




PROBLEMS CONFRONTING SHEA BUTTER INDUSTRY IN NIGERIA

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ABSTRACT

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The Shea sector of the Nigeria economy has the potential to generate wealth and employment for large number of people at the same time. However, this is yet to be seen as the industry is currently underexploited. This could be attributed to many problems affecting the entire value chain of the industry. The study reviewed the literatures as well as authors experiences on the field using participatory tools like in-depth interview, focus group discussion and observations to identify the problems confronting the entire Shea butter industry and proffer solutions to them. The problems identified by the study includes indiscriminate cutting of Shea trees, lack of storage facilities for the kernel and butter, poor quality butter produced, lack of modern processing technology, poor infrastructural facilities like road, electricity and water. Others are lack of access to market, no credit facilities and, lack of government assistance and seasonality of Shea kernel. The study recommended that relevant government agencies should provide an enabling environment such as water, electricity, modern processing technologies, storage facility, good roads and make by-laws to stop indiscriminate cutting down of Shea trees to ensure sustainability of the Shea industry. Bank of industry and commercial banks should give out loan to Stakeholders along the value chain line to stimulate Shea butter production. The stakeholders in the industry should also form functional cooperatives to collectively solve their problems.

Contribution/Originality: This study is one of very few studies which have investigated the problems confronting the Shea butter industry by looking at the Stakeholders along the value chain of production rather than looking at only the processors in a view to proffer solutions and inform policies planning on the way forward.

1. INTRODUCTION

The Shea tree belongs to the family *Sapotaceae*, which grows naturally in the wild in the dry Savannah belt of West Africa from Senegal in the west to Sudan in the east and onto the foothills of the Ethiopian highlands (FAO, 1988). Based on distribution, two species of the plant have been identified namely *Vitellaria paradoxa* and *Vitellaria nilotica*. *Vitellaria paradoxa* is produced mainly in the West African sub-region while *Vitellaria nilotica* grows mainly in northern Uganda and southern Sudan (Ferris *et al.*, 2001). The Shea tree can be found in 20 sub Saharan African countries, namely Benin, Burkina Faso, Cameroon, Central African Republic, Chad, Cote d'Ivoire, Democratic Republic of Congo, Ethiopia, Ghana, Guinea Conakry, Guinea Bissau, Gambia, Mali, Niger, Nigeria, Senegal, Sierra Leone, Sudan, Togo and Uganda (Hatskevich *et al.*, 2011).

The Shea nut tree (*vitellaria paradoxa*) is an economic crop indigenous to the Guinea and Sudan savanna zones of Nigeria and it is grown between latitudes 70-120 N (Warra, 2009). Its fatty matter has been used for years in Africa for different purposes, ranging from food and soap processing, to healthcare and other medicinal uses (Coulibaly *et al.*, 2009). Shea butter is an important raw material and/or a precursor for the manufacture of pharmaceutical, cosmetic and candle products. It is widely used to treat skin problems such as dryness, sunburn, burns, ulcers and dermatitis (Bonkougou, 1987; Fakayode *et al.*, 2013).

Given the fast rate of growth witnessed in the Shea industry over the past decade, it is suggested that Shea nut volumes multiplied by recent tonnage prices, even prior to butter extraction, can earn West African Sahel-Savannah rural communities in the region of US\$ 150 million (Lovett, 2010). Osagie (2014) also observed that the Shea sector of the Nigeria economy has the potential to generate 3.8 Million US dollar per annual for the country. And can generate employment for a large number of people at the same time. However, this is yet to be seen as the industry is currently underexploited as a result of many problems affecting the entire value chain of the industry from gatherers to the manufacturers of Shea products.

The fact that Shea tree is not cultivated but gotten from the wild and it takes 15 to 20 years to start fruiting, couple with rapid cutting down of Shea trees for making timber, charcoal and fire wood makes the tree an endangered species which on the long run will have effect on sustainability of the Shea butter industry to provide income to the people and foreign exchange earnings for Nigeria as seen in other countries like Ghana and Burkina' Faso. The industry is currently not living up to its billing of poverty reduction, income and employment generation as well as provision of raw materials and foreign exchange earnings. This could be attributed to the numerous challenges confronting the industry.

Several studies have been carried out on the problems confronting Shea butter processors such as Fakayode *et al.* (2013) that identify constraints of inadequate capital, poor packaging and market, low domestic consumption/patronage of Shea-butter products, insufficient supply of water and high cost of equipment maintenance and Adesiji *et al.* (2015) who identify inadequate water supply, inadequate processing equipment and inadequate credit facilities but little or no information is available on the problems confronting the entire industry. Tackling the challenges however, requires adequate understanding of the challenges confronting the industry along the value chain with the view to addressing them appropriately.

1.1. Objective of the Study

The main objective of the study is to examine the entire Shea butter industry with a view to identify the problems affecting the industry and proffer solutions to them. The specific objectives of the study are to:

- i. describe the Shea value chain;
- ii. identify the problems confronting the industry along the value chain line;
- iii. proffer solutions to the identified problems.

2. METHODOLOGY

The objective of the study were achieved through review of literature on Shea tree from Journals and Conference papers from the internet as well as authors experiences on the field using participatory tools like In-depth interview (IDI), Focus group discussion (FGD) and observations. FGD was conducted with the processors in Ilua, Saki West Local Government Area of Oyo State, Wawa, Borgu Local Government Area, Kodo, Bosso Local Government Area and Yekomasa, Lavun Local Government Area all of Niger State and Agba'ekuji, Moro Local Government Area of Kwara State. IDI was conducted in these locations with nut gatherers and butter sellers. In addition, IDI was conducted for Shea butter products manufacturers in Minna, Chanchaga Local Government Area of Niger State

3. RESULT AND DISCUSSIONS

3.1. The Shea Value Chain

Value chain refers to a structure of physical, economic and social transactions between individuals and organizations that are engaged in raw material transformation into end products (Ahmed, 2007). According to Schmitz (2005) value chain refers to series of chain of activities that are associated with adding value to a product through the production and distribution processes of each activity. It refers to all series of activities that are involved in the transformation of a raw material into finished products. According to Lovett (2004) there are wide range of stakeholders in the Shea industry playing different roles at various stages which include village pickers and post-harvest processors of dry kernel, local buying agents (LBAs), rural or urban traditional butter processors, large-scale exporters of Shea kernel, large-scale processors (mechanical extraction and export) of Shea butter based 'in-country', small-scale entrepreneur formulating cosmetics based on Shea butter in Africa, external (US, EU, India and Japan) large scale buyers and processors of kernel and butter, external entrepreneurs or companies formulating cosmetics based in Shea butter, and external entrepreneurs or companies formulating edible products, including Cocoa Butter Equivalents (CBEs) or Cocoa Butter Improvers (CBIs) based in Shea butter.

But in a simpler form, Brabeck *et al.* (2008) modeled the Shea value chain in Ghana as nut producers, nut traders, butter producer, butter traders, nut and butter exporters, producer of food and cosmetics. However, this study will adopt the actors in Nigeria Shea butter value chain as nut gatherers, nut traders (wholesalers and retailers), Shea butter processors, butter traders (wholesalers and retailers), producers of finished products (food, cosmetics, soap and pharmaceutical companies). The problems confronting the Shea butter industry will be considered based on these value chain actors as adopted by the authors.

3.2. The Nut Gatherers

These are the first group along the value chain. They go into the bush to collect the Shea nuts during the onset of raining season. They sometime process the nuts into butter for domestic uses and sale on the local market. They are plagued with different problems such as:

- i. Seasonality of the nuts: The Shea trees fruit once in a year which last for a period of three months (usually from May to July). Therefore, until the next season there would not be fresh nuts for the women to pick and which implies the collection of fresh nuts and home processing of nuts are equally seasonal which do not allow the women to continue to earn income throughout the year from these activities unless they diversify into buying the Shea nuts (Abdul-Moomin *et al.*, 2016). It was observed that the nut gatherers sell their nuts early at cheaper rate because there is urgent need for money to buy food stuff for the households or farm inputs or support their husbands to buy farm inputs and lack of storage facilities to preserve the nuts. This will affects income generation of the gatherers as compared to delaying the sale of the nuts to attract higher price that would have serve as motivation to remain in the business and ensure the sustainability of the industry.
- ii. Snake and wild animal attack: In order to get enough Shea nuts, the gatherers have to go far into the bush since Shea trees are not cultivated at present. According to Abdul-Moomin *et al.* (2016) scorpions and snakes bites are major risks associated with fresh nut picking as gatherers do not usually have protective cloths such as rain coats, wellington boots and hand gloves to protect themselves. According to the FGD conducted in Niger and Kwara States they confirm cases of death as a result of snake bites. Since these attacks are common, it becomes a source of panic for the gatherers when picking the nuts. The use of protective working materials such as rain boots, hand gloves and helmets in case of bees attack will help to remove the fears in the mind of the gatherers thereby encouraging them to go farther into the bush to get many nuts that will lead to more income being generated by the gatherers.
- iii. Lack of storage facilities: Another problem confronting the nut gatherers is lack of storage facilities in term of knowledge, warehouse and equipment to store the nuts for a long period of time when the nut price would

have appreciated. [Abdul-Moomin et al. \(2016\)](#) noted that the gatherers do not have access to proper storage facilities to keep the collected fresh nuts. The authors observed that the nuts were carelessly bagged and left outside in the rain because of lack of knowledge on how to handle the nuts at storage and place to store nuts. This makes mucous and other microorganisms to grow on the nuts that affect the quality of the nuts and butter produced from them. The nut gatherers are adversely affected by price reduction as a result poor quality of the nuts. This problem and lack of capital are reasons why nut gatherers sale their nuts early at cheaper price to the nut traders that have such technology and capacities in term of warehouses to store and preserve the nuts for a long time that would have ensured high and continuous income to them.

iv. Lack of capital: According to [Azeez and Salami \(2013\)](#) the nut gatherers are expected to be the highest gainer of income along the value chain because they do not need any big startup capital rather their ability to gather the nuts in the bush. On the contrary, the authors observed that they lacked capital to buy protective wears and storage facilities which is limiting the quantities that they can pick and manage without spoilage of the nuts. This prompts them to sell their nuts to nut traders early, thereby getting little income for their effort since they do not delay sale of their nuts to a later time to get more profit for their efforts.

v. Indiscriminate cutting of Shea trees: This is a serious problem confronting the Shea industry which directly affects the availability of Shea nuts and butter. According to [McNally \(2008\)](#) bushfires, cutting of trees for firewood and destructive farming methods are all factors that affect the availability of Shea nuts. Shea trees are constantly been cut down to make fire woods and charcoals. The authors also observed that more than 75% of trees cut down along Jebba, Mokwa, Bida and Minna roads and from Minna to Kontagora road are Shea trees. According to the focus group discussion conducted in Kwara and Niger state, they all agreed that it is a serious threat to their livelihood as the gatherers have to go far into the bush to pick the nuts which in many cases may not be possible because of the fear of the hazards in the bush. They also said that Shea trees burns excellently as the reason for its preference for use as fire woods and charcoals.

vi. Time conflict: As observed by the authors, the Shea trees start to fruit at the onset of raining season that coincides with the commencement of the farming season. At this period of time, there is competition for the nut gatherers' time for picking of nuts, farming activities and taking care of their husband and children. [Jamala et al. \(2013\)](#) opined that high level of domestic work have adverse effect on the Shea butter industry. Time is never adequate for them because they need to jostle between these activities every day. This accounts for the low level of Shea nuts gathered every year.

3.3. Nut Traders

These are the people that linked the gatherers to the processors or the companies that buy the nuts. The problems they encountered include the followings.

i. lack of capital: The nut traders do not have enough capital to buy many nuts during the on-season, rather they buy only the ones that their money can buy. According to In-depth interview conducted with a nut trader in Wawa community of Borgu Local government area of Niger state, she said money is their major problem since money is needed to buy large quantity of nut during the season, provide ware house and storage facility to store the nuts which are usually not available. This did not allow them to have many nuts to sell during the off seasons to make more income. According to another IDI conducted with a nut trader in Bida, Bida Local government Area of Niger State Nigeria, the respondent complained of lack of credit facilities and if the facility is available, the conditions attached to the loan is hard to complied with and the interest rate are usually high, which makes it difficult to get one.

ii. Lack of storage facility/technologies: Storage facility and technology are needed to preserve the nuts to the period when the nuts are scarce. According to IDI conducted with a nut trader in Bida, Bida Local government Area of Niger State, Nigeria, the respondent said that lack of knowledge on the methods to preserve the nuts is

affecting them because this correlates with the quality and price of the nuts. The authors also observed these facility and technology are usually out of reach of the nut traders because of lack of funds, so they buy only the quantity which their money can afford and manage during the surplus season and they sell there around the time. This robs them of the income they would have made if they have storage facility and the storage technology to preserve the nuts to a later time to sell at higher price. According to the In-depth interview conducted with a nut trader in Wawa community of Borgu Local government area of Niger state, she suggested that if government and non-governmental organization can train the nut traders on ways to preserve the nuts or provide storage facility to them, it will ensure continuous supply of the nuts.

iii. Scarcity of kernel to buy: It is a known fact that Shea nuts are seasonal and there are times that the nuts will be scarce. At this period, according to IDIs conducted in Wawa, Borgu Local Government Area and Bida, Bida Local Government Area all of Niger State, the nut traders revealed that they find it difficult to get the nuts to buy and sell and that the problem is aggravated by lack of storage facilities, indiscriminate cutting down of Shea trees and funds to buy large quantity of the nuts during the season.

iv. Poor transportation linkage. Both the FGD and IDI sessions conducted in Kwara and Niger states, the nut traders' concurred that poor road connection make access to the nuts difficult because it is not easy to get to inter-land where the nuts are gathered during the on-season due to lack good transportation network and that they incur an additional expenses to bring the nuts to the road which have adverse effect on their income.

v. High transportation cost: There was a consensus in all the FGD sessions conducted in Kwara and Niger States that high cost of transportation is a serious problem affecting the nut traders because it reduces the income that would have accrued to them because the transporters charged them high transport fares to move the nuts from one place to the other and they resort to reduce this high cost of transportation by jointly transporting their nuts. The authors also noted that bad road network is the reason for the high cost of transportation. The cost of transportation increase operational or overhead cost of the nut traders, thereby reducing their income.

vi. Government negligence / lack of assistance: Government negligence and lack of assistance is another problem confronting the nut traders. According to IDI conducted with a nut trader in Bida, Bida Local government Area of Niger State, Nigeria, he said government negligence and lack of assistance is a major problem confronting them as an entrepreneurs and that government are only interested in the revenue they get from them. He went further to say that in order to move the industry forward government agencies must provide enabling environment such as provision of storage facilities, credit facilities and market linkages for the nuts.

vii. Lack of access to international market and the instability of the international market price of Shea nut: The Authors are of the opinion that most of the nut traders in Nigeria do not have access to international market because of the bureaucracies and the large amount of money involved to get license to export the nuts such as obtaining company registration with Corporate Affair Commission and the export trade permit from Nigeria Export Promotion Commission. According to IDI conducted with a nut trader in Bida, Bida Local government Area of Niger State, Nigeria, he said access to international market is limiting the income that would have accrued to them because selling the nuts abroad is better than selling the nuts locally. Another nut trader in a separate IDI section in Bida, Bida Local government Area of Niger State, Nigeria, said that the instability of the international market price of nuts is a problem associated with the export of Shea nut. The international market price of the Shea nuts has to be stable in order to assist the nut traders make a good business plan to gain maximally.

viii. Shea nut weight lost in storage: This is a serious problem confronting the nut traders. According to the FGDs and IDIs conducted in Kwara and Niger states, the nut traders lamented that Shea nut weight lost is affecting their business because it reduce the profits they made from selling the nuts after preserving them for some time before selling. At the time of buying these nuts they weigh certain tonnes include some water contents but at storage, the Shea nuts losses more water content, hence the reduction in weight which in some cases could be very high. This weight loss has consequences on the eventual profit of the nut traders when they finally sell the nuts.

3.4. Processors

The processors are the pivot of the industry. They buy the kernel from the gatherers and the nut traders and they sometime gathered the nuts, They add value to the kernels to produce Shea butter which is the most important component gotten from Shea trees. It is at this stage that involves lot of investments. Processing is technology driven in order to produce a quality butter that will command a good value in the market. There are many problems affecting this stage of production.

i. Low technological input: Processing activities are tedious and require high technical inputs to make the work easier and to get quality Shea butter. Most processors do not have the money to buy the equipment because they are not available and very expensive except with government and development partners' assistance. This accounts for the low level of technology utilization. The low technology utilization affects both the quality and quantity of Shea butter. [Jamala et al. \(2013\)](#) note that reliance on low level of technology input is inadequate to lead the Shea butter sector to desired rapid and sustained increases in the contribution and utilization of Shea tree. Most of the processing sites visited for the Focus group discussion sessions in Kwara and Niger States lack processing machines and places where government and development partners have provided some, there was consensus of the processors for example in Kodo Shea butter village, Bosso Local government area of Niger State, Ilua, Saki West Local government area of Oyo State and Agba'ekuji, Moro Local government area of Kwara State that the equipment are inadequacy to go round the processors at the same time and they have to schedule time for processing which have adverse effect on their processing time and income generation drive because they process once in a week. They seek for additional equipment to enhance their productivity and processing time since they cannot buy the equipment.

ii. Lack of capital: [Jamala et al. \(2013\)](#) noted that lack of appropriate funding is one of the problem confronting processors. Shea butter processing is capital intensive because money is needed to buy mechanical input to carry out processing activities. Most of the equipment they use for processing such as milling machine, kneader, crusher and roaster are very expensive and the processors are at the mercy of government and donors to buy the equipment for them. According to the focus group discussion conducted in Kwara and Niger State they complained of lack of money to buy Shea nuts during the on-season, storage facilities and the modern processing equipment as the reason for not using them. They seek for external intervention in term of loans to improve their business.

iii. Lack of power/electricity: The equipment provided for the processors needed electricity to drive the plants which is not available in the rural areas where processing activities is taking place. The processors used diesels and petrol to power their machines which lower their profits. According to [Akinsokeji \(2012\)](#) lack of electricity was ranked first as one of the problems confronting Shea butter processing in Kwara State. This was also corroborated by the focus group discussion sessions in Kodo Shea butter village, Bosso Local government area of Niger State, Ilua, Saki West Local government area of Oyo State and Agbe'ekuje, Moro Local government area of Kwara State, electricity was singled out as a serious problem confronting Shea butter processing.

iv. Seasonality of Shea nuts: There are two types of seasons in a year. At the onset of raining season, the nuts will be plenty while during the dry season, the nuts are scarce and the processors will have to look for the nuts everywhere. This has effect on the production of Shea butter throughout the year as it may be difficult to produce during the dry season. The processors are at the mercy of the nut traders who have facilities to preserve the nuts. According to In-depth interview with a processor in Minna, Chanchaga Local government area of Niger State, she said that the price of Shea nut rose from 25,000 naira per ton to between 110,000-120,000 naira per ton in 2016-2017 seasons. The processors buy the nuts at higher price and those that do not have enough money to buy the nuts at this price may reduce production level or stop processing until when the nuts are available again. This will reduce the income that would have accrued to the processors.

v. Lack of storage facilities: The knowledge of how to store and storage facilities is another problem affecting processing. [Jamala et al. \(2013\)](#) noted that lack of storage facilities is affecting the processors. The knowledge on

how to store and storage facilities is essential to ensure continuous production and supply of Shea butter throughout the year. In addition it will ensure that the processors get high income by delaying the sale of their butter to a later time when the supply is low as a result of scarcity of the nuts.

vi. Lack of government assistance: Shea butter processing is very capital and labour intensive. The processors need assistance from government in term of modern processing technologies, equipment and money that are not available in most cases. [Jamala et al. \(2013\)](#) in their study in Ganye, Southeastern Adamawa State, Nigeria reported that the respondents (90%) pointed out that they do not receive any kind of assistance from government or non-governmental organization in order to enhance Shea butter processing enterprise. According to focus group discussion conducted in Kwara and Niger State, the processors lamented for lack of government assistance and solicited for same through her agencies by giving them loans to buy these machines or providing the equipment for them and technical know-how of modern processing technology that ensure good quality butter that guarantee good income from their butter. The equipment will help to reduce the drudgery associated with Shea butter processing, thus making the profession attractive to whosoever want to venture into it. Providing these assistances to the processors is a good means of empowering the women who are the major stakeholders in the industry.

vii. Lack of potable water: Water is very important in processing activities because large volume of water is needed to wash the nuts and during kneading of the butter to get a clean and quality Shea butter. However, most rural areas where the butters are produced have no potable water. This has a direct effect on the quality of the butter and the income generated from the sale of the butter. According to the interaction between the authors and the Agba'ekuji processors in Moro Local government area of Kwara State, they said, they have modern processing technologies but water was their major problem and begged for any kind spirited individual or corporate organizations to come to their aid. The provision of bore holes in processing centers across the country will help to reduce the stress the women pass through to get water for processing and this will go a long way to improve the quality of Shea butter produced in the country and increase the income accruing to the processors.

viii. Lack of land for processing: The authors observed that most of the processors do not have a place to carry out their processing activities and in a situation where the land was provided by the community, the place is not adequate for all of them to process at the same time as the processors will have to process at the time allocated to them. This will affect the income that would accrue to the processors since they cannot produce the butter at will. Another problem associated to place of processing is the way to get rid of the effluents that result from Shea butter processing. According to FGD conducted in Saki West Local government Area of Oyo State, the respondents complained of how the waste has been a source of worry to them since they do not know how to get rid of these wastes that constitute nuisance to their neighbours and the environment. Processing areas should be provided by government and communities in area that is far from the residential areas and research should be conducted on the uses to which these waste can put to. This will help to solve the problem of how to get rid of the waste as the demand for the waste product increases.

ix. Labour intensive: Shea butter processing activities requires large labour which is usually supplied by the family. The transformation of Shea nuts into butter using traditional method is a difficult task because it is tedious, drudgery and involved intensive physical labour as well as considerable amount of time ([Akinsokeji et al., 2017](#)). In a situation where such labour is not available the processor will resolve to hire labour which will have adverse effect on the income of the processors. The use of modern processing technology equipment will help reduce labour requirements for processing.

x. Lack of knowledge on how to operate and maintain the machine: This is common in places where the equipment were provided, the knowledge on how to operate and maintain the machines becomes another issue. The processors lack expertise on how to operate and maintain the equipment. For example, the focus group discussion conducted in Wawa community of Borgu Local government area of Niger State, the processors have stop using the equipment because the operator have gone to school and the equipment has fault and there was no person that can

repair them in the area except it is taken far into the city for repair. They therefore need operators and technicians to operate and maintain the equipment. Hiring these personnels also has adversely effect on their income.

xi. Market challenges: The information on the market price and low demand for Shea butter has great effect on the quality of butter produced because quality correlates with the price of up-takers. [Abdul-Moomin et al. \(2016\)](#) reported that there was generally low demand for the Shea butter especially in the urban settings because most urban households do not usually use the Shea butter for both domestic and commercial cooking as compared to their rural counterparts creating a limited local market for the Shea butter. The processors resort to sell their butter in local market at low price or on credit to middle agents who retain their capital for their selfish interest. [Abdul-Moomin et al. \(2016\)](#) further noted that poor pricing was the most pressing marketing challenge confronting the women thus the price at which the Shea products (butter) are usually sold is too small as compared to their expectations and fluctuation in the prices of the processed nuts and butter could sometimes result in losses as well as reduction in profit margins of the butter processors. In some cases, the butter cost less than 300 Nigerian naira per Kilogramme of butter. The authors are of the opinion that the soap manufacturers also contributed to the poor quality of butter in Nigeria because they prefer to buy low quality butter at low price since they do not require high quality butter to produce soap. This low price of butter cannot guarantee the production of premium quality butter as processors will prefer to process butter traditionally instead of using modern processing technology. The low demand and decrease in income that the processors experience from Shea butter processing activities have psychological effect on the processors to want to produce more and in extreme cases some of them have left the profession for this reason. All these have accounted for the poor quality and low production of Shea butter in the Nigeria. To ensure premium quality of butter, the price of butter must be adequate and the market situation improved.

xii. No uniform measuring scale to sell butter. The authors observed that the processors use different measuring scale to sell their butter which resulted in different prices of Shea butter across the country. This has adverse effect on profit marginal of the processors that are at disadvantage in term of factor of production. For the industry to be sustainable, there must be uniform measuring scale to ensure uniform price that guarantee income to all processors regardless of the economic environment they are operating.

xiii. Middle agents. Processors are price takers, so the middle agents exploit this situation to rob the processors of their profit. The situation is aggravated by middle agents because they are unwilling to pay good price for butter. They buy the traditionally produced butter which is usually of low quality at lower price that cannot sustain the industry and refine the butter to improve quality of the butter and get higher price for butter. This also have adverse effect on the quality of butter produced in Nigeria since there was no challenge to push the processors to produce premium quality butter.

xiv. Lack of functional Shea butter processors association. The authors observed that in most of the locations where the FGD sessions were conducted the processors do not have Shea butter cooperatives and even in places where there were cooperatives, they are not functioning well. Cooperative is very important to address some of the problems identified by the study. For example they collaborate together with other cooperators to stabilize the price of butter. Cooperative is a better means to reach the processors on modern processing technology and to access credits needed to improve the industry.

3.5. Butter Traders

Shea butter traders are those people that buy from the processor and sell the butter to the manufacturing companies or export the butter. They are equally face with problems such as:

i. Scarcity of butter: Shea kernel is seasonal so is the butter. During off seasons, the butter is scarce and expensive. Butter trader have to go far to look for the butter to buy in order to remain in the business. According to an In-depth Interview conducted in Minna, Chanchaga Local government area and Bida, in Bida Local government

area all of Niger State, the respondents said, they have to go far looking for the butter and the issue is compounded by lack of capital to buy large quantity when it is surplus and lack of storage facilities to help preserve the butter for long time to ensure continuous in flow of income throughout the year. This adversely affects the butter traders because sometimes they are out of stock.

ii. Lack of capital: Capital is the soul of business but most butter traders do not have it. Based on the In-depth interview reported earlier, the traders do not have enough money to buy large quantity of butter during the season, provide storage facility or pre-finance processing activities that ensure quality and continuous supply of butter which in turn guarantee continuous and higher income to the butter traders. According to the In-depth Interviews, the traders lamented that it is very difficult to get credits to finance their business.

iii. Lack of government assistance. As identified by the other stakeholders through the focus group discussion and In-depth interview, lack of government assistance in term of water, electricity, storage facilities, good roads and capital is seriously affecting the butter traders directly or indirectly. For instance, bad road affects transportation cost incurred by the butter traders directly while electricity and water affect them indirectly by influencing the cost of butter that they buy from the processors that attract low price. According to another In-depth Interview conducted in Minna, Chanchaga Local government area of Niger State with another butter trader, she said it is extremely difficult to get financial assistance from government agencies, citing example of herself to have applied for several loans from government agents without any reply.

iv. Lack of storage facility: Storage facility is essential to ensure the continuous supply of Shea butter throughout the year, considering the fact that Shea production is seasonal. The authors observed that most of the butter traders do not have storage facilities, so they buy and sell butter almost immediately making small profits compared with those that have storage facilities that can delay sale for a longer time when the price would have risen due to scarcity of the butter to get higher price in return.

v. High transportation cost: The cost of moving Shea butter from one place to another is high partly because of bad roads. This lowers the income accruing to the butter traders as some of the money that would have been the gain are incurred on transport. According to In-depth Interviews conducted in Minna, Chanchaga Local government area of Niger State, they complained of the high cost of transport as a serious problem affecting them as it robs them of their profits.

vi. Certification of the butter: This is a very important issue in the Shea butter industry especially if the butter has to be used in edible product company where quality of the butter cannot be compromised. The authors observed that most butter produced in Nigeria are not certified and of low quality partly because of the method used to produce them. The company that buy the butter have to refine it to be able to use the butter, hence they command low price in the local and international market. The butter traders have to ensure that the butter that they buy from the processors are of high quality by ensuring that the processors employ the best sanitary management and modern processing technologies and obtain certification from relevant agencies as a quality butter for human consumptions. This will increase the demand for Nigerian butter and increase the income to the participants along the value chain line.

3.6. Industries Using Shea Butter as Raw Materials

These are the industries that use Shea butter as raw materials to produce other things like soaps, candles, chocolates, cosmetics and pharmaceutical products. They include among others small-scale entrepreneurs or companies formulating cosmetics or edible products, including Cocoa Butter Equivalents (CBEs) or Cocoa Butter Improvers (CBIs) based in Shea butter in Nigeria. Some of the problems affecting them are:

i. High cost of butter: According to In-depth Interview conducted in Minna, Chanchaga Local government area of Niger State, the industrialist said that high cost of butter at off season affect the price of the finished

products since it affect the cost of production. High cost of butter has a negative effect on the profit made by them. High profit is essential to keep these industries in operation.

ii. Lack of capital: All the In-depth interviews conducted agreed that most of the industrialists do not have enough capital and do not have access to credit facility to buy large quantities of Shea butter during the on season when the butters are surplus in the market, rather they buy quantities that they can afford at the time and use it to produce the finished products while during off season they buy smaller quantity because of the high cost of butter thereby making small profit.

iii. Poor social infrastructures: There is no constant supply of water, electricity and good roads across the country. According to In-depth Interviews conducted in Minna, Chanchaga Local government area and Bida, in Bida Local government area all of Niger State, they lamented poor infrastructures as major problem confronting their business because they have to improvise for them which is another operational cost that affect their profits on the long run. All these amenities are very important to help the industrialists to reduce cost of production and gain more since less money will be used to provide water and electricity. Similarly the authors observed that lack of good road is another problem confronting the Shea butter raw material based industry. Good road will facilitate the movement of kernel and butter from the rural area to the factories and their finished products from their factories to the market, thereby reducing the cost of transportation that is usually exorbitant because of the bad road by reducing the cost of production and making their finished products compete favourably with other similar imported products which are usually cheaper because of reduced cost of production in their countries.

iv. Lack of government assistance: The industrialists through the In-depth interviews complained of lack of government assistance in term of provision of electricity, water, good roads and loan or subsidies on the price of machines used to produce the finished goods. As with the other stakeholders, government needs to assist the industrialist by creating an enabling environment where these industries will thrive by providing electricity, water, good roads which have direct effect on the income accruing to the industrialists. These assistances will make them to remain in the business and continue to drive the activities of the other stakeholders that are below their value chain line to produce the nuts and butters, thereby ensuring the sustainability of the Shea industry.

v. Low patronage by the people: The In-depth interviews conducted with industrialists in Minna, Chanchaga Local government area and Bida, in Bida Local government area all of Niger State revealed low patronage of their products. The authors are of the opinion that most people are not aware of the inclusion of Shea butter in the manufacture of some of these end-products despite the fact that they knew the importance of Shea butter and the non-listing of Shea butter on the label as one of the ingredients that they use to produce the product are reasons for the low patronage. The authors also attributed low patronage to the Nigerian attitude of not valuing what comes from the country, rather they valued things from other countries that is not as good as the made in Nigeria product that is the largest producer of Shea nut in the world. Any effort aim at creating awareness of these products will help to increase the patronage and increase the income of the manufacturers.

vi. Product certification by government agents: The delay in the certification and processes involved in certification of their products is another issue confronting the industrialists. According to In-depth interview (IDI) conducted with the industrialists, they complained of the ways the government agencies like National Agency for Food and Drug Administration and Control (NAFDAC) and Standard Organization Nigeria (SON) handle the certification of their products. For instance one of the respondents said after many years of applying for NAFDAC number, they are yet to approve it, despite the fact that NAFDAC have visited them several times and they have put in place all that they were recommended to do. This has adverse effect on the effort of the industrialists to market their products in big supermarkets in cities across the country. Government agencies should make effort to remove the bottleneck policies that have effect on speedy approval of their products to serve as a boost to increase patronage of the people and increase income to the industrialist.

4. CONCLUSION AND RECOMMENDATIONS

The challenges confronting rural women in the Shea butter industry as identified in this study will form the basis for policy formulation, programming and interventions by government and other actors in the industry in a way to enhance the livelihood of rural women and ensure the sustainability of the industry. All the problems that cut across the value chain line needed urgent agricultural policy and planning to improve the quality, increase Shea butter production and income of the stakeholders along the value chain in the country. These problems include lack of capital, poor infrastructures like electricity, roads, water; storage facility, low technology inputs, lack of government assistance and incessant felling of Shea trees.

Government should assist the stakeholders in the Shea industry by providing infrastructures such as water, roads, electricity and storage facilities. For instance water is very essential to get a quality Shea butter that command good price for both domestic and international market, electricity and good road are necessary to reduce the cost of production of butter thereby increasing the income of the actors in the industry. The Nigerian Export Promotion Council, Raw Material Research Development Council and other relevant agencies should provide modern processing technology to the processors or give money to processors to acquire these technologies because this will help to solve the problem of quality of Shea butter produced in the Nigeria and reduce the drudgery associated with processing activities.

In addition Bank of Industries (BOI), Nigerian Export and Import (NEXIM) bank, microfinance banks and commercial banks should give loans to the stakeholders along the value chain through their various cooperatives to solve the problem of lack of capital that affected other problems like scarcity of butter and nuts, storage facility, low technology input and lack of processing land. This has been proven to facilitate the adoption of modern processing technologies by providing soft loans to women cooperative processors as reported in a study in Ghana by [Effa and Herring \(2005\)](#). Money is needed to buy technology inputs, large quantities of nuts and acquire storage facility to preserve them in order to make more income during the off season.

It is also very important that the stakeholders form functional cooperatives through which their problems can be made known to the authorities and as a means through which the government agencies and development partners can comfortable working with the stakeholders in the industry in case of any assistance that may come from them. It is also imperative for the processors to use the same measuring unit to selling their butter across the country. This will motivate the processors to produce more quality Shea butter and increase the income accruing to them.

Similarly, there should be an advocacy programme to sensitize the people on the need to stop the incessant cutting of Shea trees and possibly seek for bye-law through the national assemble to stop the cutting of economic trees like Shea trees because of the numerous benefit of the tree as well as encourage the farmers to plant, protect and retain Shea trees in the field during land preparations to ensure continuous supply of Shea kernels to the processors and the survival of the Shea butter industry.

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