

# **BORROWING BEHAVIOUR AMONG OIL PALM PROCESSORS IN IDEMILI NORTH LOCAL GOVERNMENT AREA IN ANAMBRA STATE, NIGERIA**

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## **Abstract**

The study analysed borrowing behavior among oil palm processors in Idemili North Local Government Area of Anambra State, Nigeria. A multi-stage sampling technique was employed in the selection of the 100 respondents. Primary data was collected with the use of structured questionnaire and personal interview with the respondents. Data were analyzed with the aid of descriptive statistics and multiple regression models. Results showed that 93% of the respondents demanded for and obtained between ₦100,000.00 – ₦250,000.00. Results of multiple regression analysis showed that processors age, output and farm size had significant positive influence on processors borrowing behavior with the exception of household size, income and marital status which had a significant negative influence on the behavior of the processors towards borrowing at various levels of probability. Based on the finding, the study recommended that young processors should be motivated with needed credit since they are innovative; males should also be encouraged to go into oil palm processing business, amongst other things.

**Keywords: Borrowing, Behaviour, Oil palm and Processors**

## **Introduction**

Palm oil is processed from the fruit of the oil palm (*Elaeis guineensis*). It is generally agreed that the oil palm originated in the tropical rain forest region of West Africa. Oil palm is found in both wild grooves and plantation in Nigeria. Oil palm is indigenous to the Nigerian coastal plain, having migrated inland as a staple crop (Carrere, 2001). Processing of oil from fresh fruits palm bunches (FFPB) for edible oil has been practiced in Africa for thousands of years and the oil produced, highly coloured and flavoured is an essential ingredient in much of the traditional West African cuisine (FAO, 2005). The report also stated that the traditional method of processing is simple but tedious and inefficient. The farm's production of fruits may be processed by the farmer, using the traditional method of oil extraction or sold to other processors. Among the small scale producers, palm oil is principally processed by traditional or semi- mechanized methods (Omereji, 2005). Palm oil is rich in carotenoids (pigments found in plants and animals) from which it derives its deep red colour and the major component of its glycerides is saturated fatty acid palmitic (FAO, 2005). Palm oil has traditionally been and will remain an essential diet of the people of Nigeria. With an ever-growing population, domestic and industrial consumption will continue to be on the increase (Omereji, 2005). According to Vogel (2002), the local demand for palm oil is substantial, and it is estimated that for every five people in Nigeria, perhaps two liters of palm oil or more are consumed each month for cooking. It is a common knowledge that most households in Nigeria use this important product for cooking. Palm oil has a diverse array of food and nonfood uses with the main ones being the manufacturing of edible fats, soap, candles, tin-plating for iron sheets, fuel for internal combustion engines and greases and lubricants (Armstrong, 1998; Rahman, 1998). They stated that edible fats industry mainly involving margarine, receives the greatest benefit from palm oil, due mainly to its preservation qualities.

Nigeria was before 1965, the world leading producer and exporter of palm oil, accounting for about 43% of world production and has since 1974 ceased to contribute to the export trade in the commodity, largely due to increased domestic demand in palm produce (Omoti, 2003). According to him, expansion in the industry has since then not kept pace with the growing domestic demand to enable the country to re-enter the export trade. The economic importance of oil palm processing is of great value, particularly for the rural population. Jobs are provided for thousands of villagers who otherwise may not have employment prospect (Armstrong, 1998). Processing of the palm fruits into palm oil involves series of activities, which include cutting of the palm bunches, transportation, loading and offloading, stripping; sterilization and oil extraction. Palm oil processing enterprise is mainly dominated by small scale processors. The methods and techniques of processing are highly traditional. In addition, obsolete equipment is mostly used in processing activities. Among small-scale producers, palm oil is principally processed by traditional or semi-mechanized methods whose system is highly inefficient (Omotoi, 2004). These methods are laborious, time consuming and inefficient and yield very low oil, often of poor quality and more often about 25 -75% of potential palm oil is lost during processing. High cost of processing equipment is a serious problem faced by processors. This problem had discouraged intending processors from establishing their own mills. Therefore majority of the processors resort to hiring of processing equipment and this had resulted to delay in processing of the palm fruits. Those who do not own mills face marketing problems during the peak season when fruit is abundant and processors do not have to forage for raw material (FAO, 2005).

The decline in the Nigerian economy particularly into the area of productivity has often been blamed on lack of credit facilities which prevented many processors from adopting improved practices, since some of them lack the collateral needed to secure loan or credit from financial institution (Tanko and Onyeweaku, 2009). It has been argued that inadequate level of agricultural credit facilities is a major factor preventing adoption of innovation technologies (Ater, 2003). Limited access to credits perpetuates poverty and low quality of life among processors' wish to adopt may be too expensive to procure if they have restricted access to credit facilities or do not have access at all (Kolade and Fakoya, 2011). Mbubaegbu (2014) as cited in Emerole *et al* (2014) noted that small-scale farmers in Nigeria have complained of denied access to loans from commercial banks on account of their inability to provide necessary collaterals demanded by the banks. Several other studies such as Osuala, Osuji and Emerole (2012); Obamuyi (2007) and Agbo and Chidebelu (2010) had indicated that formal credit institutions on their part have indicted small scale farm borrowers as customers on whom they incur high transaction costs with poor repayment of borrowed funds. However, despite the importance of credit to farmers (processors), they still face some challenges in the acquisition of it. This oftentimes leads to discouragement, and in the final analysis not contributing their quota in the employment, poverty and food security drive of the government. Therefore, in order to provide credits which will generate employment, reduce rural poverty and ensure food security among other things, there is need to know the borrowing behaviour among entrepreneurs, using oil palm processors in Idemili North local government area of Anambra state, Nigeria. The specific objectives of the study are thus to: (i) describe the socio-economic characteristics of the respondents; (ii) examine the volume of credit demanded by the respondents; and (iii) estimate the factors that influence borrowing behavior of the processors in the study area.

## **Methodology**

The study was carried out in Idemili North Local Government Area of Anambra State. The local government is made up of ten communities which includes Abacha, Abatete, Eziowelle, Ideani,

Nkpor, Obosi, Ogidi, Oraukwu, Uke and Umuoji. It has a population of 430,783 people (NPC, 2006). A multistage sampling technique was adopted for the study. Ten respondents were randomly selected from each village to give a total of 100 respondents. Palm oil processing is one of the major economic activities of the rural people of Idemili North Local Government Area of Anambra State. Structured questionnaire as well as personal interview was the instrument used to collect primary data from the respondents. Data for the study was analyzed using both descriptive and inferential statistics. Objective (i) and (ii) were analyzed using simple descriptive statistics such as mean, percentages and frequency distribution. Objective (iii) was analyzed using a multiple regression model. The Multiple Regression model to estimate the factors that influence borrowing behavior of the processors was specified below:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \beta_8 X_8 + \beta_9 X_9 + e_i + u$$

Where Y = Amount borrowed (₦)

$\alpha$  = coefficient on the constant term

$\beta$  = coefficient(s) on the independent variables.

- X<sub>1</sub> = Age (in years)
- X<sub>2</sub> = Sex (male = 1, female = 0)
- X<sub>3</sub> = Level of education (in years)
- X<sub>4</sub> = Farm Size (in hectares)
- X<sub>5</sub> = Marital status (married = 1, single = 0)
- X<sub>6</sub> = Household size (in number)
- X<sub>7</sub> = Experience (in years)
- X<sub>8</sub> = Income (in Naira)
- X<sub>9</sub> = Output (in liters)
- u = Error term

## Results and Discussion

The socio- economic characteristics of the processors in the study area is presented in Table 1 below. The result of the analyses on age showed that 56% of the processors were within the age range of 20-39 years while 38% were between 40-59 years. This implies that majority of processors are still in their productive and active age, who have the ability to withstand the vigor and stress involved in processing of palm fruits, since processors ability to cope with demands of the operations from processing activities decreases with advancing age (Onyenucheya and Ukoha 2007; Nwosu, 2004). The implication of the foregoing result is that processing of oil palm in the study area enjoys higher patronage by the young people who are energetic enough to withstand the stress involved in oil fruit processing. The finding showed that greater proportions of processors (65%) in the study area are females while 35% are males. This may be that processing activities, particularly palm fruit processing is taken as a female activity in the study area. It may also be that males now abandon agricultural production for white collar jobs in the cities (Osondu and Ibezim 2013). The study also shows that good proportion (63%) of the rural processors in the study areas were married while (37%) of the processors were single. This implies that the married classes were more involved in palm fruit processing because of the need to supplement the family's means of livelihood (Adegboye *et al*, 2008). The household size as shown in Table 1 showed that 56% of the processors had a household size of between 1-4 persons; 42% with 5 -9 persons while those between 10 – 14 persons accounted for only 2 %. The Table also showed that 87% of the processors' income ranged between ₦10,000 - ₦100,000, whereas only 2% were between ₦301, 000 - ₦400,000. From Table 1, it is showed that 9% of the farmers had no formal education; however, 91% of the processors in the study area were literate with diverse formal education at levels ranging from

primary to tertiary education. This implies that there is high level of literacy (ability to read and write) in the study area and this would enable the processors to better utilize effectively and efficiently whatever available resources in the area. The finding shows that 58% of the processors have experience in years ranging from 1-10 while 28% have experience 11-20 years. This could be explain why the demand for credits, given that they have had some years of experience in their processing activities.

**Table 1: Distribution of Socio-economic Characteristics of the Respondents**

<b>Variables</b>	<b>Frequency</b>	<b>Percentage n=100</b>
<b>Age</b>		
20-39	56	56
40-59	38	38
60-79	05	05
80 and above	01	01
Total	100	100
<b>Sex</b>		
Male	35	35
Female	65	65
Total	100	100
<b>Marital status</b>		
Single	37	37
Married	63	63
Total	100	100
<b>Household size</b>		
1-4	56	56
5-9	42	42
10-14	2	2
Total	100	100
<b>Income (₦)</b>		
10,000-100,000	87	87
100,001-200,000	4	4
200,001-300,000	3	3
300,001-400,000	2	2
400,001 and above	4	4
Total	100	100
<b>Level of education</b>		
No formal education	9	9
Primary	18	18
Secondary	23	23
Tertiary	50	50
Total	100	100
<b>Years of experience</b>		
0-10	58	58
11-20	28	28
21-30	10	10
31-40	3	3
41-50	1	1
Total	100	100

**Source: Field Survey Data, 2016.**

#### **Volume of credit demanded /obtained by the processors in the study area**

The volume of credits demanded and obtained by the processors in Idemili North local government area of Anambra state, Nigeria is presented in Table 2.

**Table 2: Distribution of Respondents according to Amount Demanded/ Obtained**

Amount Demanded/Obtained (₦)	Frequency	Percentage (%)
Less than 100,000	-	-
100,000 -250,000	80	93
250,001- 500,000	4	5
Above 500,000	2	2
<b>Total</b>	<b>86</b>	<b>100</b>

**Source: Field survey data, 2016**

The results as shown in the Table 2 indicated the amount demanded and obtained by the respondents. It showed that 93% of the respondents in the study area demanded amounts ranging between ₦10,000.00 - ₦250,000.00; while those who demanded between ₦250,001 and ₦500,000.00 and above ₦500,000.00 were 5% and 2% respectively. This shows that all the processors got the same amount applied. By implication, their demand or borrowing capacity are relatively small. This may be attributable to the fact that they do not need much in terms of mechanization or that they lack the collaterals to go for higher amounts.

### Factors that Influence the Borrowing Behavior of the Processors

Below is Table 3 which shows the Factors that Influence the Borrowing Behavior of the Respondents in the study area.

**Table 3: Multiple Regression Result of the Factors that Influence the Borrowing Behavior of the Respondents**

Variables	+ Linear	Double log	Semi log	Exponential
Constant	-288657.600 (-1.839)*	2.343 (0.320)	-2.009E6 (-1.511)	8.564 (4.643)***
Age	5450.131 (3.507)***	1.281 (0.682)	-703459.616 (-2.066)*	0.33 (0.801)
Sex	6124.797 (0.086)	-0.980 (-5.355)***	-100861.471 (-0.626)	-0.862 (1.040)
M/status	-148561.125 (-1.790)*	-0.185 (-0.168)	-30343.878 (-0.152)	-0.495 (-0.508)
Household size	-6484.87 (-2.955)***	-0.584 (-0.707)	-24412.929 (-0.162)	-0.057 (-0.324)
Income	-0.375 (-5.154)***	-0.052 (-0.142)	287404.408 (4.368)***	-2.027 (-2.371)*
Education	-8696.666 (1.263)	0.014 (0.011)	-365080.359 (-1.595)	-0.006 (-0.076)
Output	3080.040 (9.522)***	1.422 (3.129)**	278218.521 (3.359)**	0.011 (2.848)**
Experience	3428.768 (0.677)	-.322 (-0.479)	86268.346 (0.704)	-0.027 (-0.464)
Farm size	44834.652 (3.164)***	-.698 (-1.961)	77011.804 (0.496)	-0.093 (-0.558)
R <sup>2</sup>	0.874	0.457	0.490	0.354
F ratio	68.873***	7.315***	8.423***	1.594

**Source: Field Survey Data, 2016.**

Note: Figures in parameters are the t-values; \*\*\*, \*\*, \* denotes 1%, 5% and 10% level of significance. + = lead equation

From the above result, the linear functional form was chosen as the lead equation based on some econometric considerations such as the highest number of significant variables, high R<sup>2</sup> value and F

ratio. The  $R^2$  value of 0.874 implies that about 87.4% of the total variation in the dependent variable was accounted for by the independent variable while the remaining 13% are due to errors or some variables that were not included. An F ratio of 68.873 significant at 1% shows the overall significance of the regression line. From the result, age, marital status, household size, income, output and farm size were statistically significant at various levels, indicating these variables had some influence on the processors borrowing behaviour. Age was statistically significant at 1% level with a positive sign. This means that as age of the processors increases, the probability of increased borrowing to support their businesses increases. Age is often associated with reduced economic activities and thus reduced income. Given this the chances of increased borrowing to support their business may be plausible. This is in line with the findings of Muhammad *et al* (2012), Arene (1992), Ifeanyi and Blessing (2012) and Oni *et. al* (2006), but however contradicted by Ibeleme *et al* (2013), Nwosu *et. al* (2014) and Balogun and Alimi (1988) who opined that the younger the farmer, the higher the ability to borrow loan. This is because of the risk bearing abilities of the farmer.

Marital status of respondents was statistically significant at 10% level of probability with a negative relationship with the borrowing behavior. This meant that borrowing tend to reduce with marriage among the processors. The more the processors are married, the desire to borrow decreases. This may be because of the spirit of team work associated with marriage, particularly in the study area where it could be taken as a family business. The coefficient of household size was highly significant at 1% level and negatively related to borrowing by the respondents. This meant that with increasing number of household members, the tendency to borrow decreases. Larger households could be a source of labour, thus reducing the amount that should have expended on labour. This may eventually strike out the need to borrow. In another study on loan repayment among small scale farmers of Oyo State, Nigeria, Afolabi (2010) reported that household size had negative influence on borrowing which is in agreement with this finding. Income of the respondents was significant at 1% level and negatively related to borrowing of the respondents. This implied that increase in the income of the respondents could lead to a decrease in their borrowing behaviour. However one may look at it, the reason for borrowing is to raise funds for operations. Therefore, if processors could retain some of these incomes, then, there may be no need to borrow. Output of respondents was statistically significant at 1% level of probability with a positive relationship with the borrowing behavior. This implied that as the processors' output increases, their probability of borrowing increases. This is in line with Awotide *et al.*, (2015) and Ashaolu *et al* (2011). The coefficient of farm size was statistically significant at 1% and positively related to borrowing behavior. This implies that increase in the farm size leads to increase in the processor's demand for credit. Owners of larger farms would usually have high credit requirement that could necessitate external financing opportunities (Khalid, 2001). This is also in line with Ibeleme *et al* (2013).

## **Conclusion**

There is need to encourage processors particularly young processors. This may be in the form of credits and agricultural extension services. Males should be encouraged to go into the processing activities. This will not only create employment for them but will also increase household income and overall food security. Although cooperative membership was not part of the variables studied, its formation among processors is recommended. This will help the processors/members in the acquisition of inputs amongst other things which will boost their operations. In conclusion, the study examines the borrowing behavior among small scale oil palm processors in Idemili North Local Government Area, Anambra State, Nigeria. Majority of the processors were women. Their largest and major source of loan is from relative/friends/neighbor. The research has shown that the amount

requested and given to the processors is low. There are factors that have positive influence on the borrowing behavior of the oil palm processors surveyed such as their age, output and their farm size. Meanwhile, the multiple regression results of the estimated determinants of borrowing behavior of the processors with linear functional form as the lead equation. The major constraint that influences the borrowing behavior of the respondents is the need for collateral security from lending source.

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