Global Journal of Agricultural Research, 13 (1), 36-46, 2025
Print ISSN: 2053-5805(Print),
Online ISSN: 2053-5813(Online)
Website: https://www.eajournals.org/
Publication of the European Centre for Research Training and Development -UK

Socio-Economic Determinants of the Performance of Small-Scale Palm Oil Producers in Abia State

Eruba Dimgba[1], Data Irene Ekine[2], Andrew Iboh Okidim[3], Rachael Elo-Oghene Morris[4]
[1, 2, 3 & 4] Department of Agricultural & Applied Economics, Rivers state University, Port Harcourt, Rivers State

doi: https://doi.org/10.37745/gjar.2013/vol13n13646 Published June 01, 2025

Citation: Dimgba E., Ekine DI, Okidim AI, Morris RE (2025) Socio-Economic Determinants of the Performance of Small-Scale Palm Oil Producers in Abia State, *Global Journal of Agricultural Research*, 13 (1), 36-46

Abstract: *This study examines the socioeconomic determinants of palm oil production among smallholder farmers in Abia State, focusing on four local government areas: Isiala Ngwa North, Obingwa, Ukwa East, and Ukwa West. Primary data were obtained using a well-structured questionnaire from 312 small-scale palm oil producers in the study area. The data were analysed using descriptive statistics, mean ratings and ordered logit regression. The descriptive statistics showed that oil palm production in the study area is predominantly female led, with an average age of about 46 years and average household size and monthly income of 4 persons and 128,000 naira, respectively. The ordered logit regression results showed that socioeconomic factors such as age, education, household size, years of experience, income and tax are significant determinants of palm oil production in the study area. In particular, age and tax significantly decrease the probability of reporting output growth (from low, moderate to high) by 6.07% and 0.94%, respectively. Interestingly, household size and education significantly increase the probability of reporting output growth (from low, moderate to high) by 0.5% and 4.3%, respectively. Similarly, income and years of experience in the palm oil processing significantly increase the probability of reporting output growth (from low, moderate to high) by 3.6% and 6.3%, respectively. This finding highlights the importance of income and years of experience in enhancing palm oil production in Abia State. In addition, the results showed that the constraints affecting palm oil production in the study area include difficulty in acquiring modern processing equipment, inadequate access to funding, high cost of hired labour, high processing cost, lack of storage facilities, and quick deterioration of palm fruits. Given the findings, this study recommends that the Abia State Government should encourage people to venture into palm oil production at a young age to reduce the negative implications of age on the performance of small-scale palm producers.*

Keywords: palm oil, smallholder farmers, output growth, income, education and Abia State

INTRODUCTION

Palm oil (Elaeis guineensis) is widely recognised as an important resource following its significant contribution to agricultural output and rural livelihoods. Globally, palm oil production increased from 1.2 million metric tons in 1964 to a staggering 73.3 million metric tons by 2018 [United States Development Agency (USDA, 2020]. Before the discovery of crude oil, Nigeria was recognised as the

world's largest producer of palm oil, which predominantly thrives in the southern regions, especially within the wet rainforests and the savannah belt (see Nse-Nelson, Mejeha, & Oke, 2021; Chiemela *et al.*, 2021; Aminu & Umoh, 2020). According to Chiemela *et al.* (2021), about 90% of palm oil production in Nigeria relies on traditional techniques. These age-old methods can be quite labour-intensive and demand a significant amount of manpower.

Palm oil production in Nigeria is primarily dominated by small-scale farmers who still rely on traditional and rudimentary methods (Nse-Nelson, Mejeha, & Oke, 2021). According to the Food and Agriculture Organisation (FAO, 2023), smallholders, who account for 80% of Nigeria's total oil palm production, depend largely on traditional farming and processing techniques. This approach often leads to small landholdings, low productivity, and a limited resource base, which ultimately results in low yields per hectare and minimal income. However, the gradual shift towards using high-tech mills by palm oil producers is very commendable.

Furthermore, palm oil production is a vital part of the rural economy in many southern Nigerian states, including Abia State. It is believed that palm oil production plays a crucial role in Abia State, serving as an essential source of food, employment, and income, as many smallholder farmers are actively involved in its production, processing, or marketing. Sanusi et al. (2022) highlight the economic benefits of palm oil production, which include producing food for human consumption, creating employment opportunities for citizens, supplying raw materials to industries, and generating income for farmers and palm oil processors. Ejike (2021) argues that palm oil plays a crucial role in the global market for oil consumption and international trade, making it one of the most widely produced and utilized vegetable oils worldwide.

Beyond its numerous applications, palm oil is seen as part of many food products, cosmetics, animal feed, and even bioenergy. The oil extracted from oil palm is not only excellent for home cooking but also has various industrial uses and is vital for international trade, generating significant foreign currency earnings for countries (Egwu, 2024). Additionally, palm oil is a key ingredient in producing detergents, soap, margarine, confectionery, epoxy resins, and baked foods, and it also serves as an additive in animal feed (Obayelu, Ayodeji & Adeoye, 2022). However, the performance of small-scale palm oil producers is shaped by a wide range of factors, many of which are deeply connected to the socioeconomic conditions in their area. In particular, socioeconomic factors, including access to finance, availability of land, education levels, and market access, among others, play a crucial role in influencing how well these producers operate and how productive they can be.

In Abia State, where palm oil farming is a longstanding tradition, these socioeconomic factors are particularly important in determining the performance of these small-scale producers. Even with the potential for growth in the palm oil industry, many of the small-scale palm oil producers encounter hurdles that impact their performance, such as limited access to financial resources, inadequate infrastructure, lack of agricultural support services, and uncertain market conditions. Thus, it becomes imperative to explore how these socioeconomic factors affect the performance of small-scale palm oil producers. This is considered imperative to guide effective interventions and support for this important agricultural subsector for increased productivity and value addition. Despite the potential of palm oil production to drive economic development and reduce poverty, previous studies have not sufficiently explored how socioeconomic factors influence the production efficiency and sustainability of this sector. In this context, this study aims to examine the socioeconomic determinants of palm oil production in Abia State to improve production practices, enhance livelihoods, and foster sustainable economic growth in the state.

Global Journal of Agricultural Research, 13 (1), 36-46, 2025
Print ISSN: 2053-5805(Print),
Online ISSN: 2053-5813(Online)
Website: https://www.eajournals.org/
Publication of the European Centre for Research Training and Development -UK

METHODOLOGY

Study Area

This study was restricted to Abia State with a focus on four local government areas (Isiala Ngwa South, Obingwa, Ukwa East and West) in the Aba Agricultural Zone. The state was established from Imo State on August 27, 1991 and lies between longitudes 7º 231 and 8º 21 East of the Equator and latitudes 4° 471 and 6º 121 North of the Greenwich Meridian. The state shares its borders with Cross River and Akwa Ibom States to the east, Ebonyi and Enugu States to the north, Imo State to the west, and Rivers State to the south. The dominant economic activity and main source of employment in the State is agriculture, and farming is mainly subsistence due to the rich soil that nurtures a variety of crops such as yam, cassava, cocoyam, melon, maize, oil palm, garden egg, and cocoa. However, major livestock include poultry, goats, pigs, and sheep.

Figure 3.1: Map of Abia State

Research Design

For this study, a survey research design was employed. According to Collis & Hussey (2003), using a survey research design is crucial for data collection, selecting a sample for the study, and making inferences about the larger population based on the findings.

Population of the Study

The population of this study comprised all the small-scale palm oil processors in Obingwa, Ugwunagbo Ukwa East and West LGAs of Abia State. Following the report by Abia State Ministry of Agriculture, the number of small-scale farmers in Obingwa, Ugwunagbo Ukwa East and West stood at 1960, 1104, 2064 and 3108, respectively. Thus, the total population for this study include 8236 scale-scale farm oil producers.

Sampling Technique and Sample Size

The sampling procedure employed in this study was a combination of a purposive and multistage sampling procedure. The first stage involved purposively selecting four (4) LGAs (Obingwa, Ugwunagbo, Ukwa East and West) following the predominance of palm oil processing activities. The second stage involved selecting three (3) autonomous communities from each of the LGAs to give a total of twelve (12) autonomous communities. Stage three will involve selecting two (2) communities from each of the (12) autonomous communities to give a total of twenty-four (24) communities. The last stage involved purposive selection of thirteen (13) small-scale palm oil producers from each village, to give a total of three hundred and twelve (312) respondents who formed the sample size for the study.

Method of Data Collection

The primary data required for this study was collected using a structured questionnaire. The items for each construct were structured to capture the specific research objectives. In the design of the questionnaire, the four (4) point Likert scale method of strongly agreed (SA), agreed (A), disagreed (D), and strongly disagreed (SD) was adopted.

Data Analysis Techniques

This study employs descriptive statistics of frequency counts and simple percentages to analyse the socioeconomic characteristics of the respondents. More importantly, the ordered logit regression model (OLM) was employed to estimate the probability of reporting output growth from low, moderate to high based on changes in each of the social and economic factors. The rationale for the choice of OLM stems from the idea that output growth, which is measured as a discrete outcome, can be ordered to elicit more robust and representative information. In this context, the dependent variable in the OLM is categorised as polychotomous responses (which involve more than two outcomes) rather than dichotomous responses (which deal with just two outcomes). According to Grilli & Rampichini (2015), the ordered logit model is well-suited for ordinal response variables. One major benefit of using the OLM in contrast to the Ordinary Least Squares (OLS) method is that it treats the dependent variable as ordered categorical data (Greene, 2008). The mean rating was employed to identify the challenges faced by the small-scale palm oil producers in the study area. Given a four-point Likert scale, the decision rule requires that a listed challenge is accepted if the computed mean score is greater than or equal to the critical mean of 2.5.

Model Specification

This study closely followed the work of Egwu, Odoh & Eze (2023) with some modifications following the use of the ordered logit model and improvements in the socioeconomic indicators. The functional specification of the model is as follows:

OGR = f(AGE, HHS, EDU, YEX, INC, COL, ACC, COM, TAX) (3.1)

Where: OGR = output growth in terms of quantity of palm oil produced
AGE = age of the farmers
HHS = household size
EDU = education level
YEX = years of experience
INC = average monthly income of the farmers
COL = cost of labour
ACC = access to credit
COM = level of competition among the palm oil producers
TAX = tax paid to the government

The representations of the functional equations as ordered logit regression models are provided below:

$$P(OGR_i=j) = \frac{exp(\pi_0+\pi_1 AGE+\pi_2 HHS+\pi_3 EDU+\pi_4 INC+\pi_5 YEX+\pi_6 COL\,\pi_7 ACC+\pi_8 COM+\pi_9 TAX)}{1+exp(\pi_0+\pi_1 AGE+\pi_2 HHS+\pi_3 EDU+\pi_4 INC+\pi_5 YEX+\pi_6 COL\,\pi_7 ACC+\pi_8 COM+\pi_9 TAX)} \quad (3.2)$$

Where: $P(OGR_i = j)$ = Probability of each small-scale oil palm producer selecting alternative j from the ordered outcomes (low, moderate, and high) for output growth

$exp(\pi_0 + \pi_1 AGE + \pi_2 HHS + \pi_3 EDU + \pi_4 INC + \pi_5 YEX + \pi_6 COL\,\pi_7 ACC + \pi_8 COM + \pi_9 TAX)$ = probability of reporting improvement in output growth from low, moderate to high by the small-scale oil palm producers given changes in the socioeconomic factors.

$exp(\pi_0 + \pi_1 AGE + \pi_2 HHS + \pi_3 EDU + \pi_4 INC + \pi_5 YEX + \pi_6 COL\,\pi_7 ACC + \pi_8 COM + \pi_9 TAX) =$ probability of not reporting improvement in output growth from low, moderate to high by the small-scale oil palm producers given changes in the socioeconomic factors.

RESULTS AND DISCUSSIONS

Socioeconomic Characteristics of the Respondents

The descriptive statistics of frequency counts, simple percentages and mean values formed the basis for analysing the socioeconomic characteristics of the sampled small-scale palm oil producers. The results are summarised in Table 1.

Table 1: Socio-economic characteristics of the respondents

Variable	Frequency (N=312)	Percentage (%)	Mean
Sex			
Male	145	46.47	
Female	167	53.53	
Age (Years)			
18-30	58	18.59	
31-40	58	18.59	46
41-60	113	36.22	
61-70	56	18.27	
>70	26	8.33	
Marital Status			
Single	77	24.68	
Married	139	44.55	
Divorced	74	23.72	
Widow/Widower	22	7.05	
Household			
≤ 2	78	25.00	
3-4	86	27.56	
5-6	76	24.36	4 Persons
≥ 7	72	23.08	
Educational Status			
No formal education	135	43.27	
Primary	80	25.64	
Secondary	69	22.12	
Tertiary	28	8.97	
Average income (Naira)			
NGN30,000-NGN80,000	71	22.76	
NGN81,000-NGN150,000	91	29.17	NGN128,000
NGN151,000-NGN200,000	84	26.92	
≥ NGN201,0000	66	21.15	
Cost of hired labour (Naira)			
NGN2,000-NGN5,000	75	24.04	
NGN6,000-NGN10,000	78	25.00	NGN14,000
NGN11,000-NGN17,000	80	25.64	
≥ NGN18,0000	79	25.32	
Extent of competition			

No competition	80	25.64	
Low competition	93	29.81	
High competition	63	20.19	
Very high competition	76	24.36	
LGA			
Isiala Ngwa South	72	23.08	
Obingwa	73	23.40	
Ukwa West	104	33.33	
Ukwa East	63	20.19	

Source: Author's computation (2025) from Field Survey

It is evident from the sex distribution of the respondents that 145 (46.47%) of the small-scale farmers in the survey are male, while 167 (53.53%) are female. This shows that the majority of the sampled respondents are female, indicating that palm oil production in the study is a female-dominated livelihood. This aligns with the findings of Egwu, Odoh & Eze (2023) and Sanusi et al. (2022), who reported that palm oil production is a significant livelihood dominated by smallholder female farmers. It also highlights the increasing role of females in livelihood activities in the southeast region.
The age distribution of the respondents, as reported in Table 4.2, shows that the average age of the total respondents in the survey stood at 46 years, indicating that the majority of the sampled respondents are in their active working age. In particular, the age distribution shows that 58 (18.59%) respondents are within the age group of 18-40 years, while 113 (36.22%) respondents are within the age group of 41-60 years. Further analysis showed that 56 (18.27%) respondents are within the age group of 61-70 years, while only 26 (8.33%) respondents are more than 70 years old. In sum, the results showed that the majority of the respondents are within the age group of 41-60 years, indicating that they are in the working age with potential for high growth. The mean age (46 years) of the sampled smallholder palm oil producers is consistent with the findings of Nse-Nelson, Mejeha & Oke (2021), who reported that the socioeconomic profile of the wholesalers revealed that the average age was 47 years.

Furthermore, the distribution of the sampled smallholder palm oil producers based on their marital status showed that 77 (24.68%) are single, 139 (44.55%) are married, 74 (23.72%) are divorced, while 22 (7.05%) are widows/widowers. Thus, it follows from the results that the majority of the sampled respondents are married, which could be linked to the increasing responsibility associated with married life. This finding is in tandem with the findings of Chiemela *et al.* (2021), who reported a large population of married smallholder farmers involved in palm oil livelihood in Nsukka, Enugu State.

The distribution of the respondents based on their household size showed that 78 (25.00%) respondents have less than or equal to 2 persons, 86 (27.56%) respondents have 3 to 4 persons, 76 (24.36%) have 5 to 6 persons, while 72 (23.04%) respondents have a household size that is greater or equal to 7 persons. In sum, the results showed that the majority of the sampled respondents have a household size of 3 to 4 persons, with an average of 4 persons. This is similar to the findings of Nse-Nelson, Mejeha & Oke (2021), who found that the household size of the wholesale palm oil marketers ranged between 4 and 6 persons. The relatively small household size may lead the farmers to resort to hiring labour to boost their production.

In addition, the educational distribution of the smallholder palm oil producers showed that 135 (43.27%) respondents have no formal education, 80 (25.64%) respondents have primary education, 69 (22.12%) respondents have secondary education, while only 28 (8.97%) respondents have tertiary education. In sum, the results showed that the majority of the respondents are not educated. This finding is not in agreement with the findings of Obayelu, Ayodeji & Adeoye (2022), which showed that a large proportion of palm oil producers had secondary education. The income distribution of the sampled respondents showed an average income of 128,700 naira for the smallholder palm oil producers in the

survey. In particular, the results showed that 71 (22.76%), 91 (29.17%), and 84 (26.92%) reported a monthly income rage of 30,000 - 80,0000 naira, 81,000 - 150,0000 naira and 151,000 - 200,0000 naira, respectively, while 66 (21.15%) respondents reported a monthly income of 201,000 naira and above. This finding showed that palm oil processing offers a good opportunity for an increase in the income of the smallholder farmers in Abia state.

The descriptive statistics showed that the majority of the respondents (25.64%) spent between 11,000 and 17,000 naira on hired labour. This is followed by 79 (25.32%) respondents who spent 18,000 naira and above on hired labour. However, only 75 (24.04%) respondents spent between 2,000 and 5,000 naira on hired. With most of the respondents spending between on 11,000 and 17,000 naira on hired labour, it suggests that the palm oil producers depend largely on hired labour to boost their production. The distribution of the respondents based on the extent of competition in their various localities showed that 80 (25.64%), 93 (29.81%), 63 (20.19%), and 76 (24.36%) respondents reported no, low, high and very high competition in their localities. It follows from the findings that the majority of the small-scale palm oil producers reported low competition in the study area. Further analysis showing the distribution of the respondents based on their LGA indicates that most of the respondents, representing 33.33%, are from Ukwa West. This is followed by Obingwa and Isiala Ngwa South LGAs with 73 (23.40%) and 72 (23.08%) respondents, respectively. However, Ukwa East LGA has 63 (20.19%) respondents. This highlights the predominance of small-scale palm oil producers in Ukwa West LGA among the sampled LGAs.

Summary Statistics on the Output of Small-Scale Palm Oil Producers

The respondents' opinions on their output over the study period are summarised using descriptive statistics in Table 2.

Table 2: Summary of the respondents' opinion on their output

Household savings	Freq.	Percent	Cum.
Low	103	33.01	33.01
Moderate	118	37.82	70.83
High	91	29.17	100.00

Source: Author's computation (2025) using STATA 17.0

The results showed that 103 (33.01%) of the respondents in the survey reported low output while 118 (37.82%) of the respondents reported moderate output. However, only 91 (29.17%) of the respondents reported high output. Overall, the majority of the respondents reported moderate output, which could be attributed to the predominance of traditional processing method and their small-scale level of production.

Analysis of the Socioeconomic Implications on the Output of the Small-Scale Palm Oil Producers in the Study Area

The respondents' perceptions of the implications of socioeconomic factors on their output are analysed using mean scores and their corresponding standard deviations. The results are presented in Table 3

Table 3: Mean ratings of the respondents' opinions on the perceived implications of the socioeconomic factors on palm oil production in the study area.

Item	Mean	Std. dev.
Increase in age reduces the output of palm oil producers	2.544	1.07
Increase in household size increases the output of palm oil producers	2.571	1.15
Education increases the potential of output growth	2.535	1.13
Income provides a boost for the growth of output of palm oil producers	2.896	1.14
High cost of labour reduces the output of palm oil producers	2.58	1.12
Access to credit increases the output level among palm oil producers	2.5	1.11
Competition among palm oil producers increases output	2.571	1.114
Payment of taxes reduces the potential output growth	2.509	1.122
Grand Mean	2.588	

Source: Author's computation (2025) using STATA 17.0
Note: Critical mean = 2.5

The mean scores and the corresponding standard deviations showed that the respondents agreed that an increase in age reduces the output of palm oil producers. This follows the fact the mean score of 2.544 is greater than the critical mean of 2.5. Similarly, the respondents affirmed that an increase in household size increases the output of palm oil producers, given that the corresponding mean score (2.571) is greater than 2.5. This indicates that increasing the household size is important in boosting the quantity of palm oil produced by the smallholder farmers. The results further showed that the respondents agreed that income and education increased the potential of output growth because their associated mean scores are greater than the reference mean of 2.5. It is also evident from the results that the respondents agreed that the high labour cost and payment of taxes reduce the output of palm oil producers. The results showed that access to credit and competition increase the output level among palm oil producers. Overall, the results showed a grand mean of 2.588, which is greater than 2.5, indicating that the respondents agreed with all the foregoing implications of socioeconomic factors on smallholder palm oil producers in the study area.

Model Estimation

As previously explained, the ordered logit regression model was estimated to analyse the probability of output growth based on the socioeconomic characteristics of the small-scale palm oil producers. The marginal effects results are presented in Table 4.

Table 4: Summary of marginal effects results

Dependent variable: OGR						
Variable	dy/dx	Std. err.	z	P>|z|	[95% C.I.]	X
AGE	-.0607***	.0173	-3.51	0.000	-.094612 -.026798	3.08333
HHS	.0050**	.02195	2.61	0.024	-.045114 .060919	2.45192
EDU	.0438**	.02093	2.10	0.036	-.084887 -.062848	2.50962
YEX	.0635***	.02105	3.02	0.004	-.017674 .064833	2.57692
INC	.0364***	.01137	3.20	0.001	-.005386 .078367	2.5
COL	-.0096	.02166	- 0.45	0.656	-.032798 .052114	2.46795
ACC	-.0188	.02916	-0.65	0.517	-.076055 .038261	1.9359
COM	-.0013	.02216	-0.06	0.950	-.04483 .042052	2.54487
TAX	-0.0094**	.00371	-2.54	0.045	-.02017 .785412	7299.75
Pseudo R^2	0.3734			Prob > chi2	0.0065	

Source: Author's computation (2025) using STATA 17.0
Note: *** p<0.01, ** p<0.05, * p<0.1 denote significant at 1%, 5% and l0% level respectively

The marginal effects result in Table 4 show the probability of reporting output growth given a change in each of the socioeconomic factors. The results showed that age significantly decreases the probability of reporting output growth (from low, moderate to high) by 6.07%. This finding indicates that an increase in age reduces the potential to process a greater quantity of palm oil among the sampled smallholder farmers. Similarly, taxes paid significantly reduce the probability of reporting output growth (from low, moderate to high) by 0.94%. This highlights the adverse implications of tax payment on the productivity of small-scale palm oil producers. On the other hand, the results showed that household size and education significantly increase the probability of reporting output growth (from low, moderate to high) by 0.5% and 4.3%, respectively. This suggests that an increase in household size and education level offers more opportunities for output growth.

The results further showed that years of experience in the palm oil processing significantly increase the probability of reporting output growth (from low, moderate to high) by 6.3%. This suggests that more years of experience enhance output growth. It is also evident from the results that income significantly increases the probability of reporting output growth (from low, moderate to high) by 3.6%. This finding highlights the importance of income in promoting output growth. However, the results showed that the cost of labour, access to credit, and the extent of competition do not significantly reduce the probability of reporting output growth (from low, moderate to high). The pseudo R-squared of 0.3734 indicates that 37.34% of the total variations in output growth are jointly explained by changes in the socioeconomic factors. Additionally, the probability value (0.0065) of the chi-square statistic is less than 0.05, indicating that the socioeconomic factors are jointly significant in explaining changes in output growth

Analysis of the Constraints to Palm Oil Production in the Study Area

The respondents' opinions on the constraints to palm oil production in the study area were analysed using mean ratings. The results are presented in Table 5.

Table 5: Summary of mean and standard deviation on the constraints to palm oil production

Constraint	Mean	Std. dev.	Remark
Inadequate access to funding	2.532	1.116	Agreed
Inadequate access to improved seedlings	2.493	1.142	Disagreed
High cost of hired labour	2.599	1.112	Agreed
High processing cost	2.5	1.164	Agreed
Lack of storage facilities	2.773	1.123	Agreed
Quick deterioration of palm fruits	2.564	1.117	Agreed
Incidence of pests and diseases	2.319	1.108	Disagreed
Difficulty in acquiring modern processing equipment	2.916	1.090	Agreed
Grand mean	2.587		

Source: Author's computation (2025) using STATA 17.0
Note: Critical mean = 2.5

The results in Table 5 provide a summary of the respondents' opinions on the constraints associated with palm oil production in the study area. Using 2.50 as the critical mean, the results showed a grand mean of 2.587, indicating that the sampled small-scale palm oil producers agreed that all the constraints listed in Table 4.5 pose a threat to their production. In particular, the respondent agreed that difficulty in acquiring modern processing equipment is the most significant constraint they face in their study area, given that it is associated with the highest mean score. This is followed by the lack of storage facilities and high cost of hired labour. The results further showed that other constraints affecting their

production include inadequate access to funding, high processing costs, and quick deterioration of palm fruits. This is based on the fact that these constraints are associated with mean scores which are greater than the critical mean of 2.5. However, the respondents failed to agree that the inadequate access to improved seedlings and the incidence of pests and diseases are constraints to their palm oil production, given that the corresponding mean scores of 2.493 and 2.319 are less than the critical mean of 2.5.

CONCLUSION AND POLICY INSIGHTS

This study examines how socioeconomic factors such as age, household size, education, years of experience, average monthly income, cost of labour, access to credit, competition and taxes affect the performance of palm oil producers with emphasis on their output growth. The findings showed that age and taxes paid contributed negatively to output growth. This highlights that each additional year of age and an increase in taxes impede output growth among the small-scale palm oil producers in the study area. The results also indicate that both education level and family size play a significant role in boosting the likelihood of reporting output growth. This is particularly interesting because it highlights how an increase in family size, along with a higher level of education, can lead to greater palm oil production in the study area. Additionally, the findings revealed that years of experience and income also contributed positively to output growth among the small-scale palm oil farmers surveyed in the study area. On the contrary, factors such as labour costs, access to credit, and competition have no significant impact on output growth. Moreover, the analysis highlighted several constraints faced by palm oil producers in the study area, including difficulties in accessing modern processing equipment, insufficient financial resources, high costs of hired labour and processing, a lack of storage facilities, and the rapid deterioration of palm fruit. Based on the findings, the study concludes that socioeconomic factors such as age, education, household size, years of experience, income and tax are significant determinants of palm oil production among the smallholder farmers in the study area. Thus, it is recommended that the Abia State government should prioritise vocational education and training on palm oil processing to enhance the positive contribution of education to output growth among palm oil producers in Abia State. It is also recommended that the Abia Ministry of Agriculture should synergise with the Agriculture Development Programme to ensure the establishment of a modern mill to boost palm oil production across the state.

REFERECES

Aminu, F. O., & Umoh, J. (2020). Factors influencing economic performance of palm oil producers in Akwa Ibom State, Nigeria. *International Journal of Oil Palm*, *3*(3), 69-77.

Chiemela, C. J., Ukwuaba, I. C., Ugbede, O. E., Ibe, J., & Onyekwe, C. N. (2021). Economics of palm oil production in Nsukka Local Government Area, Enugu State, Nigeria. *Journal of Agriculture and Food Sciences*, *19*(1), 78-88.

Egwu, P. N. (2024). Profitability Analysis of palm oil production in Igbo Etiti Local Government Area, Enugu State, Nigeria. *Global Journal of Pure and Applied Sciences*, *30*(1), 1-5.

Egwu, P., Odoh, N., & Eze, A. V. (2023). Socioeconomic determinants of palm oil production in Igbo Etiti Local government area in Enugu State, Nigeria. *International Journal of Economic, Business, Accounting, Agriculture Management and Sharia Administration (IJEBAS)*, *3*(5), 1425-1433.

Greene, W. H., & Hensher, D. A. (2010). *Modeling ordered choices: A primer*. Cambridge University Press.

Grilli, L., & Rampichini, C. (2015). Specification of random effects in multilevel models: a review. *Quality & Quantity, 49*, 967-976.

Nse-Nelson, F. A. (2021). Performance and profitability of palm oil wholesale marketing in Abia State, Nigeria. *Nigeria Agricultural Journal, 52*(1), 38-44.

Obayelu, A. E., Ayodeji, O. O., & Adeoye, O. P. (2022). Economics of Palm Oil Production Under Semi-Mechanized Processing Method in Afijo Local Government Area of Oyo State, Nigeria. *Nigeria Agricultural Journal*, *53*(3), 306-313.

Sanusi, M. M., Idowu, S. D., Akerele, D., & Olabode, T. S. (2022). Economic analysis of palm oil processing in Odogbolu Local Government Area, Ogun State, Nigeria. *Agro-Science*, *21*(2), 130-135.