International Journal of Social Science and Economic Research

ISSN: 2455-8834

Volume:08, Issue:06 "June 2023"

UNIQUE INDUSTRY CHALLENGES CAUSING VALUE LOSS WITHIN PALM OIL PRODUCTION IN NIGERIA

OGUNRO Victor Olukayode PhD

Department of Business Administration and management, Rufus Giwa polytechnic, owo, Ondo state, Nigeria

DOI: 10.46609/IJSSER.2023.v08i06.031 URL: https://doi.org/10.46609/IJSSER.2023.v08i06.031

Received: 2 June 2023 / Accepted: 28 June 2023 / Published: 5 July 2023

ABSTRACT

The study identified unique industry challenges causing value loss within palm oil production in Nigeria. Specifically, the study examined the nature of palm oil production in Nigeria; identified unique challenges facing palm oil production in Nigeria; identified the factors causing value loss in the palm oil production industry in Nigeria and identified the factors necessary for improving value within Nigerian palm oil production supply chains. The study covered all the palm oil companies in Akwa Ibom being the largest and most imported palm oil producing state in Nigeria. For this study, Snowballing and Purposive sampling techniques were adopted to select fifteen employees from each of the sampled palm oil-producing companies to give a total of forty-five (45) employees. The data collected were analyzed using descriptive statistical tools. All the research questions raised were answered using descriptive statistics such as frequency counts, mean, standard deviations and percentages. Firstly, it was discovered that there is no steady increase in the barrel of palm oil produced in Nigeria on yearly basis. Also, it was discovered that high cost of land is the highest challenge while manual equipment for processing is the least challenge that facing palm oil production in Nigeria are agreed on by the respondents. Furthermore, it was discovered that devaluation of Nigerian currency has the highest effect resulting to value loss in the palm oil production while change in prices of palm oil substitute has the least factor. It is concluded that the major constraints being that of high cost of land and lack of fund. The Nigerian governments at all levels should undertake the credit policy to offer credit support to palm oil producers' particularly the purchase of mechanized processing equipment, acquisition of enough landed space for plantation.

Keywords: Palm Oil, Palm Oil Production, Palm Oil Marketing, Supply Chains

1.0 Introduction

ISSN: 2455-8834

Volume:08, Issue:06 "June 2023"

1.1. Background to the Study

Prior to the colonization and amalgamation of Nigeria by the British, the region engaged in different trading sprees with the whites and other regions around it (Ukwuteno, 2011;Sylvester, 2016). This trade included slaves, food, clothes and weapons among others. Back then, trade by barter was very common as a means of exchange, and cowries and shells were also used. However, the intervention of the British in the trading exchange brought about the use of money in the forms of coins and notes, which facilitated the trading process. In the period preceding amalgamation and after amalgamation there was an explosion and exploitation of a particular cash crop known as oil palm, due to its economic benefits.

Oil palm is predominantly found in the southern protectorate of Nigeria, and in a few states in the North, particularly north central (Shehu, Salleh & Ahmad, 2021;Owutuamor, Iruo & Ologidi, 2019). Its leaves seem to resemble the coconut tree a bit, but there is a clear disparity between both trees in terms of leaves, stems and even fruits. The economic and commercial value of oil palm was discovered ages ago, even before the amalgamation of the nation. By the time the British colonized Nigeria, resources were spent on oil palm plantations and oil mills, which led to the improvement and expansion of what is known as 'oil palm industry' (Nwalieji & Ojike, 2018;Murphy, Goggin, Russell & Paterson, 2021). After independence, an institution was formed particularly for research and development of the industry known as the Nigerian Institute for Oil Palm Research (NIFOR).

The oil palm industry is engaged in the cultivation and propagation of oil palm seedlings and plantations in order to produce healthy fruit bunches which can be processed into palm oil and other products (Mgbakor, Ugwu & Frank, 2013;Izah & Ohimain, 2016). It should be noted that the economic usefulness of the oil palm even boils to its leaves as it is used for making brooms and serves as roofing materials for huts in some settlements. Also, its leaves are used as walls for some local constructions, and the stem is useful in the production of paper. Its fruit are used to prepare what is called 'banga soup' in some region of the country, and can also be eaten fresh.

The crown jewel of oil palm is its economic and commercial usefulness of producing palm oil. At a point in history, Nigeria was the largest producer and exporter of palm oil as a result of the availability of oil palm plantations all over the country (Biodun, Akinlabi, Okokpujie & Fayomi, 2021;Mgbakor, Ugwu & Frank, 2013). In fact, palm oil served as one of the major sources of foreign exchange for the government. In recent times, the economic value of palm oil and even the industry has been reduced greatly due to some challenges facing the participants and stakeholders in the industry. These challenges have relegated the significance of the industry to the backyard of the nation.

ISSN: 2455-8834

Volume:08, Issue:06 "June 2023"

Some key challenges identified by Izah and Ohimain (2016) and Ajibade and Folayan (2016) which are facing the palm oil industry include the focus of the government on crude oil, which came after independence and overshadowed the whole agro-allied sector, aging oil palm plantations which need to be renewed, high cost of labour and transportation and lack of incentive and finance for people who wish to be involved in the industry as participants. The relegation of this industry from the forefront of the nation's economic and commercial activities has not relinquished the numerous potential it has to cause an upward turn in the growth and development of the economy.

In contemporary times, the production of palm oil and other products from oil palm seems to be undertaken wholly by the private sector, with little aid coming in from the government. Thus, it is in the best interest of the government and its citizens to once again cast back their focus on the advantages and development that the oil palm industry can bring to the nation because the glory days of the oil palm industry are far from over. This forms part of the motivation for this current study, to properly identify the key challenges in the palm oil industry and also seek possible solutions to these challenges.

1.2. Statement of the Problem

Globally, palm oil production has garnered a lot of foreign exchange for governments involved in its export. The government of Nigeria has experienced stagnation in the growth and development of the industry because there was a time when it was the greatest exporter of the product (Aminu & Misbahu, 2019;Abdul-Qadir, Okoruwa & Salman, 2016;Enwelu, Nwanegbo, Onoh & Ifejika, 2013). Currently, the nation is into importation of the product due to high demand for the product by citizens. This shows that there has been a relegation of the focus of the government from industry to other economic activities. The industry has been left in the hands of small-scale farmers and some big firms, without any significant investment by the government.

Over time, the government tried to put in some measures and bodies to revive the sector, but these efforts yielded low results. The reason for this might not be unconnected to the inadequate knowledge possessed of the numerous challenges facing the sector. The basic challenge of the industry seems to revolve around the high costs of oil palm processing; from the cultivation of the seedlings to transporting the fresh fruit bunches to extracting the oil, there are high costs incurred(Bassey, 2016;Izah & Ohimain, 2016). These costs are enough to discourage any individual who wishes to participate in the industry without having the backing of the government.

ISSN: 2455-8834

Volume:08, Issue:06 "June 2023"

Issues that spring up in the palm oil industry include low finance from the government to small-scale farmers and firms who are involved in the industry, lack of good roads to ease transportation from plantations to the oil mills, low availability and low access to credit facilities for participants in the industry, unpredictable fluctuations in the price of the product stemming from external influences, inadequate machineries and poor access to technology which should improve the production of palm oil(Murphy, Goggin, Russell & Paterson, 2021;Nwankwo,2016). These issues ultimately reduce the level of production of the industry. In the long run, these issues reduce the quality of the palm oil produced, which further fuels the importation of the products.

Prior studies have been undertaken in relation to the subject matter at hand. For instance, Fatai, Kazeem, Oluwole and Gbolahan (2013) examined the degree of mechanization in the production and processing of oil palm in Oyo and Osun States; Akinniran, Ojedokun, Sanusi and Ganiyu(2013) examined the economic analysis of oil palm production in Oyo State; Onoja and Ogali (2014) performed their study in Kogi State; Abdul-Qadir, Okoruwa and Olajide (2016) investigated total factor productivity (TFP) of oil palm production systems (OPPS) in Edo and Kogi States; Enwelu, Nwanegbo, Onoh and Ifejika (2013) conducted their study in Anambra State; Mgbakor, Ugwu and Frank (2013) performed their study in Delta State; and Owutuamor, Iruo and Ologidi (2019)examined issues facing palm oil production in Baylesa State.

From the studies at the disposal of the researcher, it is clear that palm oil production industry and its related challenges have been thoroughly explored. However, this current study aims to add uniqueness to prior literature by investigating challenges presently facing the industry in the country, using three oil mills in Akwa Ibom State as case studies; which seem to be a feat none of the studies at the disposal of the researcher has achieved. The names of these oil mills are Tabbris Oil Mills Limited, Ibom Oil Production and Supply and Gabiars Palm Oil in Akwa Ibom State. In essence, this study examines palm oil production value chain in Nigeria and the challenges causing value loss in the industry.

1.3. Research Questions

The following research questions are raised to guide this study:

i. What is the nature of palm oil production in Nigeria?
ii. What are the unique challenges facing palm oil production in Nigeria?
iii. What are the factors causing value loss in the palm oil production industry in Nigeria?
iv. What are the key factors necessary for improving value within Nigerian palm oil production supply chains?

1.4. Research Aim and Objectives

ISSN: 2455-8834

Volume:08, Issue:06 "June 2023"

This study aims to identify unique industry challenges causing value loss within palm oil production in Nigeria. The specific objectives are to:

i. Understand palm oil production in Nigeria;
ii. Identify unique challenges facing palm oil production in Nigeria;
iii. Identify factors causing value loss in the palm oil production industry in Nigeria; and
iv. Identify factors necessary for improving value within Nigerian palm oil production supply chains.

1.5. Scope of the Study

This study aims to uncover the key challenges causing value loss in the palm oil industry in Nigeria. To achieve this objective, three oil-producing firms will be selected from Akwa Ibom State. They are; Tabbris Oil Mills Limited, Ibom Oil Production and Supply and Gabiars Palm Oil. The justification for these firms stems from the fact that they are among the pioneer firms in the industry in the State, and also contribute significantly to the overall output of the nation. Furthermore, the scope of this study would cover palm oil industry in the nation, challenges facing palm oil production in the country, factors causing value loss in the industry and factors necessary for improving value within the industry's supply chain.

2.0 Literature Review

2.1. Conceptual Review

2.1.1. Oil Palm

Oil palm, or as it is commonly called, palm tree, has a botanical name, Elaesis Guinensis (Nwalieji & Ojike, 2018). It is one of the popular perennial agricultural trees cultivated in West Africa. In Nigeria, this tree is commonly seen in forests and even at homes where it is pruned, cultivated and utilized for different functions. Notably, the oil palm is commonly seen in the southern part of the country, and the middle belt region. In Southwest Nigeria, oil palm is known as Ope to the Yorubas; in the Southeast, it is known as Nkwu to the Igbos; in the South-south, it is known as Ibiedi, to those living in Delta; and for those people from Hausa, it is known as Kwakwa (Abdul-Qadir, Okoruwa & Olajide, 2016;Anyaoha & Zhang, 2022;Fatai, Kazeem, Oluwole & Gbolahan, 2013). The special names given to this plant by different tribes in the nation show its popularity in the nation.

It is quite easy to distinguish the oil palm from other trees in the forest or the ones cultivated in farmlands. The tree is an erect, un-branched tree that can grow up to fifteen (15) centimeters to thirty (30) centimeters in height with a doughty trunk enclosed with persistent leaf bases (Izah &

ISSN: 2455-8834

Volume:08, Issue:06 "June 2023"

Ohimain, 2016;Murphy, Goggin, Russell & Paterson, 2021). Over time, oil palm has been recognized as a tree with high-yielding source of edible and technical oil. This has made it to be cultivated by private individuals and even the government. Some of its end products like refined oil and brooms have been seen to have high economic value and functions. Notably, they are commonly cultivated in nations with high rainfall of about 1600mm- 2500mm per annum in tropical climates.

2.1.2. Palm Oil Production

Oil palm is a cash crop, while palm oil is a finished product, and in some instances, palm oil could serve as raw materials for some products (Bassey, 2016;Biodun, Akinlabi, Okokpujie & Fayomi, 2021). Palm oil is gotten from the fruits grown on oil palm. To derive palm oil from oil palm, some processes need to be carried out. According to Bassey (2016), the derivation of palm oil from palm fruits entail field processes and factory/house operations. The field operations deal with cutting down ripe fruit bunches from the tree and taking them to the factory/house by field workers, while the factory/house operations entail pressing, stripping, milling, clarification, sterilization and storage (Enwelu, Nwanegbo, Onoh & Ifejika, 2013).

Palm oil serves as part of the raw materials for manufacturing soap, ointments and balms, and is also used for cooking (Fatai, Kazeem, Oluwole & Gbolahan, 2013;Ibitoye, Akinsorotan, Meludu & Ibitoye,2011). Notably, the request for palm oil is on the increase based on higher consumption of edible oils because of population growth, improved living standards and healthy diets. More so, the advancement of biofuels industry around the world has also increased the demand for this product. In addition, due to the fact that palm oil can be substituted for trans-fat, making it a healthier alternative, its demand is high in most developed economies (Izah & Ohimain, 2016;Mgbakor, Ugwu & Frank, 2013). In essence, the benefits of palm oil as an economic commodity and as a source of nourishment to the body is very significant.

Palm oil production is placed into three sects; smallholders, medium scale production and large-scale plantation (Nwankwo,2016;Onoja &Ogali, 2014). With palm fruit, there are three major commercial products extracted from it; palm oil, palm kernel oil and palm kernel cake. The functions of palm oil are numerous (Owutuamor, Iruo & Ologidi, 2019). Domestically, it is used for cooking in a lot of homes, soap making, metal plating and lamp oil (Shehu, Salleh & Ahmad, 2021). In the other way, palm kernel oil is also used for soap making. Also, palm kernel oil serves as a source of glycerine, which is used for producing margarine, cooking fats and lubricants (Owutuamor, Iruo & Ologidi, 2019;Shehu, Salleh & Ahmad, 2021). After extracting oil, what is left over is called kernel cake, which is very beneficial in livestock feed production.

2.1.3. Challenges Facing Palm Oil Industry in Nigeria

ISSN: 2455-8834

Volume:08, Issue:06 "June 2023"

In any industry, there would be some issues beguiling the operations and success of the firms in the industry. In the same vein, there are issues facing the palm oil industry in Nigeria, some of which are unique to the industry and some are general. Firstly, getting the seeds and seedlings for cultivating this cash crop is not easy (Ajibade & Folayan, 2016;Bassey, 2016). The Nigerian Institute for Oil Palm Research (NIFOR) is an institute of research that has the right for carrying out research to grow and develop oil palm seeds and seedlings in Nigeria. Based on the special privilege they have in the eyes of the law, they are a popular option for obtaining oil palm seeds and seedlings. However, their location is quite far from some small scale farmers, making it difficult to get these seeds and seedlings.

The inadequate regulation and directive concerning the trading of seeds and seedlings have made some farmers to buy contaminated ones at cheaper prices, which are detrimental to their overall production (Enwelu, Nwanegbo, Onoh & Ifejika, 2013;Ibitoye, Akinsorotan, Meludu & Ibitoye, 2011). Another challenge in the industry has to do with poor funding. Poor funding in this context implies that NIFOR is unable to meet up the demands of customers and farmers due to the inability to get better plants and machineries. In the same vein, some small scale farmers need finance to purchase equipment and also employ labour which would improve their overall production.

To improve the revenue gotten from the agricultural sector, the government occasionally give fertilizers to small scale farmers for free. However, for some small scale farmers, access to these fertilizers for their farms is unavailable (Izah & Ohimain, 2016;Mgbakor, Ugwu & Frank, 2013). This is usually due to a lack of coordination and cooperation between those in the government and those in the private sector (Mgbakor, Ugwu & Frank, 2013;Izah & Ohimain, 2016). In the sense that government officials most times, do not have enough information to identify farmers that need the fertilizer, and even where such identification has been made, the fertilizer is insufficient to meet the demand. Also, there are cases where farmers are ready to purchase fertilizers provided by the government, still, it is insufficient to meet the demand.

As noted earlier, the lifespan of healthy oil palms does not extend beyond thirty (30) years most times. Plantations of oil palm need to be renewed periodically, maybe once in thirty years in order to achieve heightened production. However, this appears not to be so, as some oil palm plantations have gone beyond their expected useful life, and are not able to produce. In essence, these oil palms plantations are occupying space without producing any economic value in return. Most oil palm plantations owners do not have the means and expertise to change their plantations, which is another challenge found in the industry (Nwankwo,2016;Pacheco, Gnych, Dermawan, Komarudin & Okarda, 2017).

ISSN: 2455-8834

Volume:08, Issue:06 "June 2023"

Agreeably, the oil palm industry is a labour and capital intensive industry. It can also be noted that no individual can carry out all the processes involved in converting oil palm fruits into palm oil by himself/herself; as such, help is needed from friends, families and hired hands. Most times, the external labour gotten from people do not come from free, as labourers need to be paid (Shehu, Salleh & Ahmad, 2021;Sylvester, 2016). Also, most plantations are not situated close to oil mills or the factory where they will be processed. Thus, after harvesting and cutting down bunches of fruits, expenses are incurred in the form of transportation costs to convey the products to the place where they can be transformed into finished goods (Shehu, Salleh & Ahmad, 2021;Sylvester, 2016).

In Nigeria, most equipment and machineries used in oil mills are produced locally, without any integrity test or international acceptance. As a result, the quality of the oil produced from these sub-standard instruments is poor and pose as a serious challenge to the sector (Sylvester, 2016;Yinusa, 2015). When the quality of palm oil is poor, people would rather import the product from better-equipped nations, which would reduce the overall turnover of the industry. There is a need for the government to carry out investigations and trials on better equipment that can be used in the sector, even if it would be produced locally. In essence, the low technology implemented in oil mills is a challenge facing the palm oil industry.

2.2. Empirical Review

Palm oil production industry at a time in Nigeria, was one of the biggest means of foreign exchange. However, the situation is not so currently due to crude oil. Still, it is important to know some facts about the industry and the cash crop. For instance, Fatai, Kazeem, Oluwole and Gbolahan (2013) examined the degree of mechanization in the production and processing of oil palm in Oyo and Osun States. Using descriptive statistics, it was discovered that crop protection, weeding and fertilizer application had low mechanization; harvesting was done only by manual methods; threshing of fruits was semi-mechanized; palm oil extraction process and kernel cracking and palm kernel oil extraction had 30% and 50% of mechanization respectively. Thus, the States had low mechanization for oil production and processing.

Another study in Oyo State, Surulere L.G.A, conducted by Akinniran, Ojedokun, Sanusiand Ganiyu(2013) to examine the economic analysis of oil palm production used descriptive statistics and budgetary analysis and regression analysis for its data. Findings showed that all the farmers questioned inherited their land and had other means of livelihood. Furthermore, they obtained seedlings from the government to increase their production. In Kogi State, it was discovered by Onoja and Ogali (2014) that majority of farmers obtained their fresh fruit bunches for processing from the village or open market and oil palm processing and marketing is a profitable business. Another study was conducted in Edo and Kogi States by Abdul-Qadir, Okoruwa and Olajide

ISSN: 2455-8834

Volume:08, Issue:06 "June 2023"

(2016) to investigate total factor productivity (TFP) of oil palm production systems (OPPS) using Tornqvist TFP index. Findings showed that oil palm production was structured into small (≤ 10 hectare (ha), medium (11 – 50 ha) and large (≥ 51 ha). The TFP of the large, medium and small scale OPPS were 1.04, 0.99 and 0.82, respectively, while the overall TFP was 0.92.

In Delta State, Mgbakor, Ugwu and Frank (2013) used descriptive statistics and revealed that lack of land, insufficient fund, lack of improved variety and information, labour intensive as well as seasonal variation were the key issues facing palm oil production. In Oyo State, Yinusa (2015) discovered that poor road linkage was the major issue facing palm oil production.

For Izah and Ohimain (2016) who evaluated the opportunities and weakness of the oil palm sector in Nigeria, they discovered that some of the issues facing the sector were domination by small-scale holders who use manual equipment for processing, political/regime changes, poor attitude towards work and inadequate government policies, inadequate access to credit facility and poor infrastructures. Also, Abdul-Qadir, Okoruwa and Salman (2016)evaluated the competitiveness of oil palm production systems using policy analysis matrix. Findings gave credence to the fact that oil palm production is classified into small, medium and large scale systems and these systems are competitive in the production of palm oil and palm kernel under existing market prices. The private profits for the three production systems were N1, 131,350, N 607,443 and N 99,640 for large, medium and small scale respectively.

Another study, conducted by Aminu and Misbahu (2019)revealed that inadequate funding, economic depression, mechanization and agronomic issues, and challenges of land use due to the local communal ownership among others were the key challenges facing palm oil production in Nigeria. In Bayelsa State, Owutuamor, Iruo and Ologidi (2019) examined issues facing palm oil production. By using percentages, mean, and cost and return analysis they discovered that high cost of transportation, theft, dearth of storage facilities and unfavourable weather were the major issues confronting palm oil production. For Anyaoha and Zhang (2022), it was vitalto quantify the environmental impacts of technologies used by different mills. From the life cycle assessment carried out, it was discovered that large-scale mills perform worse (468 kg CO2-eq per t FFB) than the semi-mechanized and smallholder mills in effects on climate change but better in the other impact categories, including human toxicity, eco-toxicity, and fine particulate matter formation.

From the studies at the disposal of the researcher, it is clear that palm oil production industry has been explored by prior scholars. However, this current study aims to add uniqueness to prior literature by investigating challenges presently facing the industry in the country. More so, it would also present possible solutions to these issues plaguing the industry.

ISSN: 2455-8834

Volume:08, Issue:06 "June 2023"

3.0 Research Methods

For this study, a positivist research philosophy was used. This is due to the study's usage of research questions that were analyzed during this study. Corresponding to the positivism philosophy, the study adopted a deductive research approach in order to correspond with positivism research philosophy. Also, descriptive survey research was adopted for this study. This is so because data will be collected from the responses of the employees of the selected palm oil firms in Nigeria. This study adopted a mixed research design. Both case study and survey design were used for the study. The study focused on the selection of three oil-producing companies in Akwa Ibom using a case study design. This is because Akwa Ibom state has some unique characteristics to contribute significantly to palm oil production in Nigeria. Also, this study adopted a survey design because it involves the collection of data from a targeted population to describe the existing phenomenon as they exist regarding palm oil production in Nigeria.

According to the recent survey conducted in Nigeria, Akwa Ibom is the largest and most imported palm oil producing state in Nigeria. Akwa Ibom is a tropical state in the Southern coaster region of Nigeria with favorable environment and vegetation that has contributed to the state's palm oil production rate. The state has a large number of palm oil production areas as well as refineries that have contributed to the palm oil production yield. Also, it was disclosed that Akwa Ibom state (Ini Local Government Area) has the biggest palm tree plantation in Nigeria. Thus, this study covered all the oil producing companies in Akwa Ibom include Tabbris Oil Mills Limited, Grand cereals and Oil Mills limited, Oil Palm Mill, Ebe-Ikpe, Ibom Oil Production and Supply, Gabiars Palm Oil and Ayipeku Oil Palm Company Limited. Snowballing and Purposive sampling techniques were adopted to select fifteen employees from each of the sampled palm oil-producing companies to give a total of forty-five (45) employees. The selected employees were members of the top-level management of the companies that have at least five years of working experience.

The study used a close-ended questionnaire to elicit the needed information from the targeted respondents. As a result of the sample size to be covered by this study and questionnaire was considered the most feasible tool to cover them in the given period. The questionnaire were administered to the targeted sampled employees after seeking the permission of the management of the sample palm oil producing companies, and adequate follow-up was made to ensure high level of confidentiality of the data collected from the employees to avoid misconduct among the respondents during and after the data collection process. The data collected were analyzed using descriptive statistical tools. All the research questions raised were answered using descriptive statistics such as frequency counts, mean, standard deviations and percentages. The background

ISSN: 2455-8834

Volume:08, Issue:06 "June 2023"

information of the respondents were analyzed using frequency and percentage. After which mean and standard deviation were used to analyze the research questions.

4.0 Results and Discussion

4.1. Results

4.1.1. Analysis of the Demographic Information of the Respondents

Table 1: Background Information of the Respondents

Gender	**Frequency**	**Percentage**
Male	21	68.9
Female	14	31.1
Educational Qualification	**Frequency**	**Percentage**
Below First Degree	11	24.4
First Degree	21	46.7
Second Degree	7	15.6
Third Degree	6	13.3
Years of Experience	**Frequency**	**Percentage**
1-5	24	53.3
6-10	19	42.2
11-15	2	4.4
Marital Status	**Frequency**	**Percentage**
Single	31	68.9
Married	9	20.0
Divorced	3	6.7
Widowed	2	4.4
Age	**Frequency**	**Percentage**
21-30	12	26.7
31-40	31	68.9
41-50	2	4.4

Source: Field Survey, 2023.

Table 1 disclosed the background information of the respondents of the study. The information consists of the respondents' gender, educational qualification, years of experience, marital status, and age. To start with, the table unveils that 21(68.9%) of the respondents were male, while 14(31.1%) of the respondents were female. This indicates that majority of the respondents are male. Also, 11(24.4%) of the respondents had below first degree (SSCE, OND, NCE), 21(46.7%) of the respondents had first degree (HND, B.Sc. B. Edu, B. Tech), 7(15.6%) of the respondents had second degree (M.Sc.) while 6(13.3%) of the respondents had third degree (Phd). By implication, majority of the respondents had first degree. Thus, their reposes would be valid to the success of this study. In addition, 24(53.3%) of the respondents had 1-5 years of experience, 19(42.2%) of the respondents had 6-10 years of experience while 2(4.4%) of the

ISSN: 2455-8834

Volume:08, Issue:06 "June 2023"

respondents had 11-15 years of experience. Hence, majority of the respondents had 1-5 years of experience in the sampled palm oil industry in Nigeria. Therefore, the required information regarding the unique industry challenges causing value loss within palm oil production in Nigeria would be gathered from a reliable source.

Subsequently, it was discovered that 31(68.9%) of the respondents were single, 9(20%) of the respondents were married, 3(6.7%) of the respondents were divorced while 2(4.4%) of the respondents were widowed. This infers that most of the respondents were single. Finally, it is unveiled that 12(26.7%) of the respondent were between the age range of 21-30, 31(68.9%) of the respondents were between the age range of 31-40, while 2(4.4%) of the respondents were between the age range of 41-50years. This indicates that majority of the respondents were between the age range of 31-40 years.

4.1.2. Analysis of Research Question

Research Question I: What is the nature of palm oil production in Nigeria?

In answering the question, mean scores on the nature of palm oil production in Nigeria were computed and compared, the result is presented in the table below.

Table 2: The nature of palm oil production in Nigeria

S/N	Items	Mean	SD	Remarks
1	Palm oil is one of the most significant agricultural exports in Nigeria	3.53	.405	Agreed
2	Palm oil is a valuable source of foreign exchange in Nigeria	3.40	.495	Agreed
3	There is a steady increase in the barrel of palm oil produced in Nigeria on yearly basis	1.38	.830	Disagreed
4	The government appreciates the contribution of palm oil industry to the development of her economy.	2.02	.783	Disagreed
5	There is low mechanization of palm oil production in Nigeria	2.78	.470	Agreed
6	There is no tariff on palm oil exports to neighboring country	2.03	.767	Disagreed
7	High level of mechanization is required for the production of palm oil in Nigeria	3.40	.495	Agreed

ISSN: 2455-8834

Volume:08, Issue:06 "June 2023"

8	More than 1.34 x 106 metric tons of palm oil are consumed in Nigeria	3.58	.499	Agreed
9	The use of hi-tech mills is a great innovation for the production of palm oil in Nigeria	3.22	.599	Agreed
10	There is high level of palm oil price instability in Nigeria.	3.60	.580	Agreed

n=45

Source: Data Analysis, 2023

Table 2 presents result of the proposed nature of palm oil production in Nigeria. It was discovered that all the respondents agreed on majority of the items proposed except for the few items. The respondents disagreed that there is a steady increase in the barrel of palm oil produced in Nigeria on yearly basis and that the government appreciates the contribution of palm oil industry to the development of her economy with the mean and standard deviation of 1.38(0.830) and 2.02(0.783) respectively. Also, it was disagreed that there is no tariff on palm oil exports to neighboring countries with the mean and standard deviation values of 2.03 and 0.767 respectively. Contrarily, the respondents agreed that palm oil is one of the most significant agricultural exports in Nigeria and a valuable source of foreign exchange in Nigeria with the mean and standard values of 3.53(0.405) and 3.40(0.495) respectively. Also, it was agreed that there is low mechanization of palm oil production though high level of mechanization is required for the production of palm oil in Nigeria, more than 1.34 x 106 metric tons of palm oil are consumed in Nigeria, the adoption of hi-tech mills contribute significantly to the production of palm oil in Nigeria and the existence of oil price instability in Nigeria with the mean and standard deviation values of 2.78(0.470), 3.40(0.495), 3.58(0.499), 3.22(0.599) and 3.60(0.580) respectively.

Research Question II: What are the unique challenges facing palm oil production in Nigeria?

To answer the second research question of the study, mean scores of the respondents on the unique challenges facing palm oil production in Nigeria were computed and compared, the result is presented in the table below.

Table 3: The unique challenges facing palm oil production in Nigeria

S/N	Items	Mean	SD	Remarks
1	Lack of good policy	3.27	.618	Agreed
2	Non directional financial support	3.38	.716	Agreed
3	High cost of land	3.80	.457	Agreed
4	Lack of improved planting materials	3.22	.471	Agreed
5	Lack of storage facilities	3.47	.726	Agreed

ISSN: 2455-8834

Volume:08, Issue:06 "June 2023"

6	Lack of improved variety and information	3.29	.589	Agreed
7	Lack of sponsorship	3.51	.626	Agreed
8	Seasonal variation	3.31	.514	Agreed
9	Poor road linkage	3.73	.539	Agreed
10	Use of manual equipment for processing	3.18	.535	Agreed
11	Political instability	3.56	.503	Agreed
12	Poor infrastructures	3.40	.580	Agreed
13	Poor attitude towards work	3.24	.609	Agreed
14	Economic depression	3.29	.626	Agreed
15	Mechanization and agronomic issues	3.53	.588	Agreed
16	Theft	3.58	.543	Agreed
17	Inadequate fertilizer accession	3.36	.645	Agreed
18	Poor managerial ability	3.51	.695	Agreed
19	Seed proliferation	3.40	.654	Agreed
20	Labour intensive	3.31	.701	Agreed

n=45

Source: Data Analysis, 2023

Table 3 disclosed that all the proposed unique challenges facing palm oil production in Nigeria are agreed on by the respondents. Thus, the unique challenges include; lack of good policy, non-directional financial support, high cost of land, lack of improved planting materials, storage facilities, improved variety and information, sponsorship, seasonal variation, poor road linkage, use of manual equipment for processing, political instability, poor infrastructures, poor attitude towards work, economic depression, mechanization and agronomic issues, theft, inadequate fertilizer accession, poor managerial ability, seed proliferation and labour intensive. Out of all these challenges, high cost of land was ranked first being the challenge with highest mean and standard deviation values (3.80 and 0.716) while the least challenge is the use of manual equipment for processing (3.18 and 0.535).

Research Question III: What are the factors causing value loss in the palm oil production industry in Nigeria?

The mean scores of the respondents on the third research question (the factors causing value loss in the palm oil production industry in Nigeria) were computed and compared, the result is presented in the table below.

Table 4: The factors causing value loss in the palm oil production industry in Nigeria

S/N	Items	Mean	SD	Remarks
1	Market Instability	3.33	.659	Agreed
2	Devaluation of Nigerian currency	3.80	.674	Agreed
3	Trade barriers	3.44	.624	Agreed

ISSN: 2455-8834

Volume:08, Issue:06 "June 2023"

4	Palm oil substitutes	3.44	.624	Agreed
5	High production cost	3.42	.657	Agreed
6	High storage cost	3.40	.654	Agreed
7	High cost of transportation	3.53	.661	Agreed
8	Lack of continuity in governance	3.42	.657	Agreed
9	Increase in demand	3.56	.546	Agreed
10	Obsolete equipment	3.31	.514	Agreed
11	Improper milling	3.53	.661	Agreed
12	Poor access to technology	3.27	.618	Agreed
13	Aging plantations	3.27	.618	Agreed
14	Low financing	3.53	.757	Agreed
15	Land tenure system	3.40	.495	Agreed
16	Unequipped palm oil mill	3.58	.499	Agreed
17	Change in weather condition	3.22	.599	Agreed
18	Change in tariff	3.60	.580	Agreed
19	Change in prices of palm oil substitute	2.78	.470	Agreed
20	Insecurity of palm oil merchandize	3.38	.716	Agreed

n=45

Source: Data Analysis, 2023

All the respondents agreed on the proposed factors causing value loss in the palm oil production industry in Nigeria. The proposed items include market instability, devaluation of Nigerian currency, trade barriers, palm oil substitutes, high production, storage and transportation cost, lack of continuity in governance, increase in demand, obsolete equipment, improper milling, poor access to technology, aging plantations, low financing, land tenure system, unequipped palm oil mill, change in weather condition, tariff and prices of palm oil substitute and insecurity of palm oil merchandize. Hierarchically, devaluation of Nigerian currency has the highest effect resulting to value loss in the palm oil production while change in prices of palm oil substitute has the least factor.

Research Question IV: What are the key factors necessary for improving value within Nigerian palm oil production supply chains?

The mean scores of the respondents on the key factors necessary for improving value within Nigerian palm oil production supply chains were computed and compared, the result is summarized in the table below.

Table 5: The key factors necessary for improving value within Nigerian palm oil production supply chains

S/N	Items	Mean	SD	Remarks
1	New breeding	3.47	.726	Agreed

ISSN: 2455-8834

Volume:08, Issue:06 "June 2023"

2	Better management approach	3.22	.571	Agreed
3	Availability of funds	3.80	.857	Agreed
4	Market stability	3.29	.589	Agreed
5	Provision of modernized storage facilities	3.51	.626	Agreed
6	Provision of infrastructural facilities	3.40	.654	Agreed
7	Governmental support	3.53	.661	Agreed
8	Access to technology	3.42	.657	Agreed
9	Provision of adequate information and variety	3.56	.546	Agreed
10	High level of education	3.31	.514	Agreed
11	High level of training	3.38	.550	Agreed
12	Provision of inputs (seeds and fertilizers)	3.02	.623	Agreed
13	Mechanization of the milling system	3.78	.670	Agreed
14	Introduction of good policy to promote supply chain	3.53	.757	Agreed
15	High level of sponsorship	3.40	.495	Agreed
16	Provision of fertile land to the local farmers	3.38	.490	Agreed
17	Provision of improved planting materials	3.02	.483	Agreed
18	Access to good road for transportation	3.78	.670	Agreed
19	Use of mechanized equipment for processing	3.53	.757	Agreed
20	Political stability	3.40	.495	Agreed

n=45

Source: Data Analysis, 2023

Table 4.6 disclosed that the respondents agreed with all the proposed items as the key factors necessary for improving value within Nigerian palm oil production supply chains. The proposed items include; new breeding, better management approach, availability of funds, market stability, provision of mechanized storage and infrastructural facilities, government support, access to technology, provision of adequate information and variety, high level of education and training, provision of inputs (seeds and fertilizers), mechanization of the milling system, introduction of good policy to promote supply chain, high level of sponsorship, provision of fertile land to the local farmers and improved planting materials, access to road for transportation, use of mechanized equipment for processing and political stability. Out of all the prosed factors, availability of funds has the highest mean and standard value (3.80 and 0.857) while provision of inputs (seed and fertilizers) has the least mean and standard deviation values (3.02 and 0.623).

4.2. Discussion of Findings

This study uncovered the unique industry challenges causing value loss within palm oil production in Nigeria. In-line with the findings of the study, discussion shall be made on each of the analyzed research questions. Firstly, it was discovered that there is no steady increase in the barrel of palm oil produced in Nigeria on yearly basis, the government failed to appreciates the contribution of palm oil industry to the development of her economy and there is tariff placed on

ISSN: 2455-8834

Volume:08, Issue:06 "June 2023"

palm oil exports to neighboring countries. Over the years, Nigeria is considered as one of the largest producers of palm oil in Africa. This as a result of the fast-growing global need of palm oil due to steady increase in population globally. However, after the discovery of crude oil which serve as the survival of Nigeria today, there has been a decline in palm oil production and exports in Nigeria. This finding agreed with the discovery of Fatai, Kazeem, Oluwole and Gbolahan (2013) that palm oil production industry at a time in Nigeria, was one of the biggest means of foreign exchange. Akinniran, Ojedokun, Sanusi and Ganiyu (2013), Onoja and Ogali (2014), Abdul-Qadir, Okoruwa and Olajide (2016) and Abdul-Qadir, Okoruwa and Salman (2016) reported in their study that the government failed to contribute to the sustainability of palm oil industry in Nigeria.

Also, it was discovered that high cost of land is the highest challenge while manual equipment for processing is the least challenge that facing palm oil production in Nigeria are agreed on by the respondents. Several challenges have been identified that affect palm oil production in Nigeria. However, high cost of land stands to hinder the production of palm oil more than any other challenge. Land is required for the plantation of palm seeds. Accessibility to fertilize land has been a greater challenge to both the small- and large-scale farmers. Gone were those days, when lands were given out to farmers for agricultural purposes for free. Farmers made use of these lands for the plantation of different plants and rearing of animals, most especially for the plantation of palm seeds since it was one of the lucrative seeds for plantation then. Unlike now, that people do not give out pieces of land for free but rather a huge ransom of money is paid either at market price or administrative price. This finding agreed with the discovery of Ukwuteno (2011) and Enwelu, Nwanegbo, Onoh and Ifejika (2013) that high cost of land, lack of access to credit, lack of improved planting materials- seeds/seedlings, lack of storage facilities and lack of processing facilities were challenges faced in the palm oil industry. Mgbakor, Ugwu and Frank (2013), Izah and Ohimain (2016), Mgbakor, Ugwu and Frank (2013), Aminu and Misbahu (2019) concluded that that lack of land, domination by small-scale holders who use manual equipment for processing, insufficient fund, lack of improved variety and information, labour intensive and lack of improved variety and information affect palm oil production in Nigeria.

Furthermore, it was discovered that devaluation of Nigerian currency has the highest effect resulting to value loss in the palm oil production while change in prices of palm oil substitute is the least factor. Through the years, the Nigerian economy has undergone several changes. One of the constant changes is exchange rate fluctuations. Historically, at the beginning of this year (march 21st) Nigerian currency was traded for ₦415.82, there was a little shift to ₦416.07 in April 16, before it rose to ₦422.02 in August 1st and finally increased to ₦428.90 on September 16th. All these constant changes (devaluation of Naira) hinder the values placed on Agricultural

ISSN: 2455-8834

Volume:08, Issue:06 "June 2023"

products both at the local and international level. At the international level, the value place on the metric ton of palm oil dropped from 1,522.36 dollars in February, 2022 to 1,056.64 dollars in July, 2022. This showed that a great value loss has been placed on palm oil products due to the devaluation of Nigerian currency. Also, changes in the prices of palm oil substitutes such as vegetable oil affect the value placed on palm oil products. Practically, the lower the prices of vegetable oil, the higher the prices of palm oil. This outcome is in agreement with the findings of Ajibade and Folayan (2016) and Nwankwo (2016) that water scarcity, devaluation of currency, prices of closed substitute, finance and market instability cause value loss in the palm oil production industry in Nigeria.

Finally, it was discovered that several key factors such as new breeding, better management approach, availability of funds, market stability, provision of mechanized storage and infrastructural facilities, government support, access to technology, provision of adequate information and variety, high level of education and training, provision of inputs (seeds and fertilizers), mechanization of the milling system, introduction of good policy to promote supply chain, high level of sponsorship, provision of fertile land to the local farmers and improved planting materials, access to road for transportation, use of mechanized equipment for processing and political stability are necessary for improving value within Nigerian palm oil production supply chain. Specifically, available of funds appeared to be the highest key factors. This might be due to the fact that 95% of the problems encountered in the industry are caused as a result of lack of fund. For instance, with the available of adequate fund, more mechanized system will be adopted for production and processing, more land will be acquired, more labours will be employed, more mechanized tools and equipment will be acquired, more advanced storage devices will be acquired and lots more. This is in tandem with the discovery of Murphy, Goggin, Russell and Paterson (2021) and Biodun, Akinlabi, Okokpujie and Fayomi (2021) that education for local producers and farmers concerning modern ways of improving the quality of the oil from palm trees and availability of funds for local businesses in the industry and citizens who have interest in the industry.

5.0 Conclusion and Recommendation

This study has examined extensively the unique industry challenges causing value loss within palm oil production in Nigeria and specifically in Alkwa Ibom. The major constraints being that of high cost of land and lack of fund. Palm oil production is a profitable venture which must be encourage and at the same time it is capital intensive. The current nonchalant attitude of the Nigerian governments at all levels towards palm oil production cannot result to the desired transformation in the palm oil industry. Government must be seen to be actively involved in the acquisition and distribution of mechanized equipment, tools and system and some resources such as fertilizers, and seedlings. Also, the government need to financially support the palm oil

ISSN: 2455-8834

Volume:08, Issue:06 "June 2023"

producer. Other relevant stakeholders such as non-governmental organizations and private individuals must be equally involved if the anticipated revolt is to be achieved in the industry. Based on the findings of this study, the following recommendations were made for the relevant stakeholder (government and management of the oil palm companies):

i. Firstly, the Nigerian government should reclaim her sit in the production and exportation of palm oil to across the universe. This recommendation was also made by the Central Bank of Nigerian's (CBN) Ex-Governor, Mr. Godwin Emefele, that the government should reclaim her market dominance in the palm oil industry to enhance the nations relevance to the neighbouring countries and also improves its revenue base at high rate.
ii. The relevant stakeholders (both the government and the management of palm oil company) should intensify efforts to train and educate of local farmers on the benefits of maximizing the production of palm oils to the economy of Nigeria.
iii. The Nigerian governments at all levels should undertake the credit policy to offer credit support to palm oil producers' particularly the purchase of mechanized processing equipment, acquisition of enough landed space for plantation.

References

Abdul-Qadir, M. I., Okoruwa, V. O. & Olajide A. O. (2016). Productivity of oil palm production systems in Edo and Kogi States, Nigeria: A total factor productivity approach. *International Journal of Advanced Science and Technology, 97,* 37-44

Abdul-Qadir, M. I., Okoruwa, V. O. & Salman, K. K. (2016). Competitiveness of oil palm production systems in Nigeria: A policy analysis matrix approach. *International Journal of Hybrid Information Technology, 9(5),* 231-250

Ajibade, Y.E. & Folayan, J. A. (2016). Determinants of profitability and problems encountered by women palm oil processors in Ogbomoso Agricultural Zone of Oyo State, Nigeria

Akinniran T. N., Ojedokun, I. K., Sanusi, W. A. & Ganiyu, M. O. (2013). Economic analysis of oil palm production in Surulere Local Government Area of Oyo State, Nigeria. *Developing Country Studies, 3(13),* 8-17

Aminu, B. B. & Misbahu, S. (2019). The changing pattern of palm oil production in Nigeria. *International Policy Brief Series Social Science and Law Journal of Policy Review and Development Strategies, 7(1),* 87-99

ISSN: 2455-8834

Volume:08, Issue:06 "June 2023"

Anyaoha, K. E. & Zhang, L. (2022). Technology-based comparative life cycle assessment for palm oil industry: The case of Nigeria. *Environment, Development and Sustainability,* 1-21

Bassey, O. I. (2016). Overview of oil palm production in Nigeria: Comparative social and environmental impacts (The case of Ekong Anaku Community) in Cross River State, Nigeria. *The Hague, Netherlands: Institute of Social Science, Erasmus University of Rotterdam.*

Biodun, M. B., Akinlabi, E. T., Okokpujie, I. P. & Fayomi, O. S. I. (2021). An overview of palm oil production processing in Nigeria: A case study of Ilashe, Nigeria. *IOP Conf. Series: Materials Science and Engineering*, 1-10

Enwelu, I. A., Nwanegbo, O. A., Onoh P. & Ifejika, P. I. (2013). Challenges and prospects of smallholder oil palm production in Awka Agricultural Zone of Anambra State, Nigeria. *Journal of Agricultural Extension, 17(2),* 39-46

Fatai A., Kazeem O., Oluwole O. & Gbolahan B. (2013). Level of oil palm production mechanization in selected local government areas of Oyo and Osun States, Nigeria. *Innovative Systems Design and Engineering, 4(9),* 36-40

Ibitoye, O. O., Akinsorotan A.O., Meludu N.T. & Ibitoye, B.O. (2011). Factors affecting oil palm production in Ondo state of Nigeria. *Journal of Agriculture and Social Research (JASR), 11(1),* 97-105

Izah, S. C. & Ohimain, E. I. (2016). The opportunities and weakness of Nigerian oil palm industry. *Biotec. Res. J., 2(1),* 33-43

Mgbakor M. N., Ugwu J. N. & Frank O. (2013). Problems and prospects of oil palm production in Isoko South Local Government Area of Delta State, Nigeria. *American-Eurasian Journal of Agronomy, 6(2),* 40-45,

Murphy, D. J., Goggin, K., Russell, R. & Paterson, M. (2021). Oil palm in the 2020s and beyond: Challenges and solutions. *CABI Agric Biosci, 2(39),* 1-22

Nwalieji, H. U. & Ojike, H. U. (2018). Characteristics of small-scale palm oil production enterprise in Anambra State. *Journal of Agricultural Extension, 22(1),* 22-34.

Nwankwo, E. C. (2016). Women in palm oil processing in South-East Nigeria: Challenges and prospects in a dwindling economy. *Journal of Development and Agricultural Economics, 8(11),* 251-259.

ISSN: 2455-8834

Volume:08, Issue:06 "June 2023"

Onoja, A. O. & Ogali, T. U. (2014). Economic survey of oil palm products' processing and marketing in Kogi State, Nigeria. *Consilience: The Journal of Sustainable Development, 13(1),* 336-345

Owutuamor, Z. B., Iruo, F. & Ologidi, C. (2019). Value addition in oil palm processing in Anyama District, Ogbia Local Government Area (LGA) of Bayelsa State, Nigeria. *Conference Paper, Invited paper presented at the 6th African Conference of Agricultural Economists, September 23-26, Abuja, Nigeria.*

Pacheco, P., Gnych, S., Dermawan, A., Komarudin, H. & Okarda, B. (2017). The palm oil global value chain: Implications for economic growth and social and environmental sustainability. *Working Paper 220. Bogor, Indonesia: CIFOR.*

Shehu, S., Salleh, M. A. & Ahmad, A. A. (2021). Challenges facing palm oil industry in Nigeria. *Asian People Journal, 4(1),* 26-33.

Sylvester, C. I. (2016). Possible challenges of potential drivers of oil palm processing sector in Nigeria. *Journal of Biotechnology Research, 2(10),* 73-79

Ukwuteno, S. O. (2011). Economics of small-scale oil palm production in Kogi state, Nigeria. *Unpublished Doctor's Thesis*

Yinusa, B. (2015). Investigation of women's palm oil processing in some villages of Nigeria. *International Journal of Manufacturing, Material and Mechanical Engineering Research, 2(1),* 7-11

