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# Socio-demographic Determinants and Constraints to Savings and Investment among Cassava Processors in Etche Local Government Area, Rivers State, Nigeria

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**ABSTRACT:** The purpose of this study was to investigate the factors that influence and constrain savings and investment strategies among cassava processors in Etche Local Government Area, Rivers State, Nigeria. The specific goals were to learn about the socioeconomic characteristics of cassava processors, the determinants of savings and investment among cassava processors, and the challenges of savings and investment strategies among respondents. A structured questionnaire was used to select 168 cassava processors for the study using a multi-stage sampling technique. The significant factors of savings and investment were determined using descriptive analysis and multiple regression analyses. According to the findings, 68.5% of cassava processors were women, with the majority (78.57%) being under 40 years old, 78% being educated, and 78.57% having experience in cassava processing for 15 years. All factors had positive values and were significant at the 1% level, resulting in a 74.24% savings coefficient of multiple determination ($R^2$). Investment had a coefficient of multiple determination ($R^2$) of 66.70 %, with all variables significant at 1%. Savings and investment in cassava processing are positive in Etche Local Government Area of Rivers State (Nigeria), according to the study. As a result, it is suggested that modern processing facilities be subsidized in order to lower processing costs, encourage future investment, reduce drudgery, increase value addition, income, and, as a result, investment.

**Keywords:** Savings, investment, cassava, processors, determinants

## INTRODUCTION

Nigeria's agricultural sector provides food for the country's growing population as well as income for millions of smallholder farmers. Cassava (Manihot spp.) is one of the most widely grown food crops in River State's upland areas. Cassava is a crop with a wide range of uses. Cassava root can be processed into granulated substances known as "garri," which are widely consumed in Nigeria. Cassava is processed to produce starch, which is used in industry. Cassava is significant not only as a food crop, but also as a significant source of income for rural households. Processors are employed by cassava as an economic crop. Cassava is traditionally processed in Rivers State's Etche Local Government Area to produce a variety of shelf-stable intermediate and final products for a variety of food applications. "Garri," cassava chips that are then processed into cassava flour, is one of these products. Cassava processing produces tapioca as a minor product or by-product. Agro-processing activities at the village level are responsible for the preservation and distribution of the majority of

Nigeria's agricultural produce, and play a critical role in the post-harvest food system. These activities are the primary source of income for rural women (IFAD, 2007), who process root and tuber crops using age-old traditional techniques. For their scale of production, traditional methods are simple and convenient. In comparison to the requirements for modern high-tech processes, the equipment used for traditional processes is less expensive. Traditional technologies, on the other hand, produce low-yielding, time-consuming, labor-intensive, and low-quality products (Scott et al., 2002). This has made it difficult for these processors to save and invest.

Savings is the act of keeping something that should have been used in the present for use in the future. Investment is the act of ploughing money into a business, project, with an expected future outcome. Both terms are important for growth and development of an individual, community, State, and a nation at large. Money can be saved by the farmers for future use. Seeds can be saved by the farmer for future use instead of consuming everything harvested from the farms. The role of savings and investment in economic development is very important and it can be described as a driving force necessary for economic growth and development.

In a developing economy like Nigeria, saving is extremely important. This is due to the fact that it has a direct impact on the country's level of economic activity. Similarly, the amount of progress made in the agricultural sector will be largely determined by what farmers do with the extra income generated from their farming activities year after year. This is because the rate of growth in the farming economy is largely determined by the stock of capital built up in a farm organization and the plowing back of such stocks in the form of investment for further farm organization improvement. The nation's future economic development will be hampered if these increases are spent on household expenditures without the necessary infrastructure being built. Anyawu and Oaikhenan (2015) define saving as the amount of income not consumed by economic units over a given time period. It refers to the portion of a household's disposable income that is not spent on domestic goods or services. It is undistributed business profits for the company. Savings, according to Jhingan (2014), is defined as the difference between disposable income and consumption, or $S = Y - C$, where S represents savings, Y represents income, and C represents consumption. Savings is the portion of disposable income that is not spent immediately.

According to Ajayi (2018), investment can be defined as the act of putting money aside now in exchange for a future financial reward or the sacrifice of something now in exchange for the possibility of later benefits. In this context, the reward can take the form of an income stream, a single capital sum, or a combination of both. Many Nigerian farmers have become increasingly unable to invest adequately in their farming activities over the years.

As a result, cooperative movements have formed in order to achieve a common goal through democratically controlled business organizations. The most important economic obligation of cooperative society members is to save. Farmers save a set amount of money every day, week, month, or quarter, depending on what is most convenient for the group and individuals. This type of savings is important for agricultural production because it provides farmers or members with credit at the start of the farming season, potentially increasing farm production and income. Small-scale farmers, according to Odoemenem et al. (2005), invest their savings in two major areas. The agricultural and non-agricultural sectors are these.

The purchase of fertilizer and chemicals, as well as hired labor and the purchase of additional farmland, are all examples of investments in the agricultural sector or farm activity. While non-agricultural investment is primarily focused on education, trade expansion, house construction, dowry obligations, and the purchase of durable assets. Production or acquisition of real capital assets over a period of time is also referred to as investment (Jhingan, 2017). By increasing the production and purchase of capital goods, investment adds to capital equipment and leads to an increase in income and production. Investment is defined as the creation of real net capital through the enhancement of a person's farm or business setup's productive capacity. The mobilization of savings should be a significant source of funds for rural investment.

Saving and investment are essential engines for capital formation and economic growth in many developing economies, particularly Africa. Saving is said to be the foundation for capital formation, which is a key determinant of economic growth. However, data available indicates that this region of the world has a low saving and investment base. Savings from the agricultural sector, for example, increased by 21.6 % on average in Nigeria between 1980 and 2001. (based on World Bank DataBase).

Capital accumulation is a major prerequisite of economic development, according to the United Nations Organization in 2000, and if the volume of savings is insufficient to meet investment requirements, major bottlenecks in the capital formation process and the drive for development are likely to develop.

The amount of money invested is determined by the amount of money earned, the cost of obtaining investible funds, and the entrepreneur's expectations for future business trends. Farmers' saving behavior in developing countries, according to Ayanwale and Bamire (2010), is

more dependent on the relationship between current and expected income, the nature of business, household size, wealth, and demographic variables like age than on the absolute level of aggregate income. While holding other variables constant, this study looked at the sociodemographic factors that influence cassava processors' saving and investment behavior in Etche LGA, as well as the constraining factors.

The majority of farmers have limited resources, which limits their productivity, income, savings, and investment. In the midst of all of this, farmers have turned to a variety of methods to increase their output while also improving their socioeconomic well-being. These options includes pooling their resources and working together as members of cooperative societies, through the use of loan and other services from microfinance or community banks; making daily, weekly or monthly contributions through the formation of small savings and thrift groups or employing the method of risk diversification by engaging in the trading of other non-agricultural goods or in processing or value addition of agricultural produce into finished goods with longer shelf-life as agro-processors – those into the process of producing or sourcing for agricultural produce and converting them into finished goods for consumption.

The majority of rural households in Etche Local Government Area are small-scale farmers, and as a result, a significant portion of their non-farm income comes from small and medium enterprises (Yusuf, 2010; Olashore, 2018). In Nigeria, rural farmers account for over 80% of the country's farmers and produce 95% of domestic food production (Yusuf, 2010; Olashore, 2018). (SMEs). Poor credit access, low savings rates, risk and uncertainty, and bad weather are all characteristics of these rural entrepreneurs. The limited disposable income of small-scale farmers is a major stumbling block to tapping rural savings. The volume of savings and, as a result, the amount of capital that could be channeled into investment were determined by the level of income. The study was conducted to investigate the determinants and constraints to savings and investment among cassava processors in Etche Local Government Area, Rivers State, Nigeria, with the following specific objectives: to determine the socioeconomic characteristics of cassava processors; to determine the determinants of savings and investment among cassava processors; and to determine the challenges of saving and investment among cassava processors.

## MATERIALS AND METHODS

This study was conducted in the Etche Local Government Area of Rivers State, Nigeria. Etche Local Government Area (LGA), is situated in the North-Eastern part of

Rivers State. It has a landmass of about three thousand two hundred square kilometres (3,200.89km) and comprises seventy-eight rural settlements with a population of 197,971 (N.P.C., 2006) and made up of five (5) clans with Okehi as her administrative headquarters. In the north and northeast, it shares boundaries with Imo state. In the west, the Ikwerre Local Government Area bounds it. In the extreme South and Southeast by Obio-Akpor and Oyibo Local Government Area respectively (Gambo, 1996) and on the East by Omuma L.G.A.

Yam and cassava-based mixed cropping enterprises dominate small-scale farm holdings in the LGA. Other crops grown in the area include potatoes and cocoyam (Okoye and Onyenweaku, 2006). Farmers dominate the L.G.A. population, hence food production, processing and marketing constitute the major occupation, contributing significantly to savings and investment opportunities.

## Sample Size and Sampling Technique

A multi-stage sampling technique was used to select respondents for this study. The first stage was the purposive selection of the local government area (Etche) because it represents a typical rural agro-pastoral community. The assumption was that the saving propensities of the farmers in Etche ethnic nationality are likely to differ. Six communities were randomly selected at stage II out of the five clans in the study area. Finally, 20% of the processors was selected randomly across the six communities to arrive at 168 respondents. A list of 844 cassava processors was provided officially by the Agricultural Department of the Local Government Area. This list formed the sampling frame, out of which 168 respondents were randomly selected using the balloting technique.

## Analytical technique

Descriptive statistic such as % ages, means, and frequency distribution was used to achieve objectives i, multiple regression was used to analyze the determinants of savings and investment on the processors for objective ii,

## Multiple regression

A multiple linear regression model by Okoye and Onyenweaku (2006) was adapted and used to achieve objectives ii.

## Model specification

The model used for savings was specified as:

$$S = f(X_1, X_2, X_3, X_4, X_5, X_6, X_7, e) \ldots\ldots\ldots\ldots\ldots\ldots (1)$$

Where

S = Amount of Savings from cassava processing (₦)
$X_1$ = Age of farmer
$X_2$ = Marital status
$X_3$ = Farming experience (years)
$X_4$ = Education level (years)
$X_5$ = Household size (Number)
$X_6$ = Farm Size (ha)
e = Error term.

The general model can take several functional forms such as linear, semi log, double log and exponential. The criteria for selection include:

i.      Magnitude of coefficient of multiple determination ($R^2$)
ii.     Appropriateness of the signs of regression coefficient
iii.    Significance of t-values and F-values.

In using the linear functional form, a linear relationship was assumed to exist between the dependent and the independent variables. The equation may be written as follows:

$$S = b_0 + b_1x_1 + b_2x_2 + b_3x_3 + b_4x_4 + b_5x_5 + b_6x_6 + ei \quad (2)$$

Where:
S, e, $X_1 – X_6$ are as defined earlier
$b_0$=Constant term
$b_1 – b_6$ = Regression coefficients to be determined investment linear regression

$$Y = b_0 + b_1x_1 + b_2x_2 + b_3x_3 + b_4x_4 + b_5x_5 + b_6x_6 + ui \quad (3)$$

Where:
Y= Amount invested in cassava processing (₦)
$X_1 – X_6$ = as defined earlier in eq (1)
$b_0$= Constant terms
$b_1 – b_6$= Regression Coefficients
ui= Error term

The advantage of linear function was the ease with which it can be fitted with the ordinary least square (OLS) regression model. Its disadvantage was the assumption that all inputs are perfect substitutes of each other with constant rate of return.

In semi-log regression analysis, the equation is written as follow:

$$S=logb_0 + b_1log\ X_1 + b_2log\ X_2 + b_3log\ X_3 + b_4log\ X_4 + b_5log\ X_5 + b_6log\ X_6 + B_7log\ X_7 + loge_i \quad (4)$$

Where:
S, $X_1 – X_7$=Are as defined in Eq (1)
$b_0$=Constant term
$b_1 – b_7$ =Coefficients to be determined
ei=Error term
log=Natural logarithm

For double log regression analysis, the equation is written as in equation (5)

$$logS=logb_0 + b_1log\ X_1 + b_2log\ X_2 + b_3log\ X_3 + b_4log\ X_4 + b_5log\ X_5 + b_6log\ X_6 + b_7log\ X_7 + loge_i \quad (5)$$

The exponential regression equation is expressed as in equation (6)

$$logS=b_0 + b_1\ X_1 + b_2\ X_2 + b_3\ X_3 + b_4\ X_4 + b_5\ X_5 + b_6\ X_6 + b_7\ X_7 + ei \quad (6)$$

These equations can be replicated by denoting S as Y in the series of Eq (4) – (6), where Y represents investment and $u_i$ the error term instead of $e_i$.

## RESULTS AND DISCUSSION

### Socio-demographic Characteristics of the Respondents

The socio-economic characteristics of the cassava processors are captured in (Table 1). It shows that 68.50% of the respondents were females, and 31.50% were males. It implies that cassava processing was female-dominated. This finding is corroborated by Wilcox et al. (2016), in Bayelsa and Rivers States. It may be because females generally take greater responsibilities for cassava processing, thereby enhancing economic contributions to family needs, as the males abandon farming and migrate to seek white-collar jobs in the cities (Osondu and Ibezim, 2013). The age distribution of respondents was 11.31% representing less than 20 years, 32.14% between 21 – 30 years, and 35.12% were between 31 – 40 years. Also, 12.50% had their age bracket between 41 – 50 years, and finally, 8.93% were above 50 years. It shows that the processors are economically active and agree with Obayelu et al. (2018). This means that more than 78.5% of the respondents were young processors. This finding has implications on

**Table 1:** Socio-demographic characteristics of the cassava processors in Etche L.G.A.

| Variable | Frequency | Percentage |
|---|---|---|
| **Sex** | | |
| Male | 53 | 31.50 |
| Female | 115 | 68.50 |
| Total | 168 | 100.0 |
| Age | | |
| 20 years and below | 19 | 11.31 |
| 21 – 30 years | 54 | 32.14 |
| 31 – 40 years | 59 | 35.12 |
| 41 – 50 years | 21 | 12.50 |
| 51 years and above | 15 | 8.93 |
| Total | 168 | 100.0 |
| Marital Status | | |
| Single | 28 | 16.67 |
| Married | 72 | 42.86 |
| Single Parent | 47 | 27.97 |
| Widows | 21 | 12.50 |
| Total | 168 | 100.0 |
| Level of Education | | |
| No formal education | 36 | 21.43 |
| Primary education | 45 | 26.78 |
| Secondary education | 76 | 45.24 |
| Tertiary education | 11 | 6.55 |
| Total | 168 | 100 |
| Household Size | | |
| 1 – 4 | 65 | 48.15 |
| 5 – 8 | 42 | 31.11 |
| 9 – 12 | 28 | 20.74 |
| Total | 135 | 100 |
| Processing Experience | | |
| ≤ 5 years | 23 | 13.69 |
| 6 - 10 years | 65 | 38.69 |
| 11 – 15 years | 44 | 26.19 |
| ≥ 16 years | 36 | 21.43 |
| Total | 168 | 100.0 |

**Source:** Field Survey, 2021

cassava processing because young processors can cope effectively with the rigours, strain, and stress involved in cassava processing (Onyenucheya and Ukoha, 2007). As shown further in (Table 1), the majority of the cassava processors were married (42.86%). Implies that the married classes were more involved in farming because of the need to supplement the family's means of livelihood (Adegboye et al., 2008). Also, 78.57% of the respondents had formal education, implying that cassava processors in Etche L.G.A. are literate enough to adopt new investment strategies. The result of this research work agrees with the findings of Shitu (2012). The result also shows that about 51.85% of the cassava processor had 5-12 persons. This development implied the availability of family labour but could reduce savings and investment. Table 1 shows the %age distribution of respondents by years of processing experience. The results showed that 13.69% had processing experience lesser than 5 years, 38.69% had 6-10 years, 26.19% had 11 - 15 years, and 21.43% had. This implies that the majority of the cassava processing farmers had significant years of experience. Also, most of the respondents were full of experienced cassava processing farmers. Based on the findings of Osaka (2006), the experience is the measure of management ability; it could be that the women cassava processors in the study area

**Table 2:** Socio-Demograhic determinants of savings among cassava processors in Etche L.G.A.

| Predictor | Coefficient | Linear | Exponential | Semi-log | Double log |
|---|---|---|---|---|---|
| Constant | $b_o$ | -48343.530*** (3519.40) | 14621.062*** (2494.25) | 4.430*** (0.118) | 4.637*** (0.083) |
| Age | $b_1$ | 6902.445*** (86.77) | 9318.894*** (4471.71) | 0.043 (0.030) | -0.148*** (-0.009) |
| Marital Status | $b_2$ | 5810.45*** (772.97) | 12721.680*** (3821.92) | 0.053** (0.026) | 0.127*** (0.002) |
| Experience | $b_3$ | 14140.849*** (911.93) | 106952.959*** (4891.13) | 0.216*** (0.030) | 0.450*** (0.160) |
| Education | $b_4$ | 6659.884*** (778.12) | 17629.774*** (3424.49) | 0.073*** (0.026) | 0.113** (0.053) |
| Household Size | $b_5$ | 15826.090*** (974.90) | 58512.429 (4068.49) | 0.129*** (0.033) | 0.478*** (0.135) |
| Farm Size | $b_6$ | 30018.330*** (250.25) | 147134.479*** (6114.08) | 0.315*** (0.042) | 0.611*** (0.202) |
| R-squared | $R^2$ | 74.24 | 70.24 | 50.24 | 27.10 |
| Adjusted R | | 68.22 | 64.19 | 74.91 | 66.25 |
| F-statistics | | 15.908*** | 15.147*** | 16.217*** | 15.835*** |
| D.W. statistics | | 1.265 | 1.291 | 1.416 | 1.445 |

Source: Computed from survey data, 2021, *Significant at 10%, ** = significant at 5%; *** = significant at 1%. Figure in parentheses are standard errors.

are likely to make decisions that would increase their productivity all things been equal because of their large number in the survey as earlier analyzed.

## Socio-demographic determinants of savings among cassava processors in Etche L.G.A.

The multiple regression analysis was adopted to determine the socio-economic factors (predictors) responsible for enhancing savings among cassava processors. The predictors used were represented by age (AGE), marital status (MS), household size (HHS), education level (EDUL), farm size (FS), and experience (EXP). Four functional forms of the regression model (linear, exponential, semi-log and double-log) were fitted with the data and ran using the statistical package for social science (SPSS). Savings of the linear regression analysis (Table 2) gave the highest value in terms of values of the significant of the coefficients of multiple determination ($R^2$) =74.24. This implies that 74.24% of the variation in savings was accounted for by the independent variables and the rest 25.76% were due to random disturbance, adjusted $R^2$, F-test and Dubin-Watson statistics and appropriateness of signs of the regression coefficients were therefore chosen as the lead equation. The equation is given as:

SAVINGS = -48343.530 + 6902.445AGE*** + 5810.449MS*** + 14140.849EXP*** + 6659.884EDUL*** + 15826.090HHS*** + 30018.330FS*** + e

From the table, all the predictor factors were significant at 1% level in determining savings among cassava processors from the area of this study. A total of six regressors were included in the models, the coefficient (6902.445) of Age was positive and statistically significant at 1.0% probability level, implying that the amount of savings by cassava processors increases with increasing age. This supports the findings of Attanasio and Szekely (2000) who opined that savings capacity is enhanced as age tends to rise. Old people tend to be more frugal and prudent.

Marital status (5810.499) with a positive coefficient and was statistically significant at 1% significant level. This means that married cassava processors save better than counterparts owing to the fact that couples at their productive stage of marriage will always put their resources together and save for the future. Also, 1% increase in marital status in the study area will yield to more positive savings.

Experience (14140.849) was found to have a positive relationship with savings, an increase of 1-year experience increases total savings. This finding is in line with prior expectation that the more experience the farm is in farming, the more he will be able to manage his farm and accumulate experience. This affirms the earlier to the opinion of Bosma et al. (2009), who noted that having had experience in farm increases savings amount in such enterprise.

Education had a significant positive effect (6659.884) on savings of cassava processors in the study area at

1.0% significant level. This suggests that savings are predominant among cassava processors who have some form of formal education. The respondents have some levels of formal education: this suggests that they can access financial facilities, adopt improved technology in their farming activities including easy movement from one job to another to increase their aggregate monthly income. These have the tendency to increase savings, since income is positively related to savings. The result stated that, educated cassava processors are likely save 0.75% of their income every month from their total or aggregate monthly income. As stated earlier by Orebiyi (2005).

Household size has a significant positive coefficient (15826.090) at 1% significant level on savings. This entails that a farmer with a large household will likely not invest. This is expected because, as household sizes increases, much of household spending would also increase leading to reduced investment. This is opposing to a priori expectation. It may be likely that the farm households in the study area have adult and economically active household members. A farmer with large economically active household members will likely save more of his income, since he will not solely provide for the household. This also implies a lower well-being for a farmer with a larger household size.

The coefficient of farm size (30018.330) was positive and statistically significant at 1.0% level. This points out that an increase in farm size leads to an increase in income of the cassava processors which also leads to savings. The sign of the coefficient conforms to a priori expectation. The result cycled with Onwuka (2005) and Oputa (2005), who noted that the larger the farm, the more quantities of inputs that would be needed in the farm, hence greater savings expenditures and income. This result is expected because large farm size leads to gains known as economic of scale (Onyebinama, 2004). More so, this finding was contrary to Anyiro and Oriaku (2011) who stated that efficiency in the use of land rather than expansion of cultivated areas was a necessary requisite that could increase farmers' income.

The F-statistics value of 15.908 significant at 1% showed that the socio-economic variables actually affected the saving pattern of the cassava processors in Etche LGA. Therefore, this study rejects the null hypothesis that there is no significant relationship between the socio-economic characteristics and savings.

**Socio-demographic determinants of investment among cassava processors in Etche L.G.A.**

The multiple regression analysis was adopted to determine the socio-economic factors (predictors) responsible for investment among cassava processors.

The predictors used were age (AGE), marital status (MS), household size (HHS), education level (EDUL), farm size (FS), and experience (EXP). Four functional forms of the regression models (linear, exponential, semi-log and double-log) were fitted with the data and ran using the statistical package for social science (SPSS). Investment of the Linear regression analysis (Table 3) gave the highest output in terms of values of the coefficients of multiple determination $(R^2)$ = 66.20. This implies that 66.20% of the variation in the investment was accounted for by the independent variables and the rest 33.80% were due to random disturbance. Adjusted $R^2$ (62.72) F – test and Dubin-Watson statistics and appropriateness of signs of the regression coefficients and was therefore chosen as the lead equation. The equation is given as:

Investment= 615.951 + 214.531AGE*** + 134.224MS*** + 101.922EXP*** + 76.139EDUL*** - 0.2584HHS*** + 128.223FSE*** + e

A total of six regressors were included in the models, the coefficient (214.531) of Age was positive and statistically significant at 1.0% probability level, implying that the amount invested by cassava processors increases with increasing age. This consolidates the findings of Attanasio and Szekely (2000) who found that investment capacity is enhanced as age tends to rise. Old people tend to be more frugal and thriftier. Marital status (134.224) had a positive coefficient and was statistically significant at 1% significant level. This signified that married farmer can invest better than unmarried farmers owing to the fact that couples at their productive stage of marriage will always put their resources together and invest for the future. Also, 1% increase in marital status in the study area will lead to more positive investment. Experience (101.922) was found to have a positive relationship with investment, an increase of one (1) year experience increases total investment. This finding is in line with prior expectation that the more experience the farm is in farming, the more he will be able to manage his farm and accumulate experience. This affirms the earlier finding of Bosma at el. (2009), who deduced that having had experience in farm increases investment amount in such enterprise.

Education had a significant positive effect (76.139) on investment of cassava processors in the study area at 1.0% significant level. This means that investment is predominant among cassava processors who have some form of formal education. The respondents have some levels of formal education: this suggests that they can access financial facilities, adopt improved technology in their farming activities including easy movement from one job to another to increase their aggregate monthly income. These have the tendency to increase investment, since income is positively related to

**Table 3:** Socio-economic determinants of investment among cassava processors in Etche L.G.A.

| Predictor | Coefficient | Linear | Exponential | Semi-log | Double log |
|---|---|---|---|---|---|
| Constant | | 6152.951*** | 3.983****** | 3.770*** | 4945.273*** |
| | $b_o$ | (615.877) | (0.092) | (0.165) | (433.778) |
| Age | | 214.531** | 0.175*** | 0.117 | 576.041*** |
| | $b_1$ | (105.25) | (0.023) | (0.098) | (77.50) |
| Marital Status | | 134.224*** | 0.127*** | 0.179* | 1301.815** |
| | $b_2$ | (35.266) | (0.020) | (0.102) | (643.01) |
| Experience | | 101.922* | 0.079*** | 0.219*** | 1203.815** |
| | $b_3$ | (59.584) | (0.024) | (0.107) | (483.682) |
| Education | | 76.139** | 0.029*** | 0.089*** | 166.098** |
| | $B_4$ | (36.167) | (0.007) | (0.016) | (58.70) |
| Household Size | | -0.2584*** | 0.174*** | 0.232*** | 169.847*** |
| | $b_5$ | (-0.76) | (0.025) | (0.107) | (70.74) |
| Farm Size | | 128.223*** | 0.381*** | 0.716*** | 4186.425*** |
| | $b_6$ | (48.788) | (0.033) | (0.155) | (1026.756) |
| R-squared | $R^2$ | 66.70 | 62.70 | 63.80 | 57.60 |
| Adjusted R | | 62.72*** | 62.71 | 60.42 | 53.83 |
| F-statistics | | 8.673*** | 12.570*** | 13.107*** | 9.45*** |
| D.W. Statistics | | 1.89 | 1.933 | 1.87 | 1.85 |

Source: Computed from survey data, 2021, *Significant at 10%, ** = significant at 5%; *** = significant at 1%. Figure in parentheses are standard errors.

investment. The result indicates that, educated cassava processors are likely investment 0.75% of their income every month from their total or aggregate monthly income. Orebiyi (2005) had reported similar result.

The coefficient of farm size (128.223) was positive and statistically significant at 1.0% level. This indicates that an increase in farm size leads to an increase in income of the cassava processors which also leads to investment. The sign of the coefficient conforms to a priori expectation. This result is in tandem with Onwuka (2005) and Oputa (2005) that the larger the farm, the more quantities of inputs that would be needed in the farm, hence greater investment expenditures and income. This result is expected because large farm size leads to gains known as economic of scale (Onyebinama, 2004). Meanwhile, this finding contradicts Anyiro and Oriaku (2011) that suggest efficiency in the use of land rather than expansion of cultivated areas as a necessary requisite that could increase farmers' income.

Household size was significant and negative as expected (-0.2584), at 1% probability level. This implies that, a farmer with a large household will likely not invest much. This is an a priori expectation because, as household sizes increases, much of household spending would also increase leading to reduced investment. The F-statistic values of 12.57 indicated that socio-economic characteristics of the processors did significantly influence investment decisions of the processors. Thus, the rejection of the null Hypothesis II, that processors investment is not significantly influenced by their socio-economic characteristics namely age, marital status,

household size, education, experience and farm size and the acceptance of the alternative.

**Constraints to savings and investment strategies among the respondents in Etche local government area**

The constraints identified by the respondents that inhibit their attempt to save and invest as cassava processors farmers are shown in (Table 4). The respondents identified several constraints to their inability to put part of what they earn aside for use in the future. The primary constraint to the cassava processor farmers' inability to save is the inadequacy of income identified by 74.17% of the respondents. According to this category of respondents, their incomes cannot meet their needs, let alone some left for savings. They conceded that though they always try and wish to save, they could not do so due to their limited incomes. Far distance of banks (50.83%) was also found to hinder the cassava processor farmers saving abilities.

Another constraint to the cassava processors ability to save also has to do with the fear that their monies will not be safe if they save in formal and informal forms. Some respondents (55.83%) mentioned that people might abscond with their savings, thieves may enter their homes and make away with their savings. Pressure from the extended family and members of the society at large was also identified as another factor (45.0%) of the respondent as constraining their ability to save money.

**Table 4:** Constraints to savings and investment in Etche Local Government Area.

| Constraints | Frequency* | Percentage |
|---|---|---|
| Inadequate income | 89 | 74.17 |
| Sickness | 31 | 25.83 |
| Fear of safety of their income | 67 | 55.83 |
| Family and societal demand | 54 | 45.0 |
| Misuse of money | 44 | 36.67 |
| Far distance of the bank | 61 | 50.83 |
| High bank charges | 37 | 30.83 |
| Delay and congestions at banks | 25 | 20.83 |

**Source:** Field Survey, 2021. * Multiple responses recorded.

A significant number (36.67%) of the respondents also identified their own inability to manage their financial resources very well as a constraint to their savings abilities. Factors such as high bank charges (30.83%), delays and congestions at the banks (20.83%) were other factors, while 25.83% of the respondents also mentioned sickness hindered their ability to save money. According to these people, constant illness depletes any money they may have and may want to put aside for future use.

## Conclusion and Recommendation

The study concludes that cassava processors in Etche Local Government Area of Rivers State, Nigeria, save and invest despite their demographic features. They save mostly through informal means and invest in off-farm activities. In other to overcome the various challenges facing cassava processors in the Etche local government area, it is thus recommended that modern processing facilities be subsidized to reduce the processing cost, encourage future investment, reduce drudgery, increase value addition income, and consequently increase investment.

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