be determined by evaluating the income through an asset-valuation process. In so doing, the claims of debt against third parties in relation with the actual commercial transactions can be determined when an emphasis is given to *Murabaha*, *Istisna* contracts (Iqbal and Mirakhor, 2011). The avoidance of usury is a basic principle of *Shari'ah* is explicit and ideal instrument of financing which must be *Shari'ah* compliant in connection with *Musharakah* and *Mudarabah* respectively. Similarly, the profit and loss accounts should be finalized and settlement should be made at the end of the term. It should be emphatically stressed that power and gas sector can use *takaful* instrument in establishing fund and thus the investee (i.e., power and gas industry) tend to earmarks a part of its reserves for specific *Takaful* fund. Thus, the investing is expected to contribute a certain percentage in order to cater for the affairs of the needy and the poor as integral party of addressing poverty and income inequality. Nonetheless, when there is loose, it is expected to make an adjustment in the *takaful* fund. Thus, the balance from adjusted *takaful* fund invested in the power and gas sector should be distributed by the power and gas industry to the needy and the poor in order to address financial exclusion emanating from abject poverty affecting the needy and the poor.

Further still, Islamic leasing (*Hijarah*) is another financial instrument that can be applied to power and gas products in the context of Nigeria. The kind of leasing (*Hijarah*) that can be employed in connection with power and gas is to employ the service of a company that will manage the power and gas

products in order to get profit without transferring the ownership or it otherwise known as usufruct in conventional usage. Hence, this category of lease is considered as a form of investment as well as a means of financing a particular project as literature contends. In other words, leasing is a contract while usufruct is the rights for transferability of asset by the owner who is otherwise known as lessor to a lessee based on the agreement reached on the price or rent for a particular period of time or term of lease.

With application of lease-based approach to power and gas sector and without application of debt, the instrument is marketable and review of energy regulation can enhance its marketability. Similarly, in the power and gas industry, the investment transactions can be a mix of application of *musharaka*, *mudaraba*, *ijara* etc. contracts. In this scenario, the income and assets are not predictable but they can be evaluated. Inferably, the transactions or investment in this category can be traded in secondary market and the display of market price can be clearly agreed upon by the parties involved in the investment.

Moreover, element of risk according to the principle of *Shari'ah* should be taken into cognizance whereby no claim of profit from a transaction and the risk will be shared by the parties involved. More importantly, the poor and the needy as beneficiaries from the Islamic financial surplus (IFS) being employed by the power and gas sector, they can partake in *Musharakah* as an integral part of Islamic financial instrument. In addition, risk should be segregated from any detestable elements such as usury or gambling in power and gas investment. Most studies have considered risk as a problem to the financial and economic activities (Alexander, 2011); nonetheless, few studies have taken risk as an opportunity in financial markets. Hence, risk can be considered in power and gas investment especially towards maximization of profit and utilization of surplus in improving the welfare of the less privileged in the society. In addition, it should be specifically mentioned that it is risk that would enable investors in power and gas to fulfill additional return and consequently higher return can be achieved by higher risk in a more competitive market of products in the industry. Thereby, risk should be made compliant with *Shari'ah*. Profit sharing should be lucidly made as part of arrangements between the two parties through the intermediary of their bank in the instrument used. Similarly, profit should be paid on monthly basis to the investing company. However, literature posits that credit obtains from the bank is uncertain and as a result, *Shari'ah* is frowned at such (Bilgin et al., 2021).

Onwards, the application of Islamic financial surplus can be adequately achieved in connection with power and gas sector when a necessary operational legal framework is being put in place for smooth investment in the sector. When the surplus from power and gas sector is invested, it is expected that certain returns must be earned over a period of time. Thus, the returns or profit can be utilized to help the poor citizens in bridging the gap of income inequality and addressing the challenges of poverty whereby galvanizing fund as an essential trend in financing emerging projects in the society (Amuna et al.,

2017). Nonetheless, an emphasis should be placed on small and medium scale enterprises by the beneficiaries of power and gas surplus. Nonetheless, lack of commitment by the stakeholders specifically by using and implementing the central climax of this study, it can serve as an impediment to the prime purpose of utilizing Islamic financial instrument in curtailing abject poverty in the society. Furthermore, it should be reiterated that, Islamic financial instrument tries to mitigate risk associated with economic activities. Hence, literature acknowledges that financial development has a potential to improve environmental and people's quality life (Acheampong, 2019). Undoubtedly, financial and capital markets should avoid engagement in uncertainty (*gharar*), usury (*riba*) and gambling (*maisir*). There are many avenues and mechanisms that can be employed for achieving security in energy sector and sustainable development in the country; but this study focuses on the utilization of Islamic financial surplus in the power and gas sector in order to address the challenges of social exclusion among the needy and the poor.

4. DISCUSSION

The study has demonstrated that the prime target of Islamic economic system is to take care of welfare of citizens in accordance with the Shari'ah provision. More importantly, safeguarding property and lawful accumulation of wealth that devoid in partaking in interest is the prime focus of Islamic legal system. This assertion has been buttressed with previous study that structural provision for financing a particular project should be compliant with *Shari'ah* and risk associated with Islamic finance project should be taken into consideration (Alexander, 2011). This study has established that Islamic financial surplus can be practically utilized in oil and gas sector in order to enhance sustainable economic development in the society. This position is in consonance with the study that contends that Islamic financial instruments can be relevantly used in oil and gas sector of the economy (Ali et al., 2014). This is why the study has established a distinction between Islamic economic cum Islamic financial system with that of conventional system. The study advocates for the development and in-depth explanation of Islamic legal framework in order to address the challenges of Islamic financial system in predominant Muslim countries like Nigeria. It is due to the distinction between two that the study confirmed that it is paramount to develop Islamic financial system based on the framework of the objective of *Shari'ah*. In so doing, Islamic securitization is the yardstick for investment in capital markets (Hassan et al., 2022).

Moreso, socio-economic injustice is a grievous impediment to the societal progress and addressing this problem is the core aspect of Islamic economic and financial system. The study has established that financial equity and improving living conditions of the needy and the poor are integral part of moral aspect of promoting socio-economic justice in the country. This position is in consonance with the findings that contend that improvement of financial development is a fundamental prerequisite in improving the quality of life among the citizens. This can only be achieved when there is an emphasis on equitable distribution

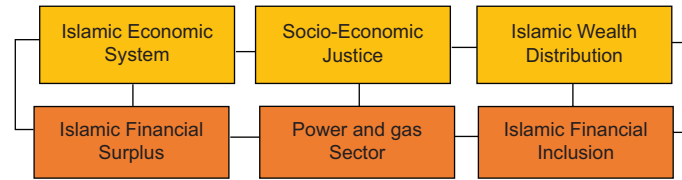
of wealth using the mechanism in achieving Islamic financial sustainability by partaking in small and medium enterprises (SMEs) (Husin and Haron, 2020). Islamic financial system be developed when it is aimed at economic growth with specific focus on the diversification of trade and business activities. This assertion is in consonance with the existing study that posited that, there is need to empathically stress on the development of financial system, formation of capital and growth of economy through diversification of trade activities.

Onwards, it has been demonstrated that there are various Islamic instruments such as *musharaka*, *mudaraba*, *ijara* etc. that can be used in business transactions and trade activities. Nonetheless, while emphasizing on economic growth and capital formation, there is need to avoid detestable activities such as interest (*riba*), uncertainty (*gharar*) and gambling (*maysir*) as literature contends. There has been emphasis on investment in power and gas sector of the economy. However, there is less attention in connecting utilization of Islamic financial instrument with power and gas sector in the context of Nigeria. In spite of several effort in improving the sector in the recent time, studies have not explored the application of Islamic financial surplus especially in improving the condition of the needy and the poor in achieving financial inclusion in the Nigerian society. This study has established the necessity of Islamic financial surplus in power and gas sector in order to attain financial inclusion among the disadvantaged people in the society. This is in line with the findings of the previous studies that advocated for the application of Islamic finance instruments in the oil and gas sector as an instrument for financial development (Gaies et al., 2019).

Furthermore, the study has analyzed several efforts made on the investment in power and gas sector in Nigeria. It has been lucidly elucidated that Power Africa has made efforts and provided technical support to the distribution companies in the country in order to increase the revenue targeting USD 250 million. Literature has identified that oil and gas sector play significant role in the economic growth. Nonetheless, previous study has provided the importance of regulatory framework for engaging in business in the energy sector in the country. Literature has stressed further that there is need to provide legal framework on deregulation of the downstream sector of the petroleum industry in the country. The paramount importance of investment in the oil and gas sector has been stressed. Emphatically, studies have advocated for investment in the oil and gas sector as an essential determinant of economic growth. However, the analysis has further identified various challenges such as: electricity, enforcement of policy, uncertainty of regulatory framework, gas supply, constraints relating to transmission system, shortfalls in the planning of power sector (Olomola and Adebayo, 2018). Nonetheless, several attempts have been made to solve the challenges. For instance, USAID (2023) has tried to give support to both Bureau of Public Enterprises (BPE) and the Nigerian Bulk Electricity Trading (BET) Plc in order to expand investment in the sector.

For more efficient input in the power and gas sector, the analysis of this study has provided the application of Islamic financial surplus

Figure 1: Theoretical Framework of the Study adapted from: (Akram Laldin and Furqani, 2013; Ali et al., 2014; Ahmed and Salleh, 2016; Olujobi et al., 2020; AbdulKareem et al., 2021; Orieso, 2021)



for financial inclusion in the power and gas sector of the economy. It has been demonstrated that in spite the fact interest-based activities are considered unlawful, most citizens still engage in such as a result of lack of alternative means of solving the problem of abject poverty by the disadvantaged people in the society. This study has emphasized on the need to consider *Shari'ah* compliance while using Islamic financial instrument. Many predominant countries like Malaysia, United Kingdom, Saudi Arabia have been successful in the efficient utilization of Islamic financial instrument. Islamic financial surplus is considered as Islamic instrument as an integral part of capital markets. It is argued that in an attempt to advocate for Islamic financial surplus, it can be a mix of application of *musharaka*, *mudaraba*, *ijara* etc. contracts. Nonetheless, it is reiterated that it should devoid of involvement in uncertainty (*gharar*), usury (*riba*) and gambling (*maisir*) respectively. It has been established that risk is a fundamental consideration according to Islamic legal system (*Shari'ah*) and positive aspect of risk is that it creates a more competitive market. The focus of addressing the problem of social inequality among the poor and the needy should cut across urban and rural areas in order to achieve sustainable development (Al-Mulali et al., 2013). Literature contends that green energy innovation should be utilized as integral part of energy intensity (Chakraborty and Mazzanti, 2020). Hence, literature has identified the decline in energy intensity and financial development has been identified as a potential solution in addressing this problem. This study has provided the utilization of Islamic financial instrument in the power and gas sector in order to achieve economic growth and sustainable development through fossil fuel and non-fossil consumption (Hanif, 2018). In so doing, it is in consonance with the existing studies that advocates for policy efficiency as an important tool for making meaningful impact in the power and gas sector; however, literature advocates for policies that provide efficient and effective use of energy and fossil fuel (Demirguc-Kunt and Klapper, 2012). More importantly, this has reiterated that in the application of *musharaka*, *mudaraba*, *ijara* etc. as Islamic financial instruments, engagement of the needy and poor in small and medium scale enterprises (SMEs) can contribute financial sustainability. This is in agreement with the previous studies that clamoured for financial sustainability of SMEs by utilizing Islamic mechanisms.

Furthermore, the analysis of this study has indicated the need for technology integration into financial development especially towards a meaningful investment in power and gas sector. This assertion is in agreement with the position previous studies that advocated for the significance of harmonization of technological innovation into financial development and investment in energy sector. This study has significantly reiterated the need to provide a framework for investment in energy sector using

the instrumentality of Islamic financial surplus (Akram Laldin and Furqani 2013). This assertion in line with the existing body of knowledge that clamoured for the need to provide business engagement in the energy sector of the economy in Nigeria. More specifically, the study explored investment in oil and gas as a determinant to the economic growth.

It has been reiterated that funds should be galvanized from power and gas sector and such funds should be invested using any of the Islamic instrument to propel the investment in order to address poverty in the society. However, majority of citizens (79%) uphold a strong opinion that diversion of funds galvanized from power and gas sector that are meant to help the needy and the poor may directly affect effort to improve socio-economic development of the society and just only 22% had contrary view. In addition, there is need for proper management of funds accrued from power and gas sector in order to help the needy and the poor. In this regard, 79% posited that misappropriation of funds can impede any attempt to contribute to financial inclusion among the disadvantaged people while just only 21% had a contrary view. Moreso, 96% strongly agreed that socio-economic growth and sustainable development can be achieved when meticulous attention is given to investment in power and gas sector and only 4% disagreed with the submission. Therefore, it is essential to advocate for judicious management of funds meant to help the needy and the poor as an integral part of financial inclusion in the country. Figure 2: shows opinions of citizens regarding galvanization of funds from power and gas sector towards helping the poor and the needy.

Nigeria as a country has been strategizing to achieve financial inclusion and as a result, Central Bank of Nigeria adopted Nigerian Financial Inclusion Strategy (NFIS) which was adopted initially adopted in 2021 in order drastically reduce financial exclusion among the Nigerian citizen. The investment in power and gas sector can make significant impact and engagement of Financial Service Provider (FSP) are important to improve the income level of the disadvantaged people in the society. Islamic financial instrument can be harmonized alongside with the adoption of technological inputs in order to achieve efficient mode of financial services. The prime focus of attention of advocating for the utilization of Islamic financial surplus in the power and oil sector is engage the disadvantaged citizens with small and medium scale enterprises (SMEs) in order to solve the problem of abject poverty and achieve sustainable socio-economic growth. In so doing, the problem of financial exclusion of the less-privileged citizens will be addressed. It should be stressed that the policy and regulation of government should focus on the financial inclusion across six geo-political

zones of Nigeria. The extent of financial inclusion across the six geo-political zones are: North-West (38%); North-East (45%); North-Central (69%); South-South (77%); South-West (81%); South-East (71%). Based on this analysis, it has been demonstrated that the Southern parts of have been doing marvelously on financial inclusion compared to the northern parts of the country. There is need to intensify effort in order to improve on financial inclusion among the poor and the needy in the country. Thus, the instrumentality of Islamic financial surplus can be incorporated into investment in power and gas sector of the economy in the country. Figure 3 shows financial inclusion rate by geo-political zone in Nigeria:

There is a distinction between men and women with respect to the strategies used in financial inclusion. It has been identified that women are used to informal means for building their finance, earning a living compared to men. Thus, men are fully engaged in financial inclusion than women. In other words, there is drastic growth in men's financial inclusion and there is a decline in women's financial inclusion. It is specifically mentioned in the EFINA's 2019 that 36% of women are financial excluded while 24% of men are excluded. It is therefore essential to address gender inequality and the country needs to bridge gap of financial inclusion. Figure 4 shows women's financial inclusion.

Undoubtedly, global GDP growth remains a central concern

Figure 2: Galvanization of Funds from Power and Gas sector towards helping the poor and the needy

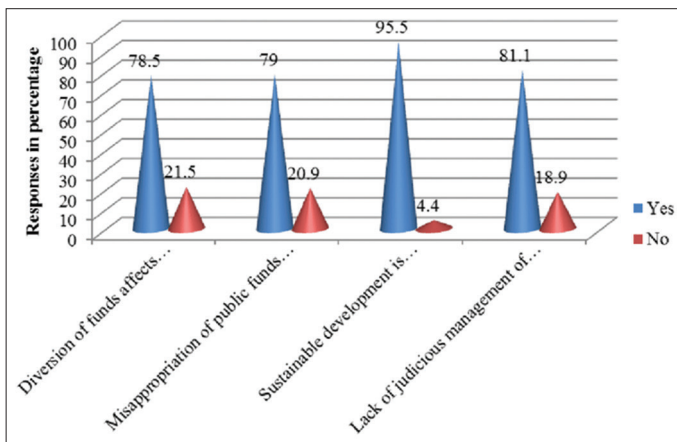
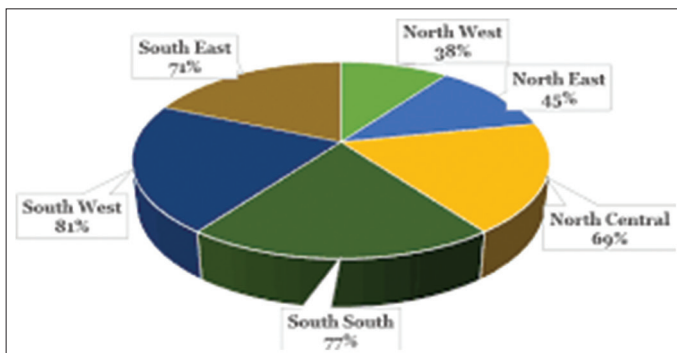


Figure 3: Financial Inclusion rate by Geo-Political Zone in Nigeria



to many economic experts in the recent time. Indeed, both advanced and developing economies are being affected with many factors that have potential of lowering the economic activities (Demirguc-Kunt and Klapper, 2012). More specifically, global inflation rate has affected the trade and investment across the world. Undoubtedly, this scenario has affected poor and low-income citizens across the world including Nigeria. However, it is identified that by 2023, the inflate rate must go down at 6.5%. Figure 5 shows linear global inflation rate.

Reiteratively, investment in power and gas sector significantly contribute to the gross domestic product (GDP). More importantly, between 2010 and 2021, there has been drastic improvement with regards to the extent of contribution of the investment to GDP. Between 2010 and 2018, the overall contribution is <20% while there is significant improvement between 2019 and 2020 and in 2021, it contributed an approximate of 34%. Figure 6 shows investment percent of Nominal GDP Annual Nigeria.

Thus, strengthening investment and application of Islamic financial surplus in boosting socio-economic growth with be helpful in minimizing the likelihood of subjecting the poor and the needy to unnecessary suffering. It has been confirmed that gas producers are likely to benefit from high commodity in 2023 while oil imports will the cost of energy inflation. Thus, there is need to give attention to this aspect in order to avoid slower economic growth in the country. Thereby, due to the fact that, an emphasis is made on investment in power and energy, it is paramount to implement fiscal support in order to ameliorate

Figure 4: Women's financial inclusion

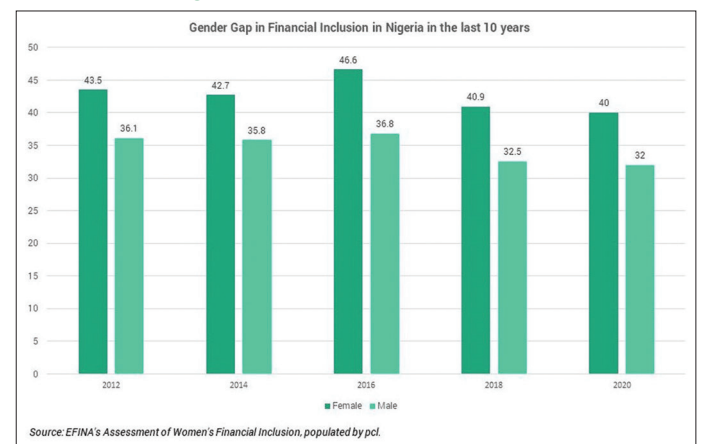


Figure 5: Linear global inflation rate

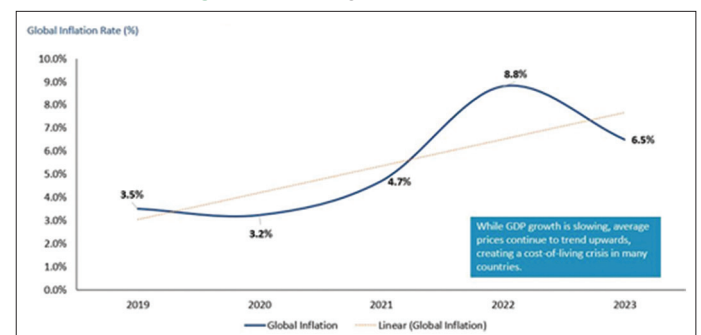
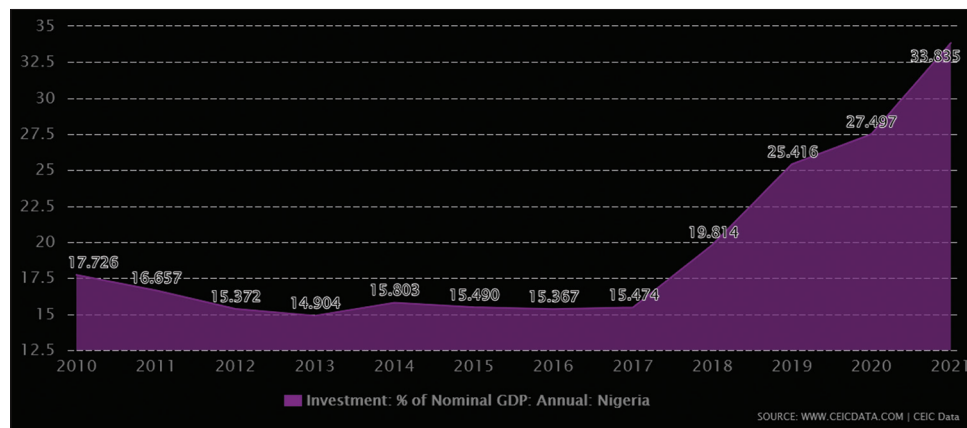


Figure 6: Investment percent of nominal GDP annual Nigeria

the ugly situation of financial crisis by employing Islamic financial surplus as a measure for curtailing abject poverty and achieve financial inclusion. The World Bank (2013) has reiterated the paramount role of Islamic finance in fostering financial inclusion in predominant Muslim countries like Nigeria (World Bank, 2013). Financial inclusion is a fundamental drive for development and socio-economic growth and financial literacy play a significant role in this regard (Ramakrishnan, 2012). As a result of the fact that Islam encourages a balanced distribution of wealth and Islamic finance attempts to improve financial inclusion and different mechanisms and techniques from conventional finance that are not antagonistic to the principle of *Shari'ah*. Investment in power and gas sector can be meaningful when investors have proper understanding of Islamic financial services as a justification. In so doing, it will maximize the opportunity for potential economic growth (Asafu-Adjaye et al., 2016) when the surplus from oil and gas sector is invested with sole objective of improving living conditions of the poor and needy. Thus, literature contends that there are underserved markets across the world and it is essential to create products for such markets specifically in the energy and gas sector of the economy (Schulman, 2016). Prior to the creation of products for underserved markets, it is paramount to engage in critical analysis of the market in order to promote the vital importance of renewable energy in the society as literature suggests (IRENA, 2019). In such a situation, appropriate strategy and mechanism should be put in place in assessing the progress (Merna et al., 2010) whereby literature has advocated for the maintenance and balance of payment in direct investment in the oil and gas sector of the economy in order to achieve economy growth that can be instrumental in improving the living condition of the needy and the poor in Nigeria (Olomola and Adebayo, 2018; Opusunju and Akyuz, 2022).

4.1. Policy Implications and Limitations of the Study

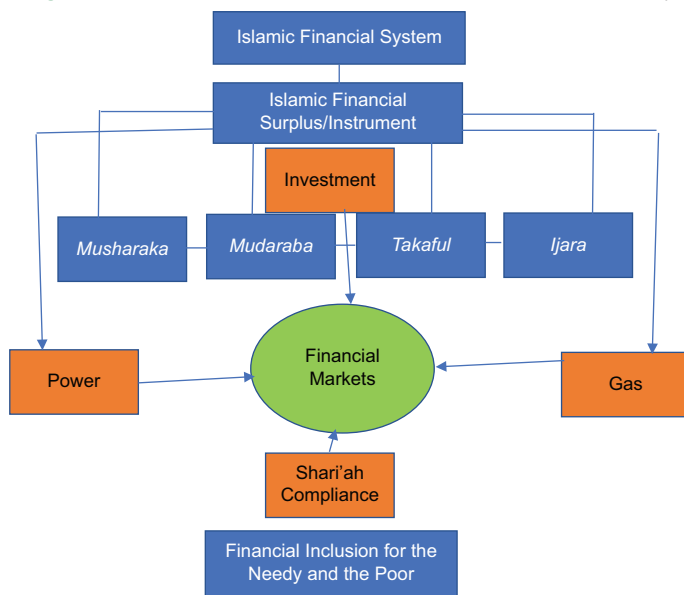
There have been several challenges impeding meaningful progress in the power and gas sector in Nigeria. Application of Islamic financial surplus with the sole aim of achieving financial inclusion among the poor and the needy can be regarded as a great opportunity. Policy framework that is Shariah-compliant can be fundamentally instrumental in solving the problem of the society. Indeed, collaboration among different agencies such as Gas and Power Investment Company (GPIC), Gas Based Industries (GBIs),

Nigerian National Petroleum Corporation (NNPC), Bureau of Public Enterprises (BPE), Nigerian Bulk Electricity Trading (BET) Plc in the power and gas sector can be instrumental in considering Islamic financial surplus as an alternative strategy to different unyielded result in combating poverty by improving the conditions of the needy and the poor in the society. The government needs to engage the Islamic financial experts for necessary engagement toward actualization of sustainable economic prosperity in the energy sector by integrating Islamic financial instrument into the sector of the economy. Hence, Islamic financial experts should be ready to help the government navigating the channel of utilizing Islamic financial surplus as an instrument for solving multifarious challenges of the society.

Furthermore, the study employed secondary data on the exploration of variables of the study. Nonetheless, there is no consistent data pertaining to the use of Islamic financial surplus in the power and gas sector, hence, using primary data might provide substantial input in the utilization of Islamic financial surplus in the power and gas sector toward mitigating the financial challenges among the poor and the needy in the society. Undoubtedly, there are studies on different variables explored in this study, there are limited attention on the potential impact of Islamic financial surplus on power and gas industry. In spite of limited data on the study, the analysis has provided substantial direction by bridging the gap in the existing body of knowledge. Similarly, the aforementioned limitations are identified, this study has elaborated on the potential application of Islamic financial surplus in the power and gas industry in order to achieve financial inclusion among the needy and poor citizens. The future studies can fundamentally explore the government policies and regulations, political stability, impact of technologies on power and gas and how harmonization of technologies can bring efficiency to the application of Islamic financial surplus. The below Figure 7 shows the interconnectedness of different variables of the study:

4.2. Future Scope for Research

This part explains the direction of future research in exploring the utilization of Islamic financial surplus in energy and gas sector of the economy in Nigeria. Majorly, this study depends on secondary data and there are various methods that can be used specifically the use of primary data. More specifically, the future research should focus on the following:

Figure 7: The interconnectedness of different variables of the study

1. Future and further research can employ econometric analysis on various variables of the study in order to improve the living conditions of the poor and the needy in the country
2. There is need for policy analysis by specifically exploring different sources government's policy, international organizations, and energy and gas publications towards drastic reduction of poverty in the society.
3. Further studies should explore the relationship between financial regulations and the energy and gas sector in order to achieve socio-economic growth and sustainable development in the country.
4. Future research should focus on the significance of political power and commitment in promoting and creating products for underserved energy markets in order to utilize its surplus for improving the livelihood of the disadvantaged people in the country.
5. The utilization of Islamic financial surplus or instrument in the energy and gas sector should go a long way to provide functioning economic system that comply with global economic markets.

5. CONCLUSION AND SUGGESTIONS

The paper has explicitly explained the utilization of Islamic financial surplus in power and gas sector of economy in Nigeria. The paper has provided an in-depth analysis with regard to the prime target of using it mainly to address the problem of social exclusion among the disadvantaged citizens experiencing abject poverty in the country. Theoretical framework is provided with the purpose of establishing the central focus of this study within the frame of objective of Shari'ah. The analysis has shown that Islamic financial surplus has potential of being integrated with power and gas in order to achieve financial inclusion among the poor and the needy. The paper also provided policy implications specifically the roles of government and involvement of Shari'ah experts in utilizing Islamic financial surplus cannot be underestimated in the country. The limitations of the study have identified and among

others, it is the restriction to the use of secondary data in the analysis. Nonetheless, the paper has provided substantial direction for the future studies that may use primary data in the context of Nigeria. Therefore, the following are suggestions of the study:

1. The government should institutionalize a legal framework specifically considering Shari'ah principles in relation with the application of Islamic financial surplus in the power and gas sector of the economy.
2. There is need to constitute an agency that will be responsible for mobilization of financial resources from the power and gas sector and distribute to the needy and poor using the mechanism of Islamic financial surplus in order to drastically reduce high level of poverty in the society.
3. The government should engage the expertise of Shariah experts in integrating Islamic financial instruments into power and gas sector in order to address multifarious socio-economic challenges in the country.
4. There is need to cultivate the spirit of entrepreneurship by establishing small and medium scale enterprises (SMEs) from the utilization of Islamic financial surplus in the power and gas industry among the needy and the poor in the country.
5. That technological innovation should be integrated into the application of Islamic financial system in power and gas sector in order to achieve efficiency of sustainable financial inclusion among the poor and the needy.

6. ACKNOWLEDGMENTS

The author would like to acknowledge the support of Prince Sultan University for paying the Article Processing Charges (APC) of this publication.

REFERENCES

- Abdul-Jalil, I., Shirazi, N.S., Mohseni-Cheraghlo, A. (2021), The impact of Islamic financial development on energy intensity: Evidence from Islamic banks. *Journal of Islamic Monetary Economics and Finance*, 7(4), 709-732.
- AbdulKareem, I.A., Olaide, K.M., Isiaka, O.S. (2021), Curbing unemployment and brain drain among Nigerian youths through Islamic financing instruments. *Journal of Islamic Economic and Business Research*, 1(1), 59-71.
- Acheampong, A.O. (2019), Modelling for insight: Does financial development improve environmental quality? *Energy Economics*, 83, 156-179.
- Adegbite, A., Jumoke, F., Abdulganiyu, M. (2022), The Energy Regulation and Markets Review: Nigeria. Available from: <https://thelawreviews.co.uk/title/the-energy-regulation-and-markets-review/nigeria> [Last accessed on 2023 Feb 15].
- Ahmed, H., Salleh, A.M.H.A.P.M. (2016), Inclusive Islamic financial planning: A conceptual framework. *International Journal of Islamic and Middle Eastern Finance and Management*, 9(2), 170-189.
- Aigba, P.A., Emovon, I., Sammuell, O.D., Enweremadu, C.C., Abdeljawad, T., Al-Mdallal Q.M, Afzal, A. (2022), Exergetic assessment of waste gas to energy in a novel integrated NGL recovery and power generation plant. *Frontiers in Energy Research*, 9, 798896.
- Akram Laldin, M., Furqani, H. (2013), Developing Islamic finance in the framework of Maqasid al-Shari'ah: Understanding the ends (Maqasid) and the means (Wasa'il). *International Journal of Islamic and Middle Eastern Finance and Management*, 6(4), 278-289.

- Alexander, A.J. (2011), Shifting title and risk: Islamic project finance with Western partners. *Michigan Journal of International Law*, 32, 571.
- Ali, A.E.M., Kim-Soon, N., Fathi, K.M.A. (2014), Islamic finance instruments: Experiences in the oil and gas sector. *International Journal of Scientific and Research Publications*, 4(6), 1-6.
- Al-Mulali, U., Fereidouni, H.G., Lee, J.Y.M., Sab, C.N.B.C. (2013), Exploring the relationship between urbanization, energy consumption, and CO₂ emission in MENA countries. *Renewable and Sustainable Energy Reviews*, 23, 107-112.
- Amjed, S., Shah, I.A. (2021), Does financial system development, capital formation and economic growth induce trade diversification? *Journal of Economics and Development*, 23(3), 222-237.
- Amuda, Y.J., Hassan, S., Subramaniam, U. (2023), Comparative review of energy, crude oil, and natural gas for exchange markets in Nigeria, India and Bangladesh. *Energies*, 16, 3151.
- Amuna, Y.M.A., Al Shobaki, M.J., Naser, S.S.A., El Talla, S.A. (2017), Crowdfunding as one of the recent trends in financing emerging and small projects in the Arab world. *International Journal of Business Engineering and Management Systems*, 1, 1-16.
- Andrés, R.C.A., Christoph, L., Espen, B.P., Jorge, S.L., Ruoxuan, W., Qinghua, Z. (2019), Global Poverty Monitoring Technical Note. Estimating Global Poverty in Stata. The Povalnet Command. United States: World Bank Group.
- Ani, C., Igwe, B.O. (2017), Energy security and sustainable development in Nigeria: The role of renewable energy. *Renewable and Sustainable Energy Reviews*, 71, 1219-1228.
- Ani, C., Igwe, B. O. (2019), Energy Security and Sustainable Development in Africa: A Comparative Study of Nigeria and South Africa.
- Asafu-Adjaye, J., Byrne, D., Alvarez, M. (2016), Economic growth, fossil fuel and non-fossil consumption: A Pooled Mean Group analysis using proxies for capital. *Energy Economics*, 60, 345-356.
- Askari, H., Iqbal, Z., Mirakhor, A. (2011), New issues in Islamic finance and economics: Progress and challenges. Singapore: John Wiley and Sons.
- Azeez, F.A. (2017), Forest Resources Income, Poverty and Income Inequality: Evidence from Rural Households in South-western Nigeria (Doctoral Dissertation: A Dissertation Submitted in Partial Fulfillment of the Requirement of the Award of the Doctor of Philosophy at the University of Fort Hare).
- Aziz, M.N., Mohamad, O.B. (2016), Islamic social business to alleviate poverty and social inequality. *International Journal of Social Economics*, 43(6), 573-592.
- Beck, T., Demircug-Kunt, A., Merrouche, O. (2013), Islamic vs. conventional banking: Business model, efficiency and stability. *Journal of Banking and Finance*, 37(2), 443-447.
- Bilgin, M.H., Danisman, G.O., Demir, E., Tarazi, A. (2021), Bank credit in uncertain times: Islamic vs. conventional banks. *Finance Research Letters*, 39, 101563.
- Canh, N.P., Thanh, S.D., Nasir, M.A. (2020), Nexus between financial development and energy intensity: Two sides of a coin? *Journal of Environmental Management*, 270, 110902.
- Chakraborty, S.K., Mazzanti, M. (2020), Energy intensity and green energy innovation: Checking heterogeneous country effects in the OECD. *Structural Change and Economic Dynamics*, 52, 328-343.
- Chen, Z., Huang, W., Zheng, X. (2019), The decline in energy intensity: Does financial development matter? *Energy Policy*, 134, 110945.
- Demircug-Kunt, A., Klapper, L. (2012), Measuring Financial Inclusion: The Global Findex Database. Policy Research Working Paper No. 6025. Washington, DC: World Bank.
- Furuoka, F. (2016), Natural gas consumption and economic development in China and Japan: An empirical examination of the Asian context. *Renewable and Sustainable Energy Review*, 56, 100-115.
- Gaies, B., Kaabia, O., Ayadi, R., Guesmi, K., Abid, I. (2019), Financial development and energy consumption: Is the MENA region different? *Energy Policy*, 135, 111000.
- Grassa, R., Gazdar, K. (2014), Financial development and economic growth in GCC countries: A comparative study between Islamic and conventional finance. *International Journal of Social Economics*, 41(6), 493-514.
- Hairetdinov, R. (2023), Islamic Financial System. Available from: https://www.iium.edu.my/deed/articles/islamic_finsys.html [Last accessed on 2023 Mar 18].
- Hanif, I. (2018), Impact of fossil fuels energy consumption, energy policies, and urban sprawl on carbon emissions in East Asia and the Pacific: A panel investigation. *Energy Strategy Reviews*, 21, 16-24.
- Hassan, S., Dhali, M., Mehar, S.M., Zaman, F. (2022), Islamic securitization as a yardstick for investment in Islamic capital markets. *International Journal of Service Science, Management, Engineering, and Technology*, 13(1), 1-15.
- Husin, M.M., Haron, R. (2020), Financial sustainability of SMEs through Islamic crowdfunding. In: *Handbook of Research on Theory and Practice of Global Islamic Finance*. United States: IGI Global. p321-337.
- Iqbal, Z., Mirakhor, A. (2011), An Introduction to Islamic Finance: Theory and Practice. Vol. 687. Singapore: John Wiley and Sons.
- IRENA. (2019), Renewable Energy Market Analysis: GCC 2019. Available from: <https://www.irena.org/publications/2019/jan/renewable-energy-market-analysisgcc-2019> [Last accessed on 2023 Mar 15].
- Kenourgios, D., Naifar, N., Dimitriou, D. (2016), Islamic financial markets and global crises: Contagion or decoupling? *Economic Modelling*, 57, 36-4.
- Khan, A., Chenggang, Y., Hussain, J., Kui, Z. (2021), Impact of technological innovation, financial development and foreign direct investment on renewable energy, non-renewable energy and the environment in belt and road initiative countries. *Renewable Energy*, 171, 479-491.
- Memillen, D.P. (2008). Changes in the distribution of house prices over time: Structural characteristics, neighbourhood, or co-efficients? *Journal of Urban Economics*, 64, 573-589.
- Merna, T., Chu, Y., Al-Thani, F.F. (2010), Project finance in construction: A structured guide to assessment. John Wiley and Sons.
- Olomola, O.J., Adebayo, A.K. (2018), Oil price volatility and economic growth: Evidence from Nigeria and South Africa. *Energy Economics*, 72, 1-12.
- Olomola, O. J., Adebayo, A. K. (2018b), The Nigerian Oil and Gas Industry: A Review of Developments and Prospects. 2018 Nigerian Oil and Gas Industry Annual Report, Department of Petroleum Resources: Nigeria, pp.1-112.
- Olugbemi, A. O. (2020), A Brief Highlight of the Regulatory Framework for Engaging in Business in the Energy Sector in Nigeria. *SSRN Electronic Journal*, pp.1-111. DOI: 10.2139/ssrn.3546545.
- Olujobi, O.J., Olujobi, O.M., Ufua, D.E. (2020), A critical appraisal of legal framework on deregulation of the downstream sector of the Nigerian petroleum industry. *International Journal of Management*, 11(6), 252-268.
- Opusunju, M.I., Akyuz, M. (2022), Causal effect between balance of payment and foreign direct investment in oil and gas sector in Nigeria. *Journal of Global Economics and Business*, 3(8), 57-81.
- Orieso, A.E. (2021), Improving the Human Rights Accountability of Multinational Corporations in the Oil and Gas Industry: A case study of Nigeria (Doctoral Dissertation).
- Ostic, D., Twum, A.K., Agyemang, A.O., Boahen, H.A. (2022), Assessing the impact of oil and gas trading, foreign direct investment inflows, and economic growth on carbon emission for OPEC member

- countries. *Environmental Science and Pollution Research*, 29(28), 43089-43101.
- Pan, X., Uddin, M.K., Han, C., Pan, X., (2019), Dynamics of financial development, trade openness, technological innovation and energy intensity: Evidence from Bangladesh. *Energy*, 171, 456-464.
- Ramakrishnan, R. (2012), Financial literacy and financial inclusion. 13th Thinkers and Writers Forum. Available from: <https://ssrn.com/abstract=2204173> [Last accessed on 2023 March 20].
- Richardson, C.F. (2007), *Islamic Finance Opportunities in the Oil and Gas Sector: An Introduction to an Emerging Field*. United States: University of Virginia; B.A., Tulane University. p. 120.
- Saqib, N. (2018), Greenhouse gas emissions, energy consumption and economic growth: Empirical evidence from gulf cooperation council countries. *International Journal of Energy Economics and Policy*, 8(6), 392-400.
- Schulman, D. (2016), PayPal's CEO on Creating Products for Underserved Markets. *Harvard Business Review*. Available from: <https://hbr.org/2016/12/paypals-ceo-on-creating-products-for-underserved-markets> [Last accessed on 2023 Aug 21].
- USAID (2023), *Power Africa in Nigeria*. Nigeria Power Africa Fact Sheet. United States: United States Agency for International Development. Available online at: <https://2017-2020.usaid.gov/powerafrica/nigeria>.
- World Bank. (2013), *Global Financial Development Report 2014: Financial Inclusion*. Available from: <http://documents.worldbank.org/curated/en/225251468330270218/global-financial-development-report-2014-financial-inclusion> [Last accessed on 2023 March 20].