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ROLE OF WOMEN PARTICIPATION IN PALM OIL PROCESSING IN BENUE STATE, NIGERIA

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ABSTRACT
The study looked at how women in Ogbadigbo local government, Benue State, participated in palm oil processing. The study relied on primary sources. Women's engagement in oil palm processing in Benue State and specifically in Ogbadibo Local Government Area was investigated using a public opinion survey research design. To gather relevant data from respondents in the study region, questionnaires were used. Data was collected from 134 respondents who worked in oil processing of the study area. The data was analyzed using descriptive statistics, gross margin, multiple regression modeling, and a Likert scale. Oil palm processing had a gross margin of $236135.78, and net processing income of $25367.50 per year. The significance between oil palm processing and palm oil production was tested using a paired sample t-test, which found that it was significant at P≤0.01 with a mean average of 28.10. 62. The results also showed that only 4% of respondents used current methods. Women also complained about insufficient funding and high maintenance costs as important challenges affecting oil palm processors, along with other concerns such as a lack of access to credit, insufficient storage, and a bad road network. Finally, the study advised that significant stages of processes such as fruit digestion and oil extraction be mechanized to relieve female processors of their labor. This will boost the number of women who work in the oil palm industry.

Keywords: Women, Palm Oil, Ogbadigbo, Benue State, Processing.

INTRODUCTION
Oil palm (*Elaeis guineensis jacq*.) is thought to be a West African native. Oil palm plantations are primarily found in a 300-500 km wide Western coastal belt running from Gambia to Angola and expanding inland toward the East as far as the equator in the Great Lakes region (Ajani *et al.,* 2012) as cited by (Ogunmola *et al.,* 2019). Oil palms are perennial plants that belong to the *palmae family, subfamily cocoideae*, and come in three primary types (varieties): *dura, tenera, and pisifera.* Oil palm is a low-land crop that may thrive up to 900 meters in elevation. Having a fibrous root structure, it prefers a deep fertile, well-drained soil; yet, it requires a lot of sunlight, which limits productivity significantly (Udoh and Essien, 2015). Oil palm is a tropical crop cultivated mainly for the production of palm oil (FAO, 2015). Oil palm features a sessile drupe with a leathery exocarp, fleshy oily mesocarp, and a hard endocarp (shell) that encloses the kernel or seeds (Adetola, 2015). The color of an oil palm fruit that is fully ripe changes. The color changes during ripening, which can range from black to red, green to reddish orange with a greenish tip, and white to pale yellow, are all dependent on the type of fruit. Nze *et al.* (2017) also examined the following agronomic procedures in oil palm production: nursery establishment, planting time, nursery upkeep, transplanting, pest and disease control, fertilizer use, palm fruit harvesting, and processing. However, the focus of this study is on the oil palm fruit's processing.

As this is largely a household enterprise, women play an important role in this important agricultural sector (oil palm processing). Women domesticated crop plants, ushering in the art

and science of farming as described by Spenser, 2017, the eminent agricultural scientist. More than a quarter of the world's population is made up of women farmers (Swamikannan and Jeyalakshmi, 2015). Although women participate in all stages of agricultural production in the majority of farming systems, their roles, including decision making, control over resources, and income, vary greatly from place to place. Women play a significant and critical role in agriculture and allied sectors such as crop and livestock production, horticulture, post-harvest management, forestry, fishery, and so on, but their contribution has been ignored for centuries. Women account for nearly half of the world's adult population and one-third of the labor force (Kumari *et al.,* 2016). They work nearly two-thirds of the total working hours but receive very little, only one-tenth of global income and own less than one percent of property (Kumari *et al.,* 2016).

According to Olagunju (2008), oil palm is the world's second-largest producer of vegetable oil, producing seven times more vegetable oil per hectare than other oil-producing crops like soybean. Palm oil, a byproduct of the processing of oil palm fruits, is a staple in West African cuisine and is used for a variety of industrial applications (Nwalieji and Ojike, 2018). Palm kernels are further processed into kernel oil, which is used for medicinal purposes, and palm kernel cake is a suitable raw material for livestock feed manufacturing. Cooking fuel is made from the shell and fiber of the kernel. The oil palm is a low-impact crop that makes efficient use of land and inputs in the production of vegetable oil.

The United States Department of Agriculture (USDA, 2017), said that palm oil production in Nigeria began at 537,000 MT in 1964, gradually increased to 971,000 MT in 2010, and has remained stagnant at 970,000 MT since 2011. According to Adetola (2015), oil palm growth has stalled at 930,000 MT since 2013, despite the fact that Nigeria consumes 2.0 million MT of palm oil per year, and the oil palm industry's shortage is estimated to be around 1,070,000 MT per year. Oil palm production and export have historically contributed significantly to Nigeria's external reserves and agricultural GDP, with palm oil and palm kernel exports accounting for 15.0% to 20.0 percent of total exports. According to data from the United States Department of Agriculture, Nigeria's contribution to global market share has since tapered to a meager 1.4% as of 2018 (USDA, 2021).

When the characteristics of the palm sectors in Malaysia and Nigeria were compared, it was discovered that Malaysia's success is based on plantation management combined with large-scale processing using modern methods. The plantation mode of production is distinguished by large-scale monoculture under unified administration (FAO, 2019). In Nigeria, on the other hand, dispersed smallholders gather semi-wild plants and process them manually, accounting for 80 percent of production. Several million smallholders are spread across an estimated 1.65 million hectares in Nigeria's southern region. Women are primarily involved in the processing of oil palm fruit in Nigeria's various agro-ecological zones. According to reports, women are responsible for at least 70% of food production in Africa, as well as marketing cash crops and animals (Adetola, 2015). Women spend roughly 1.4 hours per day on food preparation compared to 0.25 hours for men. Female labor is more productive than male labor in food processing, and women account for more than half of the labor force in oil palm processing, according to (Abdul-Qadir *et al.,* 2016).

As a result, oil palm has been a mainstay in terms of innovation to boost oil production in Nigeria. The purpose of this research is to assess the role of women in oil palm processing in the Ogbadigbo local government area of Benue state, Nigeria. This study has piqued the interest of those concerned about food insecurity and unemployment. This study provides empirical data on the degree of activities performed by respondents in the processing sector to the government, stakeholders, market planners, and policymakers. This study looked at the

socioeconomic characteristics of oil palm processors, as well as the gross margin of women's participation in oil palm production and the constraints in the study area.

Agbelemoge *et al.* (2020) conducted a study to know the involvement of women in oil palm processing in Ile-Oluji / Oke-Igbo Local Government Area of Ondo state, Nigeria. The result of the findings was that there is significant relationship between involvement of women in oil palm processing and some socio-economic characteristic like marital and income.

Nwalieji and Ojike (2018) studied the characteristics of small-scale palm oil production enterprise in Anambra State, Nigeria. The findings revealed that producing palm oil was profitable. However, productivity can be increased by encouraging increased use of modern technologies and ensuring good markets for palm oil to encourage more farmers to enter the business.

Nze *et al.* (2017) comparatively analyzed palm fruit processing and palm oil marketing in Anambra state of Nigeria. According to the findings, palm fruit processing was more profitable than palm oil marketing. It was also noted that palm fruit processors should strive to secure land for their operations, while labor, transportation, and loading/offloading costs should be reduced to increase profits in palm oil marketing.

Ajani *et al.* (2012) looked at the assessment of oil palm production and processing among rural women in Enugu North agricultural zone of Enugu State, Nigeria. It was observed that processing of palm oil was profitable in the study area. It was also stated that adequate funding and credit facilities will aid in improving oil palm production and processing among rural women, particularly in assisting them in purchasing processing machines for easy production of palm oil and increased product. The study concludes that adequate funding and credit facilities will aid in improving oil palm production and processing among rural women, particularly in assisting them in purchasing processing machines for easy production of palm oil and increased product output.

Monalisha *et al.* (2018) examines the constraints and opportunities for women in agriculture in India. The study enumerates the contributions of women in agriculture and concludes that by effectively integrating technology, work, and resources (both financial and social) with gender, both men and women can play an active role in achieving the goal.

Nwandu *et al.* (2021). The study analyses palm oil processing in Ndokwa-West Local Government Area of Delta State. According to the study, palm oil processing is profitable, with a TC ratio of 0.59 and a profit margin of 37%. The study found that household size, processing experience, and credit availability all had a 1% effect on palm oil output in the study area.

METHODOLOGY

The Study Area

The research took place in Ogbadibo local government area Benue State's. The Ogbadibo local government area was established in 1991 and consists of three districts: Otukpa, Orokam, and Owukpa, with Otukpa serving as the administrative center. It has a land area of 598 km2 and a population of 130.988 according to the 2006 census, and 176,800 according to the national population commission's 2016 estimations (NPC, 2016). Area of 501km^2 and a density of 353.2/km^2.

Method of Data Collection

The study made use of primary data which was collected through questionnaire. The target population were women participating in palm oil processing in Ogbadigbo local government area of Benue state. A two-stage sampling technique was used for this study. The first stage was a purposive selection of 6 council ward from 13. This was done because of the high palm oil processing activity in that community. These community includes, Ai-oodo I,

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Ai-oono ii, Ehaje I, Itabono ii, Olachagbaha, Orokam iii. The second stage was a random selection of 134 women from female headed households. This was done from six ward at the proportion of ten (10%) percent of the women population respectively. A total of 134 women participating in palm oil processing was sampled for this study. The questionnaire was used to collect primary data. Data was collected on the type of method used in the processing of palm oil, the profitability of oil processing, and the socio-economic characteristics of the respondents.

Method of Data Analysis

Data was analyzed using both descriptive and inferential statistics. Descriptive statistics such as frequency, percentage, and mean were employed. Gross Margin Analysis was used to assess the costs and returns in palm oil processing. The effects of socioeconomic characteristics of palm oil processors on the quantity of palm oil produced were studied using Ordinary Least Square (OLS) regression analysis. The regression analysis will be tested in various functional forms such as linear, semi-log, double log, and exponential. Data will be fitted to these functions to determine their best-fit or explanatory power. The equation with the highest Coefficient of Multiple Determination value best explains the variation.

The gross margin was used to assess the profit earning potential of oil palm processing in terms of costs and returns. The difference between total revenue and total variable cost (TVC) in oil palm processing is the gross margin. According to Abigail *et al.* (2018), gross margin is the difference between sales revenue and purchase price. Gross margin is used to calculate the value of incremental sales and to guide pricing and promotion decisions. As a result, the gross margin can be used to evaluate the performance of oil palm processing. The mathematical formula for calculating gross margin for each respondent is shown in the equation below.

$$GM = PQ - \sum_{J=1}^{n} PjXj \quad \ldots(1)$$

where;

GM = Total gross margin.

$\sum$ = Summation sign.

J = 1 to n. Where j is an index for individual variable production input and n is the total number of variable inputs in production.

P = average price of product oil palm, u cracked kernel and cracked kernel (naira).

Q = quantity (output) produced per year (tones).

Pj = unit price of variable input j (Naira).

Xj = quantity (amount) of the variable inputs used per year.

PQ = total revenue from oil palm processing per year (Naira).

Net processing (Farm) income =GM- Total fixed cost.

Different forms of regression were estimated to examine the effect of certain factors on the output oil palm processing and the best fitting model selected. The best regression fit will determine by the level of R^2, the level of significance of the overall model (F-statistics) and the level of significance of the independent variables. The different forms of regression model are specified as linear regression, semi log, cobb-douglas and exponential, respectively.

$$Yi = \beta_o+\beta_1X_1+\beta_2X_2+\beta_3X_3+\beta_4X_4+\beta_5X_5+\beta_6X_6+\beta_7X_7+\beta_8X_8+\beta_9X_9+\beta_{10}X_{10}+U \quad \ldots(2)$$

where;

Y= Output of oil palm processing (tones).

X_1 = price of palm fruits (Naira).

X_2= level of education of producer (years).

X_3= age of the producer (years)

X_4 = experience of the producer in oil palm production (years).

X_5 = annual income (Naira).
X_6= cost of labour (Naira).
X_7 = cost of transportation (Naira).
X_8 = method of production (local = 0, modern = 1).
X_9 = fluctuation of market price (1 if producer perceived it as a strong barrier to oil palm production, 0 otherwise).
X_{10} = inadequate processing facilities (1 if producer perceived it as a strong limiting factor to oil palm production, 0 otherwise).
B = estimated parameters, including the constant term (β0).
U_i = Error term.

In valuation of severity of the problem (constraints), a 5- point Likert scale was used to assess the severity of the constraints encountered in the processing of oil palm. The mean score value generated for each constraint (as generated from the responses of respondents on the 5-point likert scale) is used as proxy measure of the severity of the constraint. The mean score for each constraint (K)is as stated:

$$MS_k = \frac{\sum X_{ik}}{4N} \quad \ldots(3)$$

where;
Xi_k = response score (minimum, 1 and maximum, 5) of respondent I to constraint K.
MS= Mean score point. i= 1,2, 3,…N. N = Total number of respondents. The decision rule is such that: when the estimated Mean score point is 4.5 and above, the constraint is adjudged as highly severe and if it is between 3.5-4.49, it is viewed as severe, Likewise, if the Mean score point is between 2.5- 3.49, the severity of the constraint is adjudged to be very low, and when it falls between 1.5-2.49, it's taken as not severe.

RESULTS AND DISCUSSION

Socio-economic Characteristics of the Respondents

Table 1 depicts the socioeconomic distribution of respondents. According to the findings, the majority (54.1 percent) of women involved in palm oil processing were between the ages of 41 and 60. These findings were consistent with studies (Emokaro and Ugbekile, 2014; Jiggins *et al.,* 2008), which stated that the age distribution of the country's active force was chosen between the ages of 30 and 50 years. Other statistics include 37.8 percent of respondents aged 21 to 40, and 6.6 percent aged 61 and up. According to Kisseka (2014), the majority of the processors were between the ages of 30 and 50, implying that they were in their most active or productive years. The marital distributions revealed that 10.1 percent were single, 82.1 percent were married, 5.2 percent were divorced, 0.7 percent were widowed, and 1.5 percent were widowers. The majority of respondents were married. It is thus noted that the married have a sense of responsibility, which is required for their commitment to their businesses and meeting various family needs. The distribution of respondents by household size revealed that (27.6 percent) had a household size of 4 or fewer people, (52.2 percent) had a household size of 5-8 people, (19.4 percent) had a household size of 9-10 people, and (0.7 percent) had a household size of more than ten people. The average household size was six people. The implication is that there is a tendency for processing costs to be reduced, because large family sizes result in the addition of family labor (Spencer, 2017; Uche *et al.,* 2017). About 39.6 percent of the processors had 7 to 12 years of processing experience, 22.4 percent had more than 18 years of processing experience, 20.1 percent had 13 to 18 years of oil palm processing experience, and 17.9 percent had processing experience of 6 years or less. The respondents had an average of 13 years of processing experience. This implied that the majority

of respondents (39.6 percent) had more experience in oil palm processing and thus a greater tendency to be technically efficient, as indicated by Gupta (2013) and Enwelu *et al.* (2013), who found a positive correlation between experience and business efficiency.

The educational status of respondents revealed that 38.5 percent had secondary education, 30.4 percent had tertiary education, 25.2 percent had only primary education, and 5.9 percent had no formal education. The mean score of 10.0 indicated that the majority of respondents were literate, having received some form of formal education, and that they would be highly receptive to technological changes that could improve production and adoption. This is consistent with the opinion of Nze (2017), who stated that according to World Bank (2018) reports, the output of an educated farmer is approximately 13% higher than that of an uneducated farmer.

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Table 1: Socio-economic Characteristics of Respondents

Variable	Frequency	Percentage	Mean
Age			
≤20	2	1.5	43.5
21-40	51	37.8	
41-60	73	54 .1	
61+	8	6.6	
Total	**134**	**100**	
Marital status			
Single	14	10.4	
Married	110	82.2	
Divorced	7	5.2	
Widow	1	0.7	
Widower	2	1.5	
Total	**134**	**100**	
Household			
≤4	37	27.6	6
4-8	70	53.3	
9-12	26	27.6	
13+	1	0.7	
Total	**134**	**100**	
Processing Experience			
≤6	24	17.9	12.9
7-12	53	39.6	
13-18	27	20.1	
19+	30	22.4	
Total	**134**	**100**	
Education			
<1	8	5.9	10.0
1-6	34	25.2	
7- 12	52	38.5	
13+	41	30.4	
Total	**134**	**100**	
Farm Size			
1-6	80	59.7	6.7
7-12	40	29.9	
13- 18	13	9.7	
91+	1	0.7	
Total	**134**	**100**	
Access to credit			
No Access	74	55.2	
Have Access	60	44.8	
Total	**134**	**100**	
Major Occupation			
Palm oil processors	103	76.9	
Other occupation	31	23.1	
Total	**134**	**100**	

Source: Field survey, 2022.

Profitability of Oil Palm Processing

Table 2 shows the fixed and variable costs of oil palm processing per year for the processors in the study area. The processing machine accounted for 44.72 percent of the fixed costs, while storage containers, processing shades, and boiling drum accounted for 17.39 percent, 25.19 percent, and 12.70 percent, respectively. With a percentage of 39.40, expenditure on palm fruits contributed the most to variable cost. This reflects the processor's desire to increase the

amount of palm oil produced, which is determined by the amount and quality of palm fruits processed. According to related studies (Ezeibe, 2012; and Emokaro and Ugbekile, 2014), the cost of palm fruits is the most expensive factor in oil palm processing. Water, diesel, transportation labor, and firewood accounted for 4.32 percent, 17.03 percent, 12.14 percent, 23.43 percent, and 3.69 percent of the total cost, respectively. This is consistent with expectations due to the flexibility of oil palm processing, while fixed costs accounted for 39.06 percent of total production costs. Total revenue denotes the value of the processed goods.

Table 2: Profitability of oil palm processing

Cost items	**Mean values (₦)**	**Percentage**
Fixed cost		
Storage container	36635.82	17.39
Processing shade	53097.01	25.19
Boiling Drums	26759.33	12.70
Processing machine	94276.12	44.72
Total	**210768.28**	**100 (39.06)**
Variable cost		
Palm fruits	129547.05	39.40
Water	14223.13	4.32
Diesel	55984.33	17.02
Transportation	39910.07	12.14
Labour	77052.00	23.43
Others (firewood)	12150.00	3.69
Total	**328867.57**	**100 (60.94)**
Total cost =FC+VC	539635.86	
Revenue		
Oil palm sales	529405.97	68.24
Uncracked kernel	83559.70	10.76
Cracked kernel (pressed, etc.)	162805.97	21.00
Total	**775771.64**	**100**
Gross margin	**236135.78**	
Net processing income	25367.50	

Note: (39.06) = percentage of fixed cost of the total cost of processing; (60.94) = percentage of variable cost of the total cost of processing.
Source: Field Survey, 2022.

Table 2 also shows the total revenue generated by the processors in the study areas from each product. Palm oil generated the most revenue, accounting for 68.24 percent of total revenue, implying that palm oil is the main product. Uncracked kernel produced 10.76 percent, while cracked kernel, pressed cake, and other byproducts produced 21.00 percent. The gross margin for oil palm processing was $236135.78, with a net income of $25367.50 per year. This demonstrates that the oil palm processing industry is profitable. This finding supports the findings of Okorji (2005) and Emokaro and Ugbekile (2014) that palm oil processing is profitable. The results also compare favorably with those of Ekunwe *et al.* (2009), who reported a mean net income per annum and return per naira invested of ₦841,748.84 and ₦0.84, respectively.

Oil Palm Processing Method

There is an abundance of documentary evidence on the methods of oil palm processing. According to Agbelemoge *et al.* (2020), there are two broad methods of oil palm production:

traditional/manual and modern/mechanize. Table 3 shows the distribution of respondents by processing method. According to the results, 35.1 percent used manual processing, 64.2 percent used modern processing, and 0.7% used both manual and modern processing. This means that the majority of oil palm processors in the study area used modern processing methods. This could be due to the high profit from oil palm processing and extension visits, which increased the adoption of modern processing technology.

Table 3: Methods of Oil Palm Processing

Variable	Frequency	Percentage
Manual	47	35.1
Modern	86	64.2
Both methods	1	0.7
Total	**134**	**100**

Source: Field survey, 2022.

Factors Affecting the Quantity of oil Palm Processed

Results on the factors affecting the quantity of oil palm processing are presented in Table 4. Multiple regression was used with ten explanatory variables to determine what factors affect the quantity of output of oil palm processors, and the best model was chosen based on the number of significant variables, coefficient signs, and R^2. The R^2 coefficient is 81.3 percent. As indicated by the R^2 value of 0.8130 and the associated F value (8.413), all explanatory variables explained approximately 81.3 percent of the total variation in the value of output of oil palm processing (Y). This indicates that the model has a good fit and can be used to explain factors influencing oil palm processing output quantity in the study area. The best fitting equation was the Cobb-Douglas production function, which served as the foundation for this analysis. Only the price of palm fruits (-2.3605), annual income (10.2312), method of processing (25.9683), and cost of transportation (-2.4309) were found to be significant (p0.05). The price co-efficient of palm fruits was negative and significant at 1%. This implies that further increases in the price of palm fruits may reduce the amount of oil palm processing. Studies which are in supports of this finding (Madeley, 2010; Julius *et al.*, 2020; Emokaro and Ugbekile 2014), stated that the cost of palm fruits was the highest cost factor in oil palm processing, which could reduce the quantity processed. Palm oil processors are encouraged to grow their own palm trees in order to maximize profits. The regression co-efficient of annual income was positive and significant at (p0.05), indicating that higher income earners are more likely to increase their processing quantity. The higher the income of the processors, the more they invest in the processing business, increasing the volume and quantity of oil palm processed. The method of processing had a positive and significant effect on the quantity of oil palm processing output ($P \leq 0.01$). This implies that the availability of improved methods of processing will increase the amount of oil palm processed. This is consistent with previous findings (Srinivasan *et al.*, 2021) that adopting improved processing methods encourages mass production, which can increase production quantity as well as income. The co-efficient of high transportation costs was negative and statistically significant at 10%, indicating that a unit increase in transportation costs results in 4.44 tons decrease in the amount of oil palm processed while all other factors remain constant. This is consistent with the findings of Julius *et al.* (2020) who identified high transportation costs as one of the major challenges confronting palm oil processors. The results show that the remaining variables are not statistically significant, indicating that they are unlikely to have a significant impact on the amount of oil palm production output in the studied population.

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Table 4: Factors Affecting Quantity of Oil Palm Processing

Variables	Linear	Cob-Douglas	Exponential	Semi Log
Price of palm fruit	-3.5045(0.001)***	-2.3605(0.000)***	-3.7345(0.001)***	-2.6312(0.000)***
Educational level	0.6311(0.197)	0.4868(0.174)	1.3012(0.178)	0.9197(0.201)
Age	0.2421(0.389)	0.2798(0.231)	0.4712(0.301)	0.3891(0.432)
Years of experience	0.8755(0.834)	0.4165(0.453)	0.6532(0.21)	0.8341(0.314)
Annual income	9.6241(0.046)**	10.2312(0.034)**	7.1351(0.043)**	7.0157(0.041)**
Cost of Labour	0.0004(0.128)	0.0003(0.113)	0.0012(1.53)	0.1282(0.153)
Method of processing	23.3025(0.000)***	25.9683(0.000)***	19.692(0.041)**	9.3511(0.051)*
Cost of transportation	-4.4465(0.056)*	-2.4309(0.054)*	1.3571(0.91)	-0.8561(1.56)
Fluctuation in market price	2.4044(0.632)	1.0666(0.431)	2.1623(0.481)	0.9345(0.632)
Inadequate processing facility	-2.0465(0.388)	-2.3605(0.351)	-2.1462(0.412)	0.0014(1.517)
Constant	-29.1329(0.080)	10.4977(0.061)	-9.2191(0.079)	4.0103(0.071)
F(10,123)	6.57	8.413	4.507	5.811
P>F	0.0000	0.0000	0.000	0.000
R-Square	0.7641	0.8130	0.6634	0.6232

Note: ***, **, *significant at 1%,5% and 10%, respectively.
Source: Field survey, 2022.

Test of Hypothesis

Table 5 shows that the paired sample t-test results show a positive significant relationship between the method of oil palm processing and the quantity of oil palm processed. The quantity of production increases as production methods improves. Furthermore, the paired sample t-test shows that there are significant differences between the method of production used and the amount of oil palm processing in the study area".

Table 5: Paired sample test of the method of oil palm processing and the quantity

Variable	Mean(₦)	Std.dev	Std. mean error	t-value	df	Sig.
Methods of Processing	0.65(134)	0.48	0.04			
Quantity of Processing	28.42(134)	29.80	2.58	-10.83	133	0.000

Source: Field survey, 2022.

Problems Militating Against Oil Palm Processing Activities

Table 6 depicted the distribution of respondents' responses based on the problems encountered in oil palm processing. With a mean value of 4.5, the results revealed that inadequate finance was the most serious issue confronting oil palm processors. The findings compare favorably with similar findings (Emokaro and Ugbekile 2014; World Bank, 2018), indicating that insufficient finance is the most serious problem confronting palm oil processors in Ovia North East and lkpoa-okha Local Government Areas of Edo State. Efforts to improve the financial strength of oil palm processors through grant provision may serve as a motivator for the processors. With a mean value of 3.1, the most common problem encountered by oil palm processors was a lack of skilled labor. This is due to the fact that the majority of the processors had extensive processing experience, with a mean value of 13 years (Table 1) in processing activity. Experience is critical because it provides processors with an efficient method of processing. Other issues confronting oil palm processors include high transportation costs, a poor road network, price fluctuations, insufficient storage facilities, poor market information, and a large number of retailers, as well as their mean values.

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Table 6: Severity of the Problems Militating Against Oil Palm Processing

Problems	Strongly Agree	Agreed	Undecided	Disagreed	Strongly Disagree	Mean score
Inadequate finance	56.1	38.8	2.2	2.2	0.7	4.5
High cost of transportation	45.5	47.3	1.5	3.7	2.0	4.4
Price fluctuation	33.6	31.3	25.4	8.2	1.5	3.9
Inadequate storage facilities	29.9	47.8	6.7	13.4	2.2	3.9
Many retailers	17.2	23.9	31.3	22.4	5.2	3.2
Poor market information	28.4	36.6	9.7	16.4	9.0	3.6
Lack of skilled labour	17.9	31.3	11.2	20.9	18.7	3.1
Government policies	26.9	44.0	11.9	11.9	5.3	4.0
Poor road network	42.5	43.3	10.4	2.2	1.6	4.2
Inadequate process	33.6	47.8	7.5	9.6	1.5	4.0

Sources: Field survey, 2022

CONCLUSION AND RECOMMENDATIONS

According to the finding's, increasing productivity is the primary mechanism for sustaining a long-term profit without resorting to higher food prices for consumption. In light of the problems, observations, and prospects of palm oil processing in the study area, it can be seen from the results that palm oil enterprise can be a viable venture if properly managed. The following recommendations were made:

1. To alleviate the drudgery of female processors, major stages of operations such as fruit digestion and oil extraction are being mechanized. This mechanization must be woman-friendly and easily handled by women. Also, processors should be encouraged to use these machines because it reduces standard day labor per operational cycle, which reduces labor costs. Other less physically demanding tasks, such as fruit separation and fiber/nut separation, can be outsourced to elderly women and unemployed youth.
2. It is no longer a secret that many women have difficulty obtaining credit to start or expand their businesses. Aside from the National Agricultural Cooperatives and Rural Development Bank's (NACRDB) existing facilities, more accessible loan schemes exclusively for women in various levels of government should be made available, as should a program to monitor loan beneficiaries for repayment.
3. Provision of an enabling environment and basic infrastructures to improve on the women productive capacity. The infrastructures should include modern well-staffed hospitals and Primary Health Care Centres, good feeder roads and transportation schemes, portable water project, rural electricity and storage facilities.

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