



Financing Gap as an Obstacle to Environmental Sustainability in Sub-Saharan Africa: Evidence from the Fuelwood Energy Sector in Nigeria

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ABSTRACT

Large gaps exist in the literature on fuelwood energy sector financing and investment for environmental sustainability, especially in the Sub-Saharan African countries. Most of the existing studies evaluated the environmental impact of fuelwood consumption from the perspective of land degradation, while a few studies from the perspective of climate change. Nigeria alone consumes 85% of the total energy produced in West Africa, and the whole of this energy is from the wood. At the same time, it has the world's highest annual deforestation rate of primary forest, signifying that fuel-wood is the major and inescapable source of energy for households in the country. In this study, we examined the roles and impacts of financial institutions on environmental sustainability, focusing on the fuelwood energy sector. Using a qualitative based approach, we employed a multi-stage random sampling technique to select key informants for focus group discussion (FGD) and semi-structured interviews. Our findings revealed a huge financing gap in the fuel-wood energy sector due to lack of access to finance, lack of available information on financial products and lack of government financial support. As fuel-wood becomes the most used and easily accessible energy in the country, mainly due to socioeconomic and demographic factors, there is the need for a renewed commitment from the policymakers and practitioners to change the negative narrative about fuelwood, and allow for the development of a market-oriented fuel-wood industry that could achieve household energy supply, sustainable resource management, energy security, low carbon growth and poverty reduction through the moderating effect of financial institutions.

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INTRODUCTION

Recently, the World Bank Report on Wood-Based Biomass Energy Development for Sub-Saharan Africa draws the attention of policymakers and practitioners that biomass planning does not receive the

attention it deserves at national and international policy levels. To correct this would require a major shift both inside and outside government with regards to how wood-based biomass is viewed and managed from a policy perspective. Nearly



half of the world's population and 81% of households in Sub-Saharan Africa rely on wood-based biomass (fuel-wood and charcoal) for cooking (World Bank, 2011). Fuel-wood is the most competitive and attractive energy among biomass renewable energy sources, and many households depend on it for several reasons. Firstly, fuelwood is the most available energy in its source and households find it easily at depots, sheds or markets at a lower price depending on the quantity they want. Secondly, the use of energy from wood does not contribute to global warming due to sequestering. Finally, the production of wood for energy in the forest creates more jobs than are generated by other domestic energy such as gas, kerosene, and electricity (Couture et. al. 2012:1, Geoffrey, 2010:14).

In Sub-Saharan Africa, 93 percent of households in rural areas and 58 percent of households in urban zones rely on fuel-wood (Jolie et al. (2014). In Nigeria, the extant literature on domestic energy use showed increasing popularity on fuel-wood as the primary source of energy among the households. For instance, fuel-wood consumption escalated from 60% in 2003 to about 72% in 2013 (NPC and ICT international, 2014). More importantly, fuel-wood consumption has indicated a strong nexus between economic development and energy use in the country. It is a fact that Nigeria is the most populous country in Africa with an estimated population of over 172 million people (NPC, 2015), a GDP of \$568.5 billion and a per capita income of \$1,430 (World Bank, 2015). Strong export of crude oil, but still the country remains one of the poorest countries in the world. Poverty in Nigeria is so serious that in 2013, there were as many as 112 million people or 70% of the population living below the poverty line (Anyebe, 2015:13). The North-east and North-west regions of Nigeria that have the highest poverty rate consumes more fuel-wood than the rest of the regions (95.9% and

95.3%). The Southwest and South-east regions that are economically better up consumes less fuel-wood (54.9% and 78.0%) respectively (Zaku et. al, 2013:87). Even though Naibbi and Hearley (2013) have linked the fuel-wood phenomenon to inequality in the spatial patterns of fossil fuel supply in the country.

In the face of the noted challenges, the development of sustainable fuel-wood energy sector in the country is imperative considering that the use of fuel-wood as energy amongst households in Nigeria seems inescapable. If harvested within sustainable limits, it can continue to supplement domestic energy requirements and represent a valuable renewable energy source and source of livelihood to many people. But if used unsustainably, it can lead to the continued impoverishment of low-income households and deforestation.

To this end, the present study examines whether or not financial institutions in Nigeria have keyed to present global environmental sustainability initiative through financing and investment in the fuel-wood energy sector. It is noted that many types of research in this area focused only on negative environmental effects of fuel-wood consumption (Cline Cole et al, 1987, Gbadegesin and Olorunfemi, 2011, Nwofe, 2013, Naibbi, 2013, Cline Cole and Maconachie, 2015, Oluwagbenga, 2015, Musa et al. 2017, Abdullahi et.al, 2017) instead of looking at how fuel-wood energy sector could be developed into a market-oriented industry that could achieve household energy supply, sustainable resource management, energy security, low carbon growth, employment and poverty reduction. Achieving this will promote economic development and poverty reduction in Nigeria. World Bank (2011:1) underscores this within a complex array of investigations at different scales and draw a renewed attention on the need to develop a wood-based biomass sector being that the



sector is an important source for domestic energy and is playing a complementary role of creating important employment for the poor segments of the society that generally do not have access to formal employment.

FUELWOOD CONSUMPTION AND DEFORESTATION

Many studies are of the view that if properly managed, fuelwood consumption is no longer considered the principal cause of deforestation. The regeneration potentials of the forest ecosystem generally off-set the quantities extracted, thus, not causing a permanent decline in forest stocks as generally portrayed. Similarly, harvesting of fuel-wood for energy is likely not depleting wood stocks beyond what would be cleared for agriculture, commercial and residential development, and other permanent land-use (Deweese, 1989; ESMAP, 2001; Arnold et al., 2005). Forsyth (2003: 33-36) and Adams (2009: 242-243) argues that the term deforestation has been politicized, both the definition of deforestation and reliable data on rates of forest loss is confusing and difficult to ascertain. For this reason, forest-cover change study which requires an understanding of local, political, economic, social and environmental processes at work was suggested (Naibbi, 2013). Avoidance of a large-scale generalization about the causes of deforestation is important as earlier noted by Eckholm et al (1984), who also seeks for a local-specific knowledge of the underlining cause of deforestation in line with Massachusetts sustainable bio-energy initiative (2008) position that for as long as the land producing the wood is allowed the opportunity to grow and become forested, the net greenhouse gas emissions of wood-burning systems are much less than those generated by burning fossil fuels. The carbon dioxide produced by burning wood is roughly equal to the amount absorbed during the growth of the tree. When compared to coal and oil, fuel-wood contains a low amount of

Sulphur and heavy metals. Therefore, sustainable fuel-wood supply practices could be environmentally friendly.

CONCEPTUAL AND THEORETICAL REVIEW

The literature on informal sector financing (fuel-wood being an informal business) indicated that finance is a constraint to the growth of informal businesses. According to Jolie et al. (2014:1), a fuel-wood value chain is generally characterized by informal practices and often unequal benefits, leading to a situation whereby the sector has little incentives to attract for its growth. To this end, three types of financial constraints hinder the growth of small businesses as identified by (Omer, 2016:68) based on Bolton's report (1971), and this could also apply to the fuel-wood energy sector. They are; lack of access to finance, lack of awareness of financial services and lack of government financial support.

Lack of access to finance

Generally, the fuel-wood business is recognized as an informal business characterized by a marked fragmentation of operators (producers, transporters, and retailers) who tend to work in isolation on an individual or family basis. Even though a study in northern Nigeria by Naibbi (2013) and Cline-Cole and Machonachie (2015) have reported a strong association of fuel-wood traders. Many have identified access to finance as critical to the growth of the fuel-wood energy sector. For example, Sepp and Mann (2009:7) observed that the fuel-wood market is underfinanced, is generally weak with under-valued and underpriced products, despite the growing scarcity of the wood. The cost of wood where it is collected for free from government and trust land is never reflected in the transaction. This underpricing generally translates into wasteful and inefficient production which in turn created formidable disincentives in the



business. Access to finance has become a major difficulty for the fuel-wood business. Most of the actors in the chain are facing financial difficulties when it comes to business expansion, resulting in little available investments to place in forests leading to minimal returns. For instance, commercial bank's total credit to small scale enterprises stood at meager 0.5% in 2010 and the ration is still falling unabated (Adedayo et al, 2014). Even in a situation where loans are available, informal business owners are reluctant to take the loan due to high-interest rates, in most cases collateral to cover the exposure has to be given before loan is granted. For example, transportation is one of the activities that need a huge capital layout in the fuel-wood value chain but it is always difficult to secure a loan to buy a new truck due to the informal nature of the fuel-wood business. Dealers also needed money to the stock to boost their profit, but loans are always difficult to obtain because of the perception given to the fuel-wood business. Dealers run the business without any formal enterprise registration or operating licenses preventing them from getting loans for expansion.

Lack of professional financial advisors

The informality of the fuel-wood energy sector makes it look like a poor man's business, poor man's trade and poor man's fuel. This means that policymakers and financial institutions ignore the sector leaving it in the hands of semi-illiterate members of the society who have no technical know-how limiting technological adoption and investment (Geoffrey, 2010:77). Even though many actors along with the fuel-wood value chain in Nigeria have associations, still high level of informality of the sector and lack of organization makes the sector not to have strong bargaining power, and could not push for access to information from the financial institutions. Furthermore, criminalization of

the fuel-wood energy sector by the government officials made many key players to operate underground, so much so that the issue of getting knowledge and innovations from government or financial institutions becomes very difficult. Prices of fuel-wood in the market is determined by fuel-wood traders themselves and can be altered by traders at their will showing a huge gap between traders and larger conventional markets. Lack of policy regulations on the fuel-wood markets makes the fuel-wood energy sector inept. For example, Naibbi (2013) shows that the majority of households are at the mercy of fuel-wood vendor. Fuel-wood is sold in many un-standard units of measurement with retail prices varying in terms of location, the volume of sales, responsibility for the delivery and special relationship between seller and buyer. Thus fuel-wood pricing strategy explains the absence of synergy and information flow between the sector, government and financial institutions.

Lack of government financial support

Fuel-wood energy sector in Nigeria has for a long time operated without policy or laws guiding the day to day operation and where legislations have been made, they are either piecemeal or misguided without a proper implementation framework. More so, the sector usually operates underground, it has become almost impossible to engage the major stakeholders of the sector. For these reasons, it lacks formal recognition to warrant from government for any financial support. Bank of Industry (BOI), Small and Medium Enterprises Development Agency of Nigeria (SMEDAN) were designed to provide government financial assistance to small businesses. However, fuelwood energy sector has not been a key beneficiary of government financial support.



Financing Sources for small businesses

Equity

Equity is the owner's contribution either from family, friends or retained earnings and is used widely by small businesses. Contributions from friends and family members are acknowledged as one of the important sources of equity. According to Fatoki (2012), equity is a financing vehicle that has a residual claim on the firm, it does not create a tax advantage from its payments and does not have priority in bankruptcy. Small and medium businesses prefer equity over external sources of finance like debt to reduce the cost of finance (Carpenter and Peterson, 2002). This means that, it will cost small business owners to get external funds than to use the equity of retained earnings and the owner's funds. This allows the firm's owners to retain control of the firm, avoid floatation costs such as legal, accounting and underwriting fees as well as allowing flexibility to the owners (Carpenter and Peterson, 2002).

Retain earnings

Retained earnings are the net profit the firm has accumulated in business since its establishment and a central source of finance in any firm. Small and medium business retained earnings are the most important financing sources (Rugani, 2009). Hamilton and Fox (1998) assert that retained earnings are one of the most convenient ways managers funds their profitable business opportunities. According to Rugani (2009), a positive relationship exists between utilization of retain earnings and the size and profitability of businesses, meaning that retain earnings increases firm growth. The profitability of small and medium businesses will initially rely on retained earnings. However, profitable firms may have better access to other sources of finance than less profitable firms. The need for external finance may be lower for highly profitable firms if the retained earnings are

sufficient to fund new investments (Abor and Biekpe, 2009).

Term loan

This is a loan from a bank with a floating interest rate and the amount borrowed must be paid off at a certain period. The term loan has a maturation date but no amortization. Interest is paid monthly, quarterly, or annually as required by the borrower/lender but the principal is paid only on maturity. There are two types of term loans, short term loans usually run for less than three years and are generally repaid in monthly installments from the cash flow of the business. On the other hand, long term loans are commonly set for three and ten years, in some instances for as long as twenty years (Lorey, 2012). For example, the Microfinance Policy Regulatory and Supervisory Framework of Nigeria 2005 launched by the Central Bank of Nigeria directed that term loans should be extended to informal micro-businesses.

Bank overdrafts

Bank overdrafts are another source of funding available for the informal sector and are divided into clean, secured and temporary overdrafts. The clean overdraft is allowed only against Demand Promissory Note. The advantage is that the customer does not pay interest for days during which there is a credit balance in the account. Secured overdrafts are for longer periods and are normally granted against the security of tangible assets. While temporary overdrafts are for a short period to customers who maintain their accounts satisfactorily. Based on this classification, overdrafts are known to be a facility that assists an enterprise with short term working capital to meet their day to day expenses. In Nigeria, an overdraft is a very expensive source of finance for the informal sector. Ogujiuba (2004) observed that overdrafts have higher rates compared to



other products like credit cards. Considering the nature of the fuel-wood energy sector in Nigeria, the expensive nature of bank overdrafts is not a recommendable facility for such type of business more especially at their infant stage.

Cash credit

This is a facility granted for financing inventory by pledging the goods with the bank. The goods against which the facility is granted are either in the direct control of the bank or of an agent appointed by the bank for this purpose. Also, there are situations where the goods remain under the possession of the borrower and periodic stock reports are obtained from the borrower to determine the extent of drawing under the cash credit limit. This type of financing is not known to many people in informal businesses like fuel-wood.

Clean loan

A clean loan is a credit facility under which a fixed amount is lent to the customer without taking any security and the customer pays interest from the first day drawing on the amount of loan till its repayment. If the arrangement to repay the loan in installments is agreed, the customer pays interest on reduced balance from time to time. Under the loan facility, the entire amount of sanctioned is debited to the loan account of the customer and deposited in the current account. Bank of Industry (BOI) was established to provide these types of microloans to informal businesses to support their social capital mobilization to grow their income and asset base. This type of facility can be utilized by fuel-wood business operators.

THEORY OF FINANCIAL STRUCTURE OF SMALL BUSINESSES

Pecking order theory

According to the pecking order theory, retained earnings are better than

debt and debt is better than equity. The theory argues that a firm follows a pecking order if it prefers internal to external financing and debt to equity (Myers, 1984). The theory further stated that most businesses will be better up with internal finance than external finance because of high agency costs. The theory reflects the motivations for the financial manager (or owner-manager) to obtain control of the firm to reduce the agency costs on equity and avoid the seemingly inevitable negative market reaction to an announcement of the new equity issue (Migiro, 2005). This financial theory implies that management prefers to finance first from retained earnings, then with debt, followed by hybrid forms of finance like convertible loans, and lastly by using externally issued equity. According to Myers (1984), the pecking order theory can be an appropriate description of small medium and micro enterprises' financing practices. The pecking order hypothesis is keeping with the prior findings that debt is by far the largest source of external finance for small and medium businesses. Therefore, by implications, the theory means that external equity finance may be inappropriate to the owner-managers control over operations and assets. If pecking order theory holds, then internal equity finance will be preferred for small businesses as the form of finance does not surrender control. Also, Migiro (2006) considers pecking order theory as the most appropriate description of financing practices of small and medium businesses. Even though, it was initially thought that pecking order theory was mainly to explain the observed financing practices of the large public-traded corporation. However, it was later realized it can also apply to the financing practices of non-public traded small and medium businesses. This theory can therefore be applied to explain mode of financing fuelwood energy sector in Nigeria.



Study Area

Katsina state is located in northern Nigeria, specifically, north-west geopolitical zone. The state is among the top list of poorest states in the country, the second poorest with a poverty rate of 74.5% (NBS, 2016). Consumption of fuel-wood in the area is huge to the extent that in early May 1992 there was a fuel-wood protest organized by fuel-wood, urban-based dealers, in the middle of a kerosene and gas shortage by withholding supplies to Katsina town. Modern energy supply in the state is so precarious that there is hardly 12 hours of interrupted electricity supply. A recent study that examined fuel-wood trading and consumption showed Katsina urban community to have the highest fuel-wood consumption rate in the entire savanna region of Nigeria (Musa, 2011). The state has thirty-four (34) local government areas with population of more than seven million people.

METHODOLOGY

Our study has a qualitative approach. We used 120 Enumeration Areas (EAs) demarcated by the Nigerian National Bureau of Statistics (NBS) for socio-economic development data for Katsina state. Using a multistage random sampling technique, we selected 1 fuel-wood trader in each enumeration area (EA) to form a group of 10 (covering 100 EAs). We then formed ten (10) focus groups of one hundred (100) fuel-wood traders divided into 10 groups. Leaders of fuel-wood trader's associations were contacted through their councilors and traditional leaders. The advantage we drive from the use of focus group discussion is that it provided us a sense of belonging and cohesion with the participants of the group discussion. The participants feel safe with the researcher and share information, hence the type and range of data generated through the social interaction of the participants are often deeper and richer

(Onwuegbuzie et al, 2009:2). The primary data was collected through a face-face interview using semi-structured interviews from 200 fuel-wood traders (2) traders from each enumeration area (EA) covering the 120 EAs. The focus group discussions in the study were used to complement the semi-structured interview and fortify the accuracy of the themes generated. Observations were also critical in our studies, as it enabled us to see people's reactions and expressions. With tape-recorded contributions of the participants and transcription, three themes emerged namely; lack of access to finance, Lack of awareness of the available financial services and Lack of government financial support.

FINDINGS

This section presents the result of the analysis. As mentioned above, the analysis was based on three themes: lack of access to finance, Lack of awareness of the available financial services and Lack of government financial support.

Lack of Access to Finance

Access to finance is a key factor that governs the capability of small businesses to expand, grow and to employ the latest technologies. Limited access to finance is a major constraint to small business growth, regardless of its location, size, industry and the economic environment of the market (Omer, 2016). Studies have found financing gap as one of the greatest challenges that prevent small business growth and expansion (Adebayo et al. 2014, Hussain et al. 2006). Fuel-wood business is conducted informally in Nigeria (small business). Participants viewed access to finance for the fuel-wood energy sector as critical. However, they expressed the ability to access funds from financial institutions hindering their business growth. According to the majority of them, finance is sourced through personal savings and interest-free



loans from family and friends. One of the respondents have this to say:

“I started as a laborer and then venture into selling of fuel-wood with some little money from my family. I also added with the little I saved. I got no financing from financial institutions”. (Nigerian, interview, July 2017).

This finding is consistent with the findings of Okpara (2011:156) reporting a lack of access to finance as the commonest constraints hindering the growth and survival of small businesses in Nigeria. The extent to which small businesses are unable to access finance in Nigeria was revealed in the recent banking sector report provided by the Nigerian National Bureau of Statistics (NBS) for the Q1 of 2018. The credit allocation to the private sector by banks hits N15.60 trillion but small-scale businesses still haven't felt the impact of the huge allocation by the banks, because commercial banks preferred to finance the sector that gives them quick and fast gains (Daily Trust,

2018:32). Commercial bank loans to small and medium businesses decreased from 48.79% in 1992 to 0.15% in 2010 (Luper, 2012).

One best way to prevent deforestation is to encourage fuel-wood traders to own and develop woodlots. Studies have shown that sustainable fuel-wood production can be possible through woodlots development. Participants dissatisfied with the way financial institutions treat them said, if funds were available, they can grow enough wood without destroying the natural vegetation. In response, one respondent said:

“Financial institutions don't value us nor our business that is why they are reluctant to give us loans to develop woodlots. My capital comes through the help of Allah (God in Muslims faith). I managed a very small woodlot which is too little to serve my customers fuel-wood needs. You see, I have very small capital” (Nigerian, interview, July 2017).

Literature support this statement, Sepp and Mann (2009:7) argue that the fuel-wood market is generally weak with undervalued and underpriced products, despite the growing scarcity of the wood. As a result, access to finance has become difficult for fuel-wood business. Most of the actors in the chain face financial difficulties when it comes to business expansion, resulting in little. One respondent lamented:

available investments to place in forests and this led to minimal returns.

Most of the participants have the notion that the fuel-wood business is perceived as a poor man's business. Frustrated by this notion, they felt no recognition to access finance despite the critical role they played of providing energy for the majority of the households.

“Financial institutions are not interested in dealing with us because we are not rich, we financed our business through the little we saved”. (Nigerian, interview, July 2017).

Commercial bank's total credit to small scale enterprises in Nigeria stood at

meager 0.15% in 2010. More worrisome is that the ratio has been falling over the years



and has continued unabated (Adedayo et al. 2014). This evidence confirmed that financial institutions have not been extending credit facilities to small businesses (fuelwood business inclusive).

The sustainable fuel-wood sector is possible if the sector is properly governed. Presently the prices of fuel-wood in the market are determined by fuel-wood traders themselves, and these prices can be altered at their will, showing a huge gap between traders and larger conventional markets. This shows a lack of policy regulations in the fuel-wood markets. For example, Naibbi One respondent said:

“All these manipulations that we see in the sector are due to lack of funding from financial institutions. If there is proper financing, the sector would be regulated. Many of our friends in business have closed. They don't have enough money to continue and have no connection to get loans from the banks. Let me tell you, those of us that remain in the business are dealing with illegal forest harvesters because we cannot develop our woodlots. You have to deal with them or you close shop” (Nigerian interview, July 2017).

Lack of Awareness of the Available Financial Services

Magesa et al. (2013) argue that the cost of financial information may be high, entrepreneurs could hear different financial institutions but in an actual sense do not have information on what these institutions offer. It was noted that due to the limited level of western education possessed by the fuelwood traders, the level of awareness of available financial products is a big problem. One respondent narrated:

“Am aware we have banks that can borrow money for business, but I don't have the knowledge of the financial products available. If you look at my background, I don't have western education, I am a product of the Almajiri system of education and banks don't deal with us, they only deal with those people who have western education” (Nigerian, interview, August 2017).

This finding corroborated the report of Nigeria's Small and Medium Enterprise Development Agency (SMEDAN) in conjunction with the Nigerian National

(2013) showed the majority of households are at the mercy of fuel-wood vendors in northern Nigeria. The reason may not be unconnected with the fact that fuel-wood is sold in many un-standard units of measurement, with retail prices varying in terms of location, the volume of sales, responsibility for the delivery and special relationship between seller and buyer. Thus, the fuel-wood pricing strategy explains the absence of synergy and information flow between the sector, government and financial institutions. In response to this,

Also, no effort is being made to get them educated on the available financing opportunities. They admitted that the majority of them were the product of the Almajiri system (a traditional system of Islamic education practiced in Northern Nigeria). They realized that the system disallowed them western education from childhood, as a result, many of them have engaged in petty trading to sustain their families in reaching adulthood.

Bureau of Statistics (NBS) (2013:69) that revealed the level of awareness of financial products available to small businesses in Kano State as very low (29.40%). It is worthy



to note that Kano State bordered the study area and is the commercial nerve center of northern Nigeria. This outcome signifies that the level of awareness of financial products in Katsina State may even be lower considering that the level of poverty in Katsina State is higher compared to Kano state.

“If government or banks can teach me how to get loans, am sure within two years I own many woodlots, and I can be able to generate huge sums of money. This business fetches a lot of money, no loss at all” (Nigerian interview, August 2017).

Based on the above problem, Agaje, (2004) observed that lack of access to relevant support from professionals and appropriate financial advisors is one of the most important constraints to small and medium business growth. In third world countries like Nigeria, professional advice on small businesses only comes through government policies. For instance, National Enterprise Development Programme (NEDEP) being implemented by Bank of Industry (BOI), Small and Medium Enterprises Development Agency of Nigeria (SMEDAN) and Industrial Training Fund (ITF) were designed to provide professional One respondent had this to say:

“Sadly, I don’t have anybody to educate me on how to borrow money from banks, I don’t know the conditions governing borrowing from banks. This financial illiteracy is killing my business; I cannot expand in the last few years” (Nigerian interview. August 2017).

This statement agrees with what was reported by (Jolie et al. 2014, Geoffrey, 2010) on the fuel-wood energy sector value chain. According to their study, both policymakers and financial institutions ignored the fuelwood sector leaving it in the hands of semi-illiterate members of the society who have no technical know-how, One of the respondents have this to say:

Lack of awareness of the available resources and supports could be one of the reasons for the lack of impact of financial intuitions on the fuel-wood sector. One respondent blames banks for their inability to expand their fuel-wood business, showing the lucrative nature of the business. He said:

services in form of skills acquisition and entrepreneurship training based on One Local Government One Product (OLOP) program to small businesses. However, despite this plethora of initiatives, there are still many people that are unable to expand their businesses due to a lack of information. For this reason, most of the fuel-wood traders learned the trade from watching others doing it, or simply being trained by parents, relatives or friends.

The lack of awareness of financial services or conditions under which they are available and general financial illiteracy is a major problem facing the fuel-wood sector.

hence limiting technological adoption and investment in the sector.

Most of the respondents noted a negative perception have been attributed to the fuel-wood business. They also noted financial institutions don’t recognize their business and no attempt to deal with them.



“How do you know them and their services (referring to financial institutions and their products) while they don’t have anything to do with you, maybe they even have the impression that we are criminals” (Nigerian, interview, August 2017).

This is in line with World Bank (2011) argument pointing that criminalization of fuel-wood sector by the government officials in many countries has made many key players in the sector to operate underground, so much so that the issue of getting knowledge and innovations from government or financial institutions becomes very difficult.

Lack of Government Financial Support

World over, governments create various departments, agencies, and institutions to support small businesses. The

Nigerian government has for long created various agencies and institutions like Central Bank of Nigeria (CBN), Small and Medium Enterprise Development Agency (SMEDAN), Bank of Industry (BOI) and Microfinance institutions (MFI’s) to support small businesses. Participants claimed that they have not been getting any financial support from the government. They noted that funding support for small businesses does come from the government from time to time. However, the process of getting support has been hijacked by politicians.

One respondent narrated:

“Recently micro-enterprises funding was given to many people in this state by the federal government (referring to Katsina state) but nobody comes here to give us. They have just shared the money to their political friends, not us” (Nigerian, interview, September 2017).

This is in agreement with recent happening in the distribution of 2billion Naira Central bank loans to small businesses in Katsina state. The loan was shared with political cronies instead of small business

owners. Even the Trader’s Money initiative being championed by Vice President of Nigeria is under serious criticism of being politicized.

One respondent said:

“I used to hear that government is giving money to small business owners, but they never give me”. (Nigerian, interview, September 2017).

THE IMPLICATION OF THE FINDINGS

According to the World Bank (2011:9), modernizing of Wood-based biomass sector has the significant potential of increasing the revenue base of Sun-Saharan African countries and sustainable economic development. Therefore, there is an urgent need for funding and investment in natural resources. However, our findings from FGD and interview showed a huge financing gap in the sector. Stakeholders in the fuelwood sector depend on retained earnings, loans from friends and family to

finance fuelwood business, resulting in a lack of business expansion and indiscriminate cutting down of trees for energy. Additionally, our findings confirmed a lack of access to finance, lack of awareness of financial services and lack of financial support from the government has significantly negatively affected the fuelwood business. To reduce the rate of deforestation and create a sustainable environment, there is an urgent need for the modernization of the fuel-wood markets that can create an opportunity for



stakeholders to engage formally in the sector. Financial institutions like microfinance institutions can provide a moderating effect on financial constraints facing the fuelwood energy sector to support forest management for a sustainable environment.

REFERENCES

- Abor, J., and Quartey (2010). Issues in SMEs Development in Ghana and South Africa. *International Research Journal of Finance and Economics* 39: 1450-2887.
- Adams, W. M. (2009). Green Development: Environment and Sustainability in a developing world. 3rd edition, Routledge, London.
- Adedayo, O. E., Ojo, A. S., Toluwalope, O. A (2014). Bank's involvement in SMEs: Identifying Financing Gaps in the Nigerian Banking Sector. *Central Bank of Nigeria Report*.
- Agaje, S. W (2004). Socioeconomic determinants of growth of small manufacturing enterprises in Addis Ababa. Master Thesis. Addis Ababa University. Ethiopia.
- Anyebe, A. A (2015). An Assessment of Poverty Eradication Programme (NAPEP) in Nigeria. Cankri Karatekin University *Journal of Faculty of Economics and Administrative Sciences*, 5(1):13-28.
- Arnold, J.E.M., Kohlin, G. & Persson, R. (2006). Woodfuels, Livelihoods, and Policy Interventions: Changing Perspectives. *World Development*, 34(3); 596–611. doi: 10.1016/j.worlddev.2005.08.008.
- Babanyara, Y.Y. and Saleh, U.F. (2010). Urbanization and Choice of Fuelwood as a Source of Energy in Nigeria. *Journal of Human Ecology*, 31 (1): 19-26.
- Babbie, E. and Mouton, J. (2001). *The Practice of Social Research*. South African Edition. Cape Town: Oxford University Press, South Africa.
- Carpenter, R. E., and Petersen, B. C. (2002). Is the Growth of Small Firms Constrained by Internal Finance? *Review of Economics and Statistics*: 84 (2): 298-309.
- Cline-Cole, R. A., Falola, J. A., Main, HAC, Mortimore, M.J., Nichol, J.E., Reilly, F.D.O (1987). Wood Fuel in Kano. Final Report of the Rural Energy Project. Bayero University Kano. Submitted to United Nations University. Development Studies Division.
- Cline-Cole, R. and Maconachie, R. (2015). Wood Energy Intervention and Development in Kano, Nigeria. Longitudinal "Situating" Perspective: Final accepted Paper to Land Use Policy.
- Couture S., Garcia, S., and Reymaud, A (2012). Household Energy Choices and Fuel-wood Consumption: An Econometric Approach to French Data. *Journal Energy Economics*, 34(6):1972-1981.
- Odihi, J. (2003). Deforestation in afforestation priority zone in Sudano-Sahelian Nigeria. *Applied Geography* 23, 227-259.
- Daily Trust Newspaper, 16th May 2018 edition.
- Deweese, P. (1989). The Woodfuel Crisis Reconsidered: Observations on the Dynamics of Abundance and Scarcity. *World Development*, 17 (8): 1159–1172.
- Eckholm, E., Foley, G., Bernard G. & Timberlake, L. (1984). Fuelwood: The energy crisis that won't go away. Earthscan and International Institute for Environment and Development (IIED).



- Energy Commission of Nigeria (ECN) (2003). National Energy Policy in the Federal Republic of Nigeria.
- ESMAP. 2001. Sustainable Woodfuel Supplies from the Dry Tropical Woodlands. Joint UNDP/World Bank Energy Sector Management Assistance Programme (ESMAP), Washington
- Fatoki, O. (2011). The Impact of Human, Social and Financial Capital on the Performance of Small and Medium-Sized Enterprises (SMEs) in South Africa. *Journal of Social Science*: 29 (3): 193-204.
- Food and Agricultural Organization of the United Nations (FAO), (2005). Global Forest Resources Assessment Main Report 2005. *FAO Forestry Paper*, 163.
- Forsyth, T. (2003). Critical political ecology: the politics of environmental science- Routledge, London
- Geoffrey, M. N. 2010. Woodfuel Value Chain in Kenya and Rwanda: Economic Analysis of the market-oriented woodfuel sector. MSc Thesis. Cologne University of Applied Sciences. @ <https://energypedia>.
- Hamilton, R. T., and Fox, M. A. (1998). The financing preferences of small firm owners. *International Journal of Entrepreneurial Behavior and Research*: 4 (3): 239-248.
- Hussain, J., Millman, C., and Matlay, H. (2006). SME financing in the UK and in China: a comparative perspective. *Journal of Small Business and Enterprise Development*: 13 (4): 584-599
- Ajaiya, G. T., Bello, R. A., Orosanyi, G. T., Oyeyemi, G. M, Raheem, U. A. and Yakubu, A. T (2010). Poverty in Urban Informal Sector of Kwara State, Nigeria. University of Ilorin Research, Report.
- International Energy Agency (IEA) (2014). World Energy Outlook. WOE. OECD/IEA. Paris, France.
- Jolie S., P. D., Arenda Vander, G. and Richard M. (2014). Approach to Promote REDD+ Compatible Wood Fuel Value Chain (online). SNV Netherlands Development Organization (SNV). Available at cleancookstove.org/resources. Accessed on 28/09/2017.
- Leroy, M. T. (2012). The impact of networking on access to finance and performance of SMEs in the buffalo city municipality, Eastern Cape, South Africa. Master thesis: University of Fort Hare. South Africa.
- Magesa, R. Shimba C. and Mugombola D. (2013). Investigating impediment towards access to financial services by women entrepreneurs: A case of Arumeru District. *Developing countries studies*, 3(11): 105-115.
- Massachusetts Sustainable Bioenergy Initiatives (2008). Woody Biomass: Local Renewable Fuel for Commercial and Industrial Facilities. Massachusetts Sustainable Bioenergy, USA.
- Migiro, S. O. (2005). Small and medium scale manufacturing enterprises in Kenya: A perspective on alternative sources of financing. PhD thesis: University of Zululand, Kwadlangezwa, South Africa.
- Myers, S. C. (1984). The capital structure puzzle. *The journal of finance*: 39 (3): 574-592.
- Naibbi, A. I. (2013). Fuel-wood and Vegetation Change in Northern Nigeria: An Exploration using Remote Sensing (RS), Geographical



- Information System (GIS) and Field Reports. PhD Thesis, University of Portsmouth, UK.
- Naibbi, A. I. and Healey, R.G. (2013). Northern Nigeria's Dependence on Fuel-wood: Insight from Nationwide Cooking Fuel Distribution Data. *International Journal of Humanities and Social Science*, 3(17):160-173.
- National Bureau of Statistics (2013). The Nigerian Poverty Profile, 2013 Report.
- National Population Commission (NPC) (2015). The 2015 Population Projection for Nigeria.
- National population commission (NPC) (Nigeria) and ICF International (2014). Nigeria's energy outlook.
- Nwofe, P. A (2013). Comparative Analysis of Domestic Energy Use in Nigeria. *A review Journal of Renewable Energy* 4 (1):7-17.
- Okpara, J. O. (2011). Factors constraining the growth and survival of SMEs in Nigeria: Implication for Poverty Alleviation. *Management Research Review*, 34(2):156-171.
- Omer, N. A. (2016). The Moderating effect of Microfinance on the Financial Constraints to SMMEs Growth in South Africa. PhD, University of Western Cape, South Africa.
- Onwuegbuzie, A. J. (2009). A Qualitative Framework for Collecting and Analyzing Data in Focus Group Research. *International Journal of Qualitative Methods*, 8(3).
- Rungani, E. (2009). Determinants of capital structure of small and medium enterprises in the Buffalo City Municipality Eastern Cape Province South Africa. Master thesis: University of Fort Hare, South Africa.
- Sepp, S., Mann, S. (2009). Wood fuel Supply Interventions: Lessons Learned and Recommendations. Biomass Energy Strategy.
- SMEDAN (2013). National MSME Survey Report in Nigeria.
- World Bank (2011). Wood-Based Biomass Energy Development for Sub-Saharan Africa: Issues and Approaches: 1-64.
- World Bank (2016). Nigeria Economic Report, Improved Economic Outlook in 2014 and Prospect for Continued Growth Look Good, 2016.
- Zaku, S.G., Kabir, A., Tukur, A.A., and Jiminto, I.G. (2013) Wood fuel consumption in Nigeria and the energy ladder: A review of fuel wood use in Kaduna State. *Journal of Petroleum Technology and Alternative Fuels*, 4(5): 85-89.