

## DETERMINANTS OF AGRIPRENEURS' INVESTMENT DECISION IN CASSAVA VALUE ADDITION IN ABIA STATE, NIGERIA.

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### ABSTRACT

The study examined the determinants of Agripreneurs investment decision in cassava value addition in Abia state. A multi stage sampling technique was employed in this studying the selection of sixty (60) Agripreneurs involved in Cassava value addition using a well-structured questionnaire was used in collecting data for the study. Descriptive statistics such as mean, frequency, percentage, and tables and multiple regression analysis were used in the analysis of data. The result shows that majority (61.7%) of the respondents were; majority (85%) of the respondents had good secondary education as such their ability to harness existing resources and take investment decision; 95% Of the respondents are within the age that ensures good comprehension of basic business principle. This result this indicates that a good number (69.1%) of the Agripreneur had at least 8 years of experience in cassava value addition and the mean credit accessed was ₦54,183.33. The coefficient of correlation (0.757) indicates that there exist a strong relationship between Agripreneur Investment Decision in value addition of cassava and the explanatory variables in the model. The coefficient of multiple determinations indicates that 57.4% of the variation in Agripreneur Investment Decision in value addition of cassava was explained by the explanatory variables in the model. Further results of the regression analysis showed that age, sex and the income of the respondents were statistically significant factors affecting Agripreneur Investment Decision in value addition of cassava in Abia state, Nigeria while marital statu, experience, output level, educational level, Enterprise size and credit availability were not statistically significant factors which affects Agripreneur Investment Decision in value addition of cassava among agribusiness enterprise.

**KEYWORD:** Agripreneur, Value Addition, Investment decision

### INTRODUCTION

Investment decision is the embodiment of the willingness of an entrepreneur to commit resources into an economic venture with the expectation of reaping future benefit. It is the sum total of the will and the action to embark on a project with expectation of future return assuming the attendant risks and uncertainties. Investment decision is basically the prerogative of an Agripreneur with regard to the

Agribusiness sector. An Agripreneur is basically and agricultural entrepreneur. An (agricultural) entrepreneur, in addition to being responsible for harnessing resources (money, materials, machine and labour) together in business or production process (Akanwa and Akpanabia, 2013), seeks opportunities, employs innovativeness and takes risks beyond security. We can deduce that the peculiar level of uncertainty experienced in the Agribusiness sector requires a good degree of entrepreneurship. Agripreneurship interest in the area of cassava production has increased over the year in Nigeria as output level is on the increase – this can be adduced to the various potential of the cassava.

The crop cassava (manioc in French speaking countries) is a perennial plant that grows to a height of about 2-4cm (FAO 2006). Botanically, it is classified as *manihot utilissima*, but in recent publications however, the name *manihot esculenta* is being increasingly adopted (iita 2010). It is a root crop that originated from Southern America (Yakasi, 2010; Osun, Ogundijo and Bolariwa .2014); however, it has been introduced to many countries and presently grown throughout the tropical world. Cassava is second only to sweet potato as the most important starchy root crop of the tropics. According to Yakasi, (2010) “cassava consists of 15% peel and 85% fresh tuber flesh while the tuber consists of 20 – 30% starch, 62% water content, 2% protein, 1 – 2% fibre with trace of vitamins and minerals”. There are many derivatives from cassava example being starch, ethanol, monosodium glutamate, paper, adhesives, bio-fuels, glucose syrup and textiles (Yakasi, 2010; Tonukari, 2004). This scenario has given investment opportunity to Agripreneurs in various stage of the cassava value chain.

Cassava utilisation has found an important place among rural and urban dwellers. It is no longer grown by only by the rural households for food alone rather it is now seen as a food crop with diverse industrial potential (Yakasi, 2010; Tonukari, 2004.) given its versatility of numerous uses and by products. However, the problem of what value added cassava product has been of investment interest to Agripreneurs remains unknown compared to the cassava production interest of rural household which is basically for food. Furthermore, literatures abound on profitability, productivity, and performance of cassava production with lean study on determinants of investment decision in cassava production or value

addition production. In the light of the foregoing, this research study examined the determinants of Agripreneurs' investment decision in cassava value addition in Abia state, Nigeria. The following hypothesis will be tested

$H_{o1}$  = there is no significant relationship between investment decision in cassava value addition and Age, Sex, Marital status, Experience, Value of cassava output produced or purchased in naira, Education level, Income, Enterprise size, and credit accessed.

The study will enlighten policy makers on the significant factors that affect investment decision in value added cassava production. The study will also provide information on the various value added cassava products in which are most preferred by Agripreneurs in the area in the study area.

## RESEARCH METHODOLOGY

### Area of Study

The study was carried out in Abia state, Nigeria. It is located in the south east geopolitical zone of the country. The state covers an area of about 5,243.7 square kilometer of land; it has 17 local government areas, 3 senatorial zones and 3 agricultural zones with Umuahia as the state capital. the residents of Abia state are predominantly Igbos; they produce crops like cassava, yam, cocoyam, sweet potato, ginger, rice, and maize while the cash crops include; oil palm, rubber, cocoa, banana, and various types of fruits. Cassava is a staple crop which is largely produced in the three agricultural zone giving its economic importance viz: derivatives as well as a favorable climatic condition.

A multi stage sampling technique was employed in this study. It involved four (4) stages; the first consist of the random selection of four local government areas - this was because of the production capacity of value added cassava in these areas observed during a previsit is the study area. The local government areas are: Ikwuano, Aba north, Ohafia, and Umuahia North. The second stage consists of the random selection of two (2) autonomous communities; the third - the random selection of five (5) villages, and the fourth - the judgmental selection of two (2) Agripreneurs in each of the villages. The choice of a judgmental sampling was bent on the need to ensure that the sampled respondents meet the criteria of an Agripreneur as distinct from farming households. The sample size for this research is sixty (60) Agripreneurs involved in Cassava value addition

### Method of Data Collection

Data for this study was collected from primary source through the administration of a well-structured questionnaire which was given to the sampled Agripreneurs in Abia state. Oral interview was also applied to accord the researcher data to augment those data gotten through the use of the questionnaire.

### Method of Data Analysis

Objective 1 and 2 was analyzed using descriptive statistics such as mean, frequency, percentage, and tables. Objective 3 was analyzed using multiple regression analysis. The multi regression model for analyzing determinants of investment decision in cassava value addition by Agripreneurs is expressed econometrically as:

$$AID = \beta_0 + \beta_1A + \beta_2S + \beta_3Ms + \beta_4E + \beta_5O + \beta_6El + \beta_7I + \beta_8Es + \beta_9CA + e$$

Where

AID = Agripreneur Investment Decision (dummied by amount in naira committed into value addition in a given time horizon)

$$AID = I_0 = I_{t-1} - I_t$$

Where:  $I_0$  = investment in value addition

$I_{t-1}$  = lagged value of capital stock in naira

$I_t$  = current value of capital stock in naira

A = Age of Agripreneur (in years)

S = Sex of Agripreneur (dummied by male =1, female =0)

Ms = Marital status of Agripreneur (dummied by single =1, married =2, divorced =3)

E = Experience of Agripreneur (in years)

O = Output of cassava (proxied by value of output produced or purchased in naira)

El = Education level of Agripreneur (in years)

Y = Income (proxied by lagged value all income from various sources in naira)

Es = Enterprise size (dummied by small =1, medium =2, large =3)

CA = credit accessed (proxied by actual amount (₦) received and used)

$\beta_0$  = Constant term

$\beta_1 - \beta_8$  = Regression coefficient

e = error term

## RESULTS AND DISCUSSION

### Socioeconomic Characteristics of the Respondents

The table 1 below shows the distribution of the respondents according to their sex, and marital status

**Table1: Distribution of respondents according to sex and marital status**

	Frequency	Percentage (%)
<b>Sex</b>		
Male	23	38.3
Female	37	61.7
Total	60	100
<b>Marital status</b>		
Single	13	21.7
Married	46	76.7
Others	1	1.7
Total	60	100

Source: field survey 2016

The result shows that majority (61.7%) of the respondents were females showing that more female tends to go into the business of value addition in cassava production than male. this result is not in line with findings of Ajieh and Uzokwe (2007), Ikwuakam (2013), Agwu and Anyanwu (2015). also 21.7% of the

respondents were single, 76.7% married and 1.7% are neither married nor single.

The table 2 below shows the distribution of the respondents according to educational qualification, and age.

**Table 2: Distribution of the respondents according to educational qualification and age**

	Frequency	Percentage	Min.	Max.	Mean
<b>Educational status</b>					
No formal	1	1.7	0	4	3.15
Primary	8	13.3			
Secondary	34	56.7			
Others	17	28.3			
Total	60	100			
<b>Age</b>					
< 20	1	1.7			
21-30	6	10	20	68	43.983
31-40	21	35			
41-50	15	25			
51-60	13	21.7			
61-70	4	6.7			
Total	60	100			

Source: field survey 2016

The result shows that 1.7% of the respondents did not obtain any formal education, 13.3% obtained primary education, 56.7% of the respondents were secondary school certificate holders and 28.4% of the respondents are holders of tertiary certificate. The minimum qualification was no formal education while the maximum qualification was tertiary education. The mean education status was secondary education. This result indicate that (85%) majority of the respondents had good secondary education as such their ability to harness existing resources and take investment decision. Furthermore 1.7% of the populations are less than 20yrs of age, 10% are within the age of 21-30yrs, 35% is within the age of 31-40yrs, 25% are within the age of 41-50yrs of age, 21.7% of

the respondents are 51-60yrs of age, 6.7% of the respondents are within the age of 61-70yrs. The minimum age of the respondents was 20yrs, the maximum age was 68yrs, while the mean age was 44yrs, it can be deduced that 95% Of the respondents are within the age that ensures good comprehension of basic business principle and as such able to understand and explain what value addition in cassava production is all about. Given the average educational status and age, we can deduce that Agripreneurs are quite capable of taking and making investment decision. The table 3 below shows the distribution of the respondents according to scale of operation and business existence.

**Table 3: Distribution of respondent according to scale of operation and business existence**

	Frequency	Percentage(%)	Min	Max	Mean
<b>Scale</b>					
Large	14	23.3			
Medium	30	50			
Small	16	26.7			
Total	60	100			
<b>Experience</b>					
1-5	18	30			
6-10	28	46.7			
11-15	13	21.7	1	20	8.1667
16-20	1	1.7			
<b>Total</b>	<b>60</b>	<b>100</b>			

Source: field survey, 2016

This result from the Table above shows that 14(23.3%) of the respondents operates under large scale, 30(50.0%) of the respondents operate under medium scale and 15(25%) operated under small scale. We can deduce that majority of the respondents were operating under medium scale: this was due to the enterprise preference (such as garri, akpu, and abacha ) of majority of the Agripreneur which makes it difficult to operate on a large scale. Furthermore, the result on the table shows that 18(30%) of the

respondents has experience of 1-5years, 28(46.7%) of the respondents had 6-10 years of experience, 13(21.7%) has experience of 11-15 years, while 1(1.7%) of the respondents had 16-20years years of experience. The minimum years of experience is 1year, while the maximum year of experience was 20years The mean years of was 8 years; this indicates that a good number (69.1%) of the Agripreneur had at least 8 years of experience in value addition.

The Table 4 Shows the Distribution of the Respondents according To Credit Obtained and used And Labour.

**Table 4: Distribution of the respondents according to credit obtained and labour**

	Percentage	Frequency	Min	Max	Mean
<b>Credit(₦000)</b>					
Less than 30000	35	58.3	00	300000	54183.3
30001- 60000	7	11.7			
60001- 90000	2	3.4			
90001- 120000	5	8.3			
120001-150000	4	6.7			
150001-180000	0	0			
180001-210000	3	5.0			
210001-240000	0	0			
240001-270000	3	5.0			
270001and above	1	1.7			
<b>Total</b>	<b>60</b>	<b>100</b>			
<b>Labour</b>					
Less than 10	42	69.9	2	4	12.58
11-20	6	10			
21-30	10	16.7			
31-40	1	1.7			
41-50	1	1.7			
Total	60	100			

Source: field survey, 2016

This result shows that 35(58.3%) of the respondents obtained a credit less than ₦30,000 for the running of their business; 7(11.7%) obtained credit of about ₦30,001-₦60,000; 2(3.4%) of the respondents obtained a credit of about ₦60,001-₦90,000; 5(8.3%) of the respondents was able to obtain a credit of about ₦90,001- ₦120,000; 4(6.7%) of the respondents obtained a credit of about ₦120,001- ₦150,000; none

of the Agripreneurs was able to obtain a credit of ₦150,001-₦180,000; as well as ₦210,001- ₦240,000; 3(5.0%) of the respondents was able to obtain a credit ₦180,001-₦210,000; 3(5.0%) obtained ₦240,001-₦270,000 while 1(1.7%) obtained ₦270,001and above. The minimum credit was ₦00 indicating that there were Agripreneurs that neither accessed credit nor utilized it. The maximum credit obtained was

₦300,000 while the mean credit was ₦54,183.33, which is explained by the fact that most of the Agripreneurs obtain little credit which avails them fund for routine expenditure of the business. Furthermore, the table shows that 42(69.9%) of the respondents uses less than 10 labour; 6(10%) employs labour of about 11-20; 10(16.7%) of the respondents employ labour of 21-30; 1(1.7%) employ 31-40 men,

and also 1(1.7%) of the respondents employ labour of 41-50 men. The minimum labour obtained employed was 2, the maximum 50 while the mean labour was 11. It can be explained that agribusiness enterprises which are into value addition in cassava production are labour intensive – justified by various processes involved in value addition requiring specific skill and distinct quality control measure.

**Determinants of Investment Decision in Cassava Value Addition by Agripreneurs in Abia State, Nigeria**  
**Table 8: Analysis on the determinants of Investment Decision in Cassava Value Addition by Agripreneurs in Abia State, Nigeria**

Variables	Parameters	Linear	Exponential	+Semi-log	Double-log
Constant	$\beta_0$	69540.872 (1.252)**	-4096.456 (-0.392)	10.446 (13.496)***	9.599 (2.192)*
Age	M	0.296 (3.357)*	34962.510 (1.017)	3.977E-6 (3.191)**	0.449 (1.073)
Sex	S	-1681.857 (-2.232)	-92499.673 (-1.074)	-0.025 (-2.243)*	-1.828 (-1.742)
Marital status	MS	-4452.309 (-0.325)	4914.056 (0.152)	-0.130 (-0.648)	-0.292 (-0.745)
Experience	E	20036.264 (1.045)	7616.717 (0.144)	0.456 (1.616)	0.648 (1.005)
Output level	O	-4565.575 (-0.398)	12265.751 (0.167)	-0.085 (-0.521)	-0.106 (0.119)
Education level	El	-358.217 (-0.215)	20458.501 (0.824)	0.008 (0.336)	0.178 (0.589)
Income	Y	3048.273 (4.505)***	42307.694 (1.804)*	0.049 (5.196)***	0.805 (2.820)*
Entrepreneur size	Es	-432.723 (-0.109)	-215.913 (-0.321)	-108.422 (-0.411)	-358.327 (-0.512)
Credit availability	C	-5714.610 (-0.634)	-4952.360 (0.245)	-0.136 (-1.066)	-0.162 (-0.657)
R					
R <sup>2</sup>		0.720	0.641	0.757	0.738
F-ratio		0.518	0.411	0.574	0.544
		6.717***	1.395	8.067***	2.390*

Source: field survey data 2016.

Note: values in parentheses ( ) are the respective t-ratios. \*\*\*, \*\*, \* implies statistical significance at 1%, 5%, and 10% probability levels respectively. The lead equation is denoted by - + . The semi-log functional form of regression was also chosen because it had the highest correlation coefficient (R), as well as coefficient of determination (R<sup>2</sup>) and the highest number of significant variables and also had line of best fit giving (the highest) F-ratio of 8.067 which was significant at 1% probability level. This indicates that the variables included in the model have line of best fit.

The coefficient of correlation was 0.757; this indicates that there exist a strong relationship between Agripreneur Investment Decision in value addition of cassava and the explanatory variables in the model. Also the coefficient of multiple determinations was 0.574 indicating that 57.4% of the variation in Agripreneur Investment Decision in value addition of cassava was explained by the explanatory variables in the model.

Further result of the regression analysis showed that age of the respondents (A), sex of the respondents (S) and the income (Y) were statistically significant factors affecting Agripreneur Investment Decision in value addition of cassava (AID) in Abia state, Nigeria while marital status (M), experience (E), output level (O), educational level (El), Enterprise size (Es) and credit availability (C) were not statistically significant factors which affects Agripreneur Investment Decision in value addition of cassava among agribusiness enterprise.

The beta coefficient (3.977E-6) of age of the respondents was positive and statistically significant at 5% probability level. This result showed that there is a positive relationship between the age of the respondents and his Investment Decision in value addition of cassava production; this then implies that the higher the age of the Agripreneurs the more their commitment to Investment in value addition of cassava. This result is contrary to the finding of Falola, O. Oyinbo, Adebayo, Jonathan and Jimoh (2016)

who found out that the practice of value addition in cassava was negatively influenced by the age of the respondents in Kwara state.

The beta coefficient of sex of the respondents (-2.243) was negative and statistically significant at 10% probability level. This result indicates that there is an inverse relationship between the sex of respondents and Investment Decision in value addition in cassava production. This finding is consonance with the findings of Agwu et al. (2015) in their study of factors influencing cassava value addition by rural agribusiness entrepreneurs in Abia state, Nigeria. This result explains that female Agripreneurs are more accustomed to investing in value addition of cassava than male Agripreneur. This can be justified by the result of socio economic characteristic which reveals that more female were into cassava value chain than male as well as the nature of scale of production and value addition products. Females operate more of medium and small scale business which is less demanding in management giving them more time for other marital responsibility.

Income (as proxied by the lagged value all income from various sources) was a statistically significant determinant of Investment Decision in value addition of cassava. The beta coefficient (0.49) of income was positive and statistically significant at 1% level. This result showed that there is a positive relationship between the incomes of the Agripreneur (as proxied by the lagged value all income from various sources) and Investment Decision in value addition in cassava production. The scale of the enterprise limits it financing source to majorly equity financing which attracts zero cost compared credit financing. Note that result from the analysis of credit accessed and used revealed that majority (58.3%) of the Agripreneur access ₦30000 and less (none recipients inclusive) while credit was note a statistically significant determinant of Investment Decision in value addition of cassava. The higher the amount of income made (and retained) in the previous year, the higher the level of investment in value addition of cassava.

#### SUMMARY AND CONCLUSION

This study examined the determinants of investment decision in cassava value addition Agripreneurs in Abia state, Nigeria. The study was carried out in Abia state, Nigeria. A multi stage sampling technique was employed in this study in the selection of is sixty (60) Agripreneurs involved in Cassava value addition. The result of the regression analysis showed that age, sex and the income were statistically significant factors affecting Agripreneur Investment Decision in value addition of cassava in Abia state, Nigeria.

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