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IMPACT OF NIGERIA AGRICULTURE PROMOTION POLICY ON THE TECHNICAL EFFICIENCY AND INCOME OF SMALL-SCALE PALM OIL PROCESSORS IN EDO STATE

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ABSTRACT

The Nigeria Agriculture Promotion Policy (APP) aimed to enhance agricultural productivity and increase the income of actors along the agriculture value chain. Its four priority goals are to create employment, increase foreign exchange earnings, achieve economic diversification, and achieve food security. This study assesses the contributions of the Agriculture Promotion Policy (APP) to the income and technical competencies of small-scale palm oil processors/millers in Edo State. Employing a mixed-methods approach, fifty-five (55) palm oil processors from eleven (11) local government areas across three (3) senatorial districts of Edo State were surveyed. Quantitative data were gathered through questionnaires and subjected to descriptive statistical analysis. Concurrently, qualitative data were gathered via key informant interviews and analysed using thematic analysis. Results indicate that the APP was effective in bolstering technology adoption and yield/output performance for palm oil processors/millers. Notably, the income of processors/millers increased by 40.1%, ascending from N1,510,464.80 in 2015 (pre-APP) to N2,115,988.92 in 2021 (after APP implementation). However, certain limitations surfaced reflective of inadequate access to loans for procuring advanced palm oil production machinery. To optimize the policy's impact, it is recommended that the government introduce regular training programs for processors/millers and facilitate their access to loans for acquiring efficient palm oil processing equipment. These findings hold significant implications for Nigerian agricultural policy development. While the APP has substantiated its efficacy in boosting small-scale palm oil productivity, addressing the identified policy limitations is imperative for maximizing its overarching goals.

Keywords: ***Agriculture policy, technology adoption, production, efficiency, impactful development***

1. INTRODUCTION

Nigeria's Agriculture Promotion Policy (APP), launched in 2016, seeks to achieve self-sufficiency in key agricultural commodities and reduce the nation's dependence on food imports. The policy focuses on several priority areas including improving productivity, ensuring food security, promoting value addition, stimulating export growth, employment creation and fostering rural economic development. It encourages adopting modern agricultural practices, investing in agro-processing industries, and providing necessary infrastructure and financial support. Nigeria's Agriculture Promotion Policy is an essential framework to revitalise and transform the country's agricultural sector (Abass, et al, 2019; Adebayo & Ojo, 2020). This policy seeks to achieve sustainable food security, increase job creation, boost local production, and enhance economic diversification. In Edo State, one of Nigeria's major oil palm-producing regions, the Agriculture Promotion Policy has significantly impacted the palm oil processing industry (Babatunde et al, 2019). Edo State, located in the southern part of Nigeria, has a long-standing tradition of palm oil

production. The state's favourable climate and rich soil make it suitable for oil palm cultivation. Palm oil has been a key agricultural product in Edo State, playing a vital role in the local economy and serving as a source of livelihood for numerous individuals and communities.

Palm oil processing holds a deep-rooted history within Nigeria, intricately woven into the fabric of the nation's economy and culture (Adeyemo & Bakare, 2019). For centuries, the extraction and utilization of palm oil have been pivotal aspects of both agricultural and industrial sectors. This practice can be traced back to ancient times when indigenous communities employed traditional methods to obtain palm oil from palm fruits. These methods typically involved either manually pressing or pounding the fruits to extract the valuable oil. These early techniques laid the groundwork for the development of Nigeria's palm oil industry. During the colonial period, especially under British rule, Biodiin, M. B., Akinlabi, E. T., Okokpujie, I. P., & Fayomi, O. S. I. (2021) opined that the significance of the palm oil industry in Nigeria grew substantially. The British actively encouraged the cultivation of oil palm trees as a cash crop for export. This led to the establishment of vast plantations, primarily in the Southern and Eastern regions of Nigeria. The British colonial administration viewed palm oil as a valuable commodity for export to Europe. Following independence in 1960, Nigeria continued to be a major player in the global palm oil industry. Investments from both the government and the private sector surged, propelling Nigeria to become one of the world's leading palm oil producers.

Over time, Egwu, P., Odoh, N., & Eze, A. (2023) canvass that traditional palm oil processing methods evolved, giving way to modern mechanical and industrial techniques. These advancements include the utilization of palm oil mills and processing plants equipped with machinery for crushing, sterilizing, and extracting oil from palm fruits. Palm oil has remained a pivotal component of Nigeria's economy, making substantial contributions to the nation's Gross Domestic Product (GDP) and providing employment opportunities for millions of individuals throughout the country. It serves as a source of livelihood for both small-scale farmers and large agribusiness enterprises (Nze, Nzeakor, & Egbosionu, 2017). Despite its economic significance, the palm oil industry in Nigeria grapples with several challenges. Environmental issues, such as deforestation and the loss of biodiversity, are of concern. Additionally, social challenges related to land rights, labour conditions, and the displacement of indigenous communities in palm oil cultivation areas have emerged. To tackle these issues and promote sustainable practices, the Nigerian government has implemented regulations and initiatives aimed at enhancing the environmental and social sustainability of the palm oil industry.

According to Aminu & Umoh (2020), palm oil processing in Nigeria boasts a rich and enduring history, originating in ancient times, and reaching its zenith during the colonial era. It continues to hold a crucial role in Nigeria's economy, albeit facing sustainability and social impact challenges. Researchers and authors have meticulously documented this history and the associated issues, contributing to our comprehensive understanding of Nigeria's palm oil industry.

1.1.Problem Statement

The Nigerian agricultural sector holds a pivotal position in the nation's economic development, and palm oil stands out as one of its key commodities. Within this sector, small-scale palm oil processors constitute a vital segment, contributing significantly to employment and income generation throughout the value chain. However, there exists a degree of uncertainty regarding the effectiveness of the Nigeria Agriculture Promotion Policy (APP), particularly in its contribution to the income and technical competencies of small-scale palm oil processors. Consequently, it becomes imperative to evaluate the policy's impact on the income and technical efficiency of small-scale palm oil processors in Edo State since no study known to the author has been undertaken in this regard.

1.2.Research Question

To evaluate the contribution of the Nigeria Agriculture Promotion Policy (APP) to the income and technical efficiency of small-scale palm oil processors in Edo State, the following research question will guide the study: How does the Nigeria Agriculture Promotion Policy affect the income and technical efficiency of small-scale palm oil processors in the Edo State?

1.3.Research Objectives

The main objective of the study is to assess and understand how the Agriculture Promotion Policy in Nigeria has contributed to the technical efficiency and income of small-scale palm oil processors specifically within the region of Edo State. This objective would entail understanding the socioeconomic characteristics of small-scale palm oil processors in the study area and identifying the present and potential challenges or opportunities within the context of the Agriculture Promotion Policy (APP).

2.LITERATURE REVIEW

This literature review explores the existing body of knowledge regarding the contributions of Nigeria's Agriculture Promotion Policy (APP) on the income and technical efficiency of palm oil processors in Edo State. By examining relevant studies, reports, and scholarly articles, this review aims to provide insights into the impact of the policy on palm oil processing activities, identify key findings, and highlight research gaps for further investigation. The agriculture promotion policy in Nigeria provides a comprehensive framework for agricultural development, encompassing various interventions to enhance palm oil processing. Studies have highlighted the importance of effective policy implementation, including the dissemination of information, diffusion of technical know-how, conducting training programs, as well as the provision of access to financial support and other incentives, as key factors influencing the success of the policy in Edo State (Ajakaiye, 2018; Osagie, 2019). These studies emphasize the need for coordinated efforts between government agencies, farmers, processors, and other stakeholders to maximize the policy's impact. Though, the APP is still a relatively new policy, and it is too early to say what its long-term impact will be on palm oil processing in Nigeria. However, the early signs are positive, and the policy has the potential to make a significant contribution to the development of the palm oil sector in Nigeria. According to studies, the APP has made certain contributions to the palm oil sector in Nigerian in the following areas:

2.1.Increased Palm Oil Production and Productivity

The Agriculture Promotion Policy has contributed to increased palm oil production and productivity in Edo State. By providing farmers with improved seedlings and promoting best agricultural practices, the policy has led to higher oil palm yields (Adams et al., 2020). A study by Olukosi and Akangbe (2019) revealed that the adoption of improved seedlings and enhanced agronomic practices resulted in a significant increase in palm oil output. This increased production has not only met local demand but also created opportunities for export. The policy emphasizes the need for training and capacity building among farmers, processors, and other stakeholders in the palm oil industry. Workshops, seminars, and extension services have been provided to enhance knowledge and skills in modern palm oil cultivation, harvesting, processing, and marketing techniques. The policy emphasizes the need for training and capacity building among farmers, processors, and other stakeholders in the palm oil industry. Workshops, seminars, and extension services have been provided to enhance knowledge and skills in modern palm oil cultivation, harvesting, processing, and marketing techniques.

2.2.Value Addition and Processing Capacity

One of the primary objectives of the Agriculture Promotion Policy is to promote value addition and enhance processing capacity in the palm oil sector. Several studies have highlighted the positive impact of the policy on palm oil processing mills and the establishment of new processing facilities (Egbon & Dada, 2018; Oluwatayo, 2020). These developments have improved the efficiency of the processing chain, reduced post-harvest losses, and increased the quality of palm oil products. The policy promotes access to affordable credit and grants for farmers and processors to stimulate investment in the palm oil sector. Financial institutions have been encouraged to provide loans and other financial services tailored to the needs of palm oil producers. Additionally, the policy attracts private sector investments by creating an enabling business environment and offering incentives to agro-processing companies.

2.3.Employment Generation and Rural Development

The Agriculture Promotion Policy has played a significant role in employment generation and rural development in Edo State's palm oil sector. Studies have shown that the expansion of palm oil processing has created job opportunities for both skilled and unskilled labour, contributing to poverty alleviation and socioeconomic development (Akinwumi et al., 2017; Isitor & Adesua, 2020). Smallholder farmers and processors have increased their incomes and improved their living standards through engagement in palm oil production and processing activities.

2.4.Challenges and Recommendations

Despite the positive effects, challenges remain in the implementation of the Agriculture Promotion Policy in Edo State's palm oil sector. Studies have identified issues such as inadequate infrastructure, limited access to finance, and market inefficiencies as hindrances to the policy's full potential (Adewale et al., 2021; Iyanda et al., 2022). To address these challenges, researchers and experts have suggested interventions such as improved rural infrastructure development, enhanced access to credit and financial services, and the establishment of efficient market linkages. Despite the positive effects, challenges remain in the implementation of the Agriculture Promotion Policy in Edo State's palm oil sector. Studies have identified issues such as inadequate infrastructure, limited access to finance, and market inefficiencies as hindrances to the policy's full potential (Adewale et al., 2021; Iyanda et al., 2022). To address these challenges, researchers and experts have suggested interventions such as improved rural infrastructure development, enhanced access to credit and financial services, and the establishment of efficient market linkages (Ebe et al, 2018).

The literature review demonstrates that Nigeria's Agriculture Promotion Policy has had a significant effect on palm oil processing in Edo State. The policy has contributed to increased production, improved processing capacity, job creation, and rural development. However, challenges persist that need to be addressed for the policy's full impact to be realized. Further research is warranted to explore specific strategies for overcoming these challenges and to evaluate the long-term sustainability and inclusiveness of the policy's implementation in the palm oil sector of Edo State.

3.METHODOLOGY

This study aims to assess the impact of Nigeria's agriculture promotion policy on the income and technical efficiency of small-scale palm oil processors in Edo State. The key areas of investigation include the social and economic characteristics of the palm oil processors/millers, their mill type and income levels, the adoption of improved technologies, and the main constraints they face. To achieve this, a survey design was utilized based on the Rapid Rural Appraisal (RRA) approach, which combines conventional surveys with unstructured research methods such as focus group discussions (FGDs), in-depth interviews, and observation studies. The RRA approach, as defined by Townsley (1996), involves a systematic, semi-structured activity conducted by a

multidisciplinary team in the field, aimed at gathering the most up-to-date information and formulating innovative hypotheses about rural economic life. RRA was chosen because it incorporates the opinions and knowledge of rural people in evaluating development policies and programs. McCracken and Conway (1988) describe RRA as a method for conducting action-oriented investigations in developing countries, rather than providing a strict definition. It employs techniques such as group dynamics, surveying and sampling, interviewing, and community mapping for data collection.

The data for this study were obtained from both primary and secondary sources. The secondary data were collected from institutional sources and included information related to oil palm production and palm oil processing technologies available in the study area. These institutional sources included Edo ADP and NIFOR. Primary data were gathered from various categories of respondents, including oil palm farmers, policymakers, and development practitioners. Policy-related data affecting oil palm production and palm oil processing were obtained from ADP and NIFOR. NIFOR represents the government research institute responsible for promoting research and development in the field of oil palm, while ADP is a government agency that promotes awareness and adoption of improved farming technologies. The three (3) Senatorial Districts of Edo State, namely Edo South, Edo North and Edo Central were purposively selected since these are the areas noted for oil palm farming in the State. In stage two of the sampling process, five (5) LGAs were purposively selected in Edo South while three (3) LGAs were purposively selected in Edo North and Edo Central. The selection of these areas was guided by the high intensity of oil palm cultivation. Five (5) oil palm mill operators (processors/millers) were purposively chosen per LGA to give a total of 55 that were targeted for questionnaire administration. The Snowball technique was adopted in identifying and interviewing these farmers.

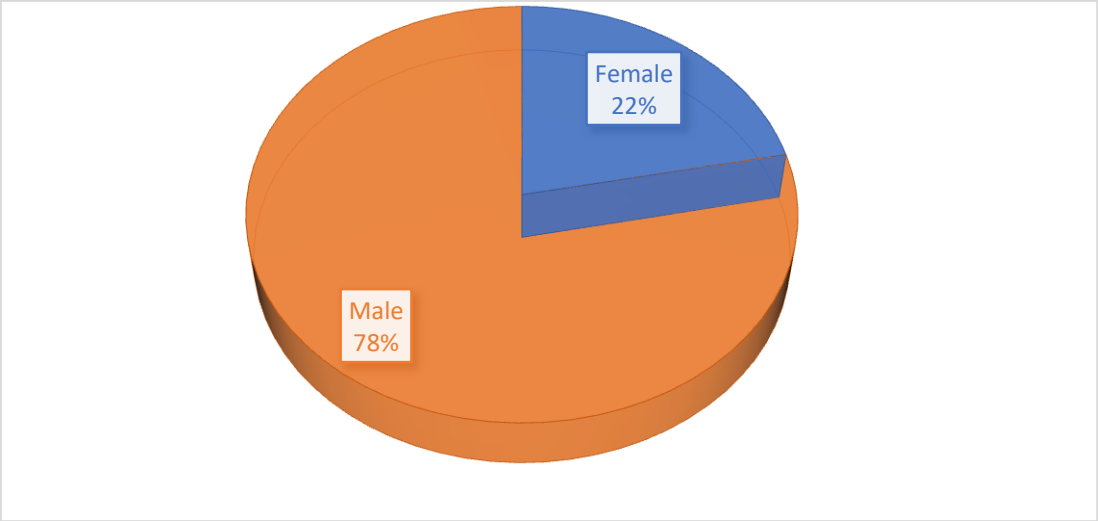
4.RESULTS AND DISCUSSION

4.1.Socio-Economic Features of Processors/Millers

Sex of Respondents

The highest percentage (78.18 %) of respondents (processors) were male whereas only 21.82 % were female (Figure 1). The result shows that the oil palm processing business in Edo state was dominated by male folks. The gender disparity may be because of the wearisome nature of the oil processing job.

Figure 1: Sex of respondents



Source: Field Survey (2021)

Age range (years) of respondents

Table 1 revealed that most of the respondents (34.55 % and 32.73 %) were between the age of 50-59 and 40-49 years respectively. About 16.36 % were 60 years and above, 10.91% were 30-39 years and 5.45 % were 30 years old and below. The average age of respondents was 49 years which implies that oil palm processors in Edo state were in their active age. This means that oil palm processors in Edo state are energetic and can carry out oil palm farming activities. The findings agree with that of Iwuji (2014), who explained that the palm oil processing business needs able-bodied men and women to carry out tasks such as loading, offloading, and boiling the palm oil in the drums which are some of the activities carried out in palm oil marketing.

Table 1: Socio-Economic Features of Processors

Characteristics	**Options**	**Freq**	**%**	**Mean**
Age range (years)	<30	3	5.45	
	30-39	6	10.91	
	40-49	18	32.73	
	50-59	19	34.55	
	60 & above	9	16.36	
	Total	55	100.00	49
Marital status	Married	44	80.00	
	Single	2	3.64	
	Widow(er)	8	14.55	
	Separated/Divorced	1	1.82	
	Total	55	100.00	
Educational status	No formal education	12	21.82	
	Primary education	11	20.00	
	Secondary education	27	49.09	
	NCE/OND	3	5.45	
	HND	1	1.82	
	First degree	1	1.82	
	Total	55	100.00	
Size of household	1-4	21	38.18	
	5 – 8	30	54.55	
	9 – 12	4	7.27	
	Total	55	100.00	5
Other occupation	Crop farming	8	14.55	
	Trading	23	41.82	
	Civil Servant	1	1.82	
	Livestock rearing	7	12.73	
	Food vendor/processor	2	3.64	
	crop farming / Trading	4	7.27	
	Crop farming / Civil service	1	1.82	
	Crop farming / Livestock rearing	6	10.91	
	Trading / Livestock rearing	2	3.64	
	Trading/others	1	1.82	
	Total	55	100.00	
Major occupation	Others	11	20.00	
	Oil palm processing	44	80.00	

	Total	55	100.00	
Membership of association	No	40	72.73	
	Yes	15	27.27	
	Total	55	100.00	

Source: Field Survey (2021)

Marital status of respondents

A larger proportion (80 %) of the respondents were married, 14.55 % were separated or divorced and 3.64 % were single (Table 1). The result shows most of the oil palm processors in the Edo state were married, and have the responsibility to cater for their families, which may explain their motivation for engagement in the processing business.

Educational status of respondents

Over 70 % of the oil palm processors sampled had one level of formal education as observed (Table 1). The majority (49.09 %) had secondary education, 20 % had primary education, 5.45 % had NCE/OND, 1.82 % each had HND and first degree respectively. The proportion of respondents who had no formal education were 21.82 %. The result has shown that a bulk of the oil palm processors in the Edo State were quite educated, which means that they can read and write and possibly comprehend and understand any technology that will promote their business. The influence of education is imperative in the marketing business because it influences the decision-making process. Educated marketers may have better access to market information compared to non-educated marketers thereby increasing his or her marketing efficiency.

Household size of respondents

More than half the respondents (54.55 %) had a household size of 5-8, 38.18 % had 1-4 and 7.27 % had a 9-12 household size (Table 1). The average household size was 5, which suggests that the respondents had people depending on them and hence the need to be involved in the oil palm processing enterprise to cater for them. Household members may even constitute a source of labour in the processing business.

Other Occupation of Respondents

Apart from the oil palm processing business, the study assessed other occupations the respondents might be engaged in as a way of diversifying their source of livelihood. The result showed that the majority (41.82 %) of them were into trading. Other occupations such as crop farming, livestock rearing, crop farming/livestock rearing, crop farming/trading, trading/livestock rearing and food vendor/processors were alternative sources of livelihood for about 14.55 %, 12.73 %, 10.91 %, 7.27 %, 3.64 % and 3.64 % respectively. Only about 1.82 % and 1.82 % were civil servants and into trading/other occupations respectively.

Major Occupation of respondents

Despite the other occupations the oil palm processors were involved in, oil palm processing constitutes a major source of livelihood for most (80 %) of them (Table 1). The result shows that for 20 % of the oil palm processors, palm oil processing was not the primary occupation.

Membership of association by respondents

Only about 27.27 % of the oil palm processors were members of an association as against 73.73 % who were not (Table 1). The results suggest low association membership among processors in the study area.

Milling experience of respondents

The milling experience of oil palm millers in Edo state is shown in Table 2. The result revealed that 43.64 % and 34.55 % of the respondents had an experience of 20-29 years and 10-19 years, respectively, 12.73 % and 9.09 % had 1-9 years and 30-39 years of oil milling experience respectively. The average oil palm milling knowledge of the respondents was 20 years. This suggests that the oil palm processors in Edo state were quite experienced and will understand the challenges and benefits of the business. They might also measure the impacts of the agricultural promotion policy since they have been in the business before the policy was introduced.

Mill ownership status

The result of the analysis (Table 2) revealed that most (63.64 %) of the oil palm processors/millers had a milling facility while 36.36 % had none.

Table 2: Processing/milling characteristics of respondents.

		Freq	Mean
Milling experience range (years)	1-9	7	
	10-19	19	
	20-29	24	
	30-39	5	
	Total	55	20
Mill ownership status	No	20	
	Yes	35	
	Total	55	
Ownership of oil palm plantation	No	30	
	Yes	25	
	Total	55	

Source: Field Survey (2021)

Ownership of oil palm plantation

The result (Table 2) reveals that 54.55 % of the respondents do not have an oil palm plantation of their own while 45.45 % owned an oil palm plantation. This implies that almost half of the respondents may not have to depend on other sources to get their oil palm fresh fruit bunch.

Input Sources

The sources of fresh fruit bunches (FFB) used by the respondents were from different sources. Table 3 revealed that 92.73 % purchased theirs from the market, 45.45 % sourced theirs

from personal farms and all of them also get FFB from customers who come to process their fruits for sale.

Table 3: Sources of inputs used by respondents.

	Yes		No	
	Freq*	%	Freq*	%
Source of FFB				
Personal farm	25	45.45	30	54.55
Purchased	51	92.73	4	7.27
From customers	55	100.00	0	.00
Source of finance				
Personal savings	55	100.00	0	.00
Commercial banks	12	21.82	43	78.18
Microfinance banks	5	9.09	50	90.91
Relatives/friends	8	14.55	47	85.45
Money Lenders	4	7.27	51	92.73

Source: Field Survey (2021)

**Multiple responses hence total exceeds 55*

Personal savings was a main source of finance for all (100 %) of the respondents in the study area. Although some, 21.82 % access funds from commercial banks, 14.55 % get funds from relatives and friends, 9.09 % access funds from microfinance banks and 7.27 % also access money lenders for funds to finance their oil palm processing business.

4.2.Policy Impact on Palm Oil Output

Table 4 shows that in 2015, the majority (38.18 %) of the respondents processed 5.01-7.50 MT of palm oil while in 2021, the highest output range was over 10 MT recorded by 32.73 % of the respondents. The average palm oil output recorded by the respondents for 2015 and 2021 were 5.03 MT and 7.05 MT respectively. This suggests an increase in the output of oil palm processors/millers in Edo State after the introduction of the policy. It can be deduced from the findings that the agricultural promotion policy impacted positively on the yield of the small-scale oil palm processors in Edo state.

Table 4: Palm oil output before and after policy introduction

Qty produced / annum (mt)	**2015**			**2021**		
	Freq	**%**	**Mean**	**Freq**	**%**	**Mean**
2.5 & below	9	16.36		1	20	

2.51-5.00	7	30.91		2	21.82	
5.01-7.50	1	38.18			10.91	
7.51-10.00		14.55			14.55	
>10.00	0	0		8	32.73	
Total	5	100	5.03	5	100	7.05

Source: Field Survey (2021)

Income of Processors

The result of the impact of the policy on the income of oil processors/millers in the study area is presented in Table 5. The result shows that in 2015, the modal (29.09 %) income range was ₦ 1,500,001- ₦ 2,000,000, while the modal range for 2021 was over ₦ 2 million (50.91 %). The average income obtained by respondents in 2015 and 2021 were ₦ 1,510,464.80 and ₦ 2,115,988.92 respectively. This shows an increase in the income of the oil processors/millers in Edo state after the agricultural promotion policy was introduced. It can, therefore, be said that the policy impacted positively on the respondents.

Table 5: Income of processors before and after policy introduction

Income/annum (₦)	**2015**			**2021**		
	Freq	**%**	**Mean**	**Freq**	**%**	**Mean**
500,000 & below	6	10.91		6	10.91	
500,001 - 1,000,000	8	14.55		8	14.55	
1,000,001 - 1,500,000	2	21.82		9	16.36	
1,500,001 - 2,000,000	6	29.09		4	7.27	
>2 million	3	23.64		28	50.91	
Total	**5**	**100**	**1,510,464.80**	**55**	**100**	**2,115,988.92**

Source: Field Survey (2021)

Type of mill technology used by processors.

The type of oil mill used by processors before and after the agricultural promotion policy is presented in Table 6. The result revealed that the use of the traditional mills/vertical digester and screw press dominated among processors in 2015 with most (85.45 %) respondents using this technology; the result for 2021 revealed a decline in this proportion of respondents to 74.55 %. The proportion of processors using the semi-traditional mill increased from 14.55 % in 2015 to 25.45 % in 2021. No respondent was using industrial mills or NIFOR small-scale processing equipment

before and after 2015. The results suggest a slight improvement in small-scale processors' use of improved processing equipment with relatively more respondents now using semi-traditional equipment. However, it appears that the promotion policy had little or no impact on the respondent's use of more advanced processing equipment.

Table 6: Type of mill used by respondents before and after policy introduction.

Type of mill	2015		2021	
	Freq	%	Freq	%
Traditional mills/ Vertical Digester and Screw Press	47	85.45	41	74.55
Semi-traditional	8	14.55	14	25.45
Industrial mills	0	0	0	0
NIFOR small-scale processing equipment (DSP, Clarifier)	0	0	0	0
Total	55	100	55	100

Source: Field Survey (2021)

Constraints Faced by Processors/Millers

Under the agricultural promotion policy, the constraints facing the oil palm processors were assessed and the result is presented in Table 7. The result revealed that inadequate finance (mean = 3.84) was the most serious constraint faced by oil palm millers in the study area. Other serious constraints included high labour cost (mean = 3.49), high cost of milling machine/processing facilities (mean = 3.36), high cost of machine maintenance (mean = 3.18) and erratic power supply (mean = 3.02), low fluctuating price of oil (mean = 2.95), incessant breakdown of milling machine (mean = 2.82), seasonal variation (mean = 2.78), lack of storage facilities (mean = 2.56) and labour shortage (mean = 2.55). The findings suggest small-scale palm oil processors in the study area were facing serious constraints which may constitute a constraint to the output and income.

The seriousness of finance as a constraint was confirmed during the focus group discussion (FGD). Discussants explained that their major problem was centred on finance. A participant noted thus, "*Our major problem in this business is money, we need cash specially to boost our production, buy diesel and maintain our processing machines*"; another reported that "*light na our major problem*" while another respondent explained, "*to get labourers to work for us is a problem as many of our youths are looking for quick cash*". However, from the discussion session with respondents, the major challenge in their oil processing business was inadequate access to finance. In Nigeria, finance has been reported by Emokaro and Ugbekile (2014) to be a major challenge for small-scale businesses.

4.3 Key Informants Response

Other categories of respondents as key informants were interviewed to elicit responses on the issues under study, particularly the challenges facing the oil palm sector. The key informants were from key institutions and individuals who are key players or have a stake in the oil palm sector in Edo state. Two key institutions interacted with are NIFOR (Nigeria Institute for Oil Palm Research) and Edo State ADP (Agricultural Development Project). Also, the machine fabricator was interviewed. In addition to the challenges reported by palm oil processors and milling machine fabricators interviewed reported that they have not felt any impact of the government on their business. Important challenges noted as impeding them included the high cost of electricity, lack of

policy support, high cost of construction materials, lack of machine fabricator tools, lack of training for fabricators and low patronage of local equipment. These challenges can be seen as an area where they need intervention. It will be advantageous to small-scale palm oil processors if they can afford the locally fabricated machines as one of the challenges revealed by oil palm processors was the high cost of processing machines. The study also sought to identify institutional challenges to oil palm development. Key informants from NIFOR reported that inadequate funding, power supply, personnel and material resources were the major challenges in developing oil palm technologies in the institute. He further explained that the institute equally is hampered in the effective dissemination of the technologies developed; specifically, challenges highlighted were inadequate funding, market competition from sources selling sub-standard materials to farmers and lack of awareness of farmers. He expatiated that most farmers don't believe in the efficacy of improved technologies, preferring their old oil palm production practices.

In the same vein, another key informant from Edo State ADP lamented the lacklustre attention of the government towards the oil palm sector. He further noted that value chain actors such as farmers, processors and millers all faced financial constraints, which limits their level of investment considering the high cost of some of the inputs such as chemicals and seedlings. To this end, he recommended that for farmers to feel the impact of the agricultural promotion policy, the government should provide an interest-free loan to farmers, farmers to form cooperative groups, and the cost of materials/produce should be subsidized by the government. Another key informant from the Edo State ADP identified the age of the plantation as a serious limitation to the output of farmers. Many of the plantations were reported to be old, and as such generally record declining yields over time. The informant, consequently, recommended that the government should fund the establishment of new oil palm plantations and oil mills while also calling for the recruitment and training of personnel in the oil palm research institute.

4.4 Test of Hypotheses

T-test was employed in the test of the hypotheses. This section presents and discusses the results.
The following null hypotheses were tested:
Technologies promoted under the Nigeria Agriculture Promotion Policy (APP) have not significantly influenced the level of technology adoption, processing efficiency and income of small-scale palm oil processors in Edo State.

5.CONCLUSION AND SUGGESTIONS

5.1.CONCLUSION

This study investigated the contributions of Nigeria's Agriculture Promotion Policy (APP) to the income and technical efficiency of small-scale palm oil processors in Edo State. Findings from the study show that oil palm production and processing is a lucrative venture in the study area. Due to the profitability of multiple economic activities along the value chain, the sector if adequately harnessed and managed could be relied upon as a panacea to reduce the mass unemployment, low foreign exchange earnings and industrialization the country currently yearns for. Furthermore, the study established a positive and significant increase in key variables (output, income, and adoption) of palm oil processors. The major findings of this study in line with the stated objectives are noted below:

(a) The sex distribution of palm oil millers reveals that most mill owners were men (78.18 %). The drudgery and level of cost required to purchase a mill and women's limited access to credit may partly account for the low proportion of women who owned a mill.

(b) The average length of experience of the respondents was 20 years. This suggests they are old enough in the business to recognise the impact of government policy trust on their business.

(c) The preferred mill type by the respondents was the NIFOR SSPE, which they believe is more efficient and produces better quality palm oil, and virtually all the respondents expressed strong interest in acquiring the modern milling equipment (i.e. NIFOR SSPE). However, they are constrained by inadequate capital and the high cost of the equipment.

(d) Most of the millers (100 %) used personal savings to finance the purchase of milling equipment and a mill site/house. Such dependence on personal savings is likely to discourage or impede large-scale investment given the limited funds.

(e) The major sources of FFB for the millers were farmers/ customers (92.73 %), and their own personal farms (45.45 %);

5.2.SUGGESTIONS

Based on these research findings, the following suggestions are proposed:

1. The farmers should be linked to credit institutions especially the newly CBN-established NIRSAL Microfinance Banks where CBN's N200 billion oil palm intervention fund is domiciled to enhance increased production and processing of oil palm products.
2. Actors along the oil palm value chain should be sensitized to the inherent benefits of social associations (forming cooperatives) as a vehicle for attracting policymakers' attention and productivity enhancement support.
3. Promote awareness of NIFOR SSPE among processors/millers, through sponsored seminars and exhibitions for practical demonstrations of the SSPE to processors/millers and fabricators.
4. Expansion of market linkages solution at the macro level through the promotion of Micro, Small and Mediums enterprises that foster profitable business interactions between inputs suppliers, producers, processors, marketers and other actors along the oil palm value chains.

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