

# **Determinants of Entrepreneurship Decision for Agricultural Business among Tertiary Graduates in Delta State, Nigeria**

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## **ABSTRACT**

*This study on determinants of entrepreneurship decision for agricultural business among tertiary graduates was conducted in Delta state, Nigeria. The research described selected socio-economic characteristics of graduates involved in agri-business in Delta State; identified agricultural business enterprises operated by graduates in the study area; determined factors that influenced graduates decision to take to entrepreneurship in agricultural business in the study area and identified factors that constrain graduates from investing in agricultural business in the study area. Purposive and multistage random sampling techniques were employed in selecting sample (120 graduates) for the study. Data generated were analyzed descriptively and by inferential statistics using Probit regression model. Results obtained showed that 66.7% of the respondents were females while 33.3% were males. Majority (83.33%) of the respondents were aged between 20 and 30 years Majority (74.2%) of the respondents were single, while 25.8% of the respondents were married, a good proportion (56.67%) of the respondents had between 5 and 8 members while 35.83% and 7.50% of them had between 1 and 4, and 9 and above respectively which shows that graduates in the area had moderate family size. The study result further showed that graduates operated diverse agricultural businesses. Age, employment status of respondents and access to credit positively influenced graduates decision to take to entrepreneurship in agricultural business at varied levels of significance while, gender and access to land negatively influenced graduates decision to take to entrepreneurship in agri-business at 1.0% level of significance. Inadequate capital to start up the business, possible market for produce and land procurement issues were identified as constraints to decision to embark on agri-business. It is therefore recommended that lending institutions should be established by the government to grant soft loans to graduates who want to embark on agricultural business.*

**Keywords:** *Determinants, Entrepreneurship, Decision, Agricultural Business, Tertiary Graduates, Delta State, Nigeria*

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## **I. INTRODUCTION**

The important role small businesses and entrepreneurship play in stimulating job creation, economic growth, poverty alleviation and general uplifting of living standards has been recognized both internationally and in Nigeria. Entrepreneurs drive innovation and speed up structural changes in the economy thereby making an indirect contribution to productivity (Herrington et al, 2020). There is wild spread agreement on the importance of entrepreneurship for economic development, more so in the agricultural sector given that entrepreneurship is the single largest sector globally and with its many facets, is possibly the most complex of all sectors. A large part of poverty reduction strategies in developing countries, particularly in Africa is predicated on expanding agricultural production and improving the output and capabilities of small farmers (Humphrey, 2021). Entrepreneurship is one of the means through which innovation in the agricultural sector can be fostered, thereby improving the output and capabilities of small scale farmers Onyekwe, Osuofor, Ude & Onwuemelie, 2021).

According to World Bank (2020) there is evidence that the political economy has been changing in favour of agriculture. Democratization and the rise of participatory policy making have increased the possibilities for small holders and rural poor to raise their political voice. New politically powerful actors have entered agricultural value chains and they have an economic interest in dynamic and prosperous agricultural sectors.

Entrepreneurship is the manifest ability and willingness of individuals to perceive new opportunities and seize this opportunities into the market. Hence, it can be conceived as a process, which involves the efforts

of individual in identifying viable opportunities in a business environment and obtaining and managing the resources needed to exploits those opportunities.

Entrepreneurship according to Nwibo and Okorie (2013), is the manifest ability and willingness of individuals to perceive new economic opportunities and seize this opportunities into the market. Hence, it can be conceived as a process, which involves the efforts of an individual in identifying viable opportunities in a business environment and obtaining and managing resources needed to exploit those opportunities.

With the transformation of agriculture from subsistence to commercial and its globalization, the challenges facing agriculture is unprecedented. As the relative proportion of agricultural graduates seeking employment in the public sector increases continually, more jobs should thereby be created in the private sector. This however, necessitates fine tuning the entrepreneurial skills of the agricultural graduates (Word Bank, 2020). Nigeria, the most populous country in Africa, is naturally endowed with millions of hectares of arable land, 38.5 billion barrels of stated oil reserves, vast gas reserves, a variety of unexploited minerals and wealth of human capital by virtue of its estimated population of 162 million (World Bank, 2021). It is the world's eighth largest exporter of oil and Africa's second largest economy, after South Africa. Nigeria accounts for 15 percent of African's population and more than two thirds of the output of the resolution of many political challenges in Africa. However Nigeria still falls far short of the economic and social progress required to impact the well-being of the average Nigerian given that over half of Nigeria's population live on less than one dollar a day (World Bank, 2021).

The enormity of the challenges is corroborated by Nigeria's low score (ranking 158) on the human development index (HDI), an index that measures the average achievement of a country in terms of the welfare and quality of life of its people. The prosperity and progress of a nation depends on the entrepreneurial quality of her people. If they are enterprising, ambitious and courageous enough to bear entrepreneurial risk the community/society will develop quickly. Such people are identified as entrepreneurs and their character reflects entrepreneurships. Entrepreneurship is no monopoly of any religion or community. Entrepreneurial potential can be found and developed anywhere irrespective of age, qualification, experience or socio - economic background. Entrepreneurs are people who realize new opportunities and channel effort in the proper direction (Herrington *et al*, 2020). Entrepreneurship ought to be the life blood of the Nigerian economy. It is the cradle of Job and wealth creation in the most innovative ways (Obed, Okpukpara & Ude, 2021).

Unemployment in Nigeria is one of the most critical problems the country is facing. The years of corruption, civilian military rule have hindered economic growth of the country. Regardless of the diverse and infinite resources (human and material), years of negligence and adverse policies have led to the under-utilization of these resources in order to yield maximum economic benefits. Young tertiary graduates with potential to work continue to roam about the street seeking for jobs which are very limited in number (UNDP, 2021). Many graduates in Nigeria wander the streets without anything reasonable to do for a living. The government is unable to provide jobs for all of them. Employment in Nigeria is usually not based on merit but depends on how connected you are with people that have power. This leaves many highly qualified people in poverty as seemingly no one cares to know what they are capable of achieving. Employed. The number of quality jobs in the economy is low and many government resources are misallocated (Chimobi, 2021). Unemployment-induced poverty tends to increase the crime rate and violence in the country. Most unemployed youths resort to crimes such as armed robbery, kidnapping for ransom, internet fraud and other forms of fraudulent activities. The reservation wage they get from these activities is typically barely enough to take care of their basic necessities (Nwoke, Ude, Ugbor, Igwe & Ogu, 2021).

The economic reforms have not been sufficient enough to reverse years of economic decline, deterioration capacity, weakened institution and inadequate infrastructure investment and the recent dramatic stock market decline, banking crisis, global economic crisis, ethnic crisis, sporadic bombing crisis, fuel subsidy removal and flood crisis have accentuated the situation. Job creation for example is currently one of the key political and economic issues in Nigeria in general and Delta State in particular, yet there is currently insufficient data on barriers to entrepreneurial startups, especially barriers pertaining decision determinants in agricultural business (Osuofor & Ude, 2021).

In Delta State, the presence of other commercial business activities and natural resources have made Deltans to rely on these other means of livelihood rather than investing in agricultural business. Largely because they do not perceive agricultural business as being lucrative and innovative and as a result of these factors entrepreneurial skills has hardly been developed in the state. Hence, this study is expected to provide answers to the following research questions: What types of agricultural business ventures are operated in Delta State?, What factors influence agricultural science graduates decision to take to entrepreneurship in agricultural business?, What are the constraints hindering graduates from investing in agricultural business?

The broad objective of this study is to analyze the determinants of entrepreneurship decision for agricultural business among graduates in Delta State. While the specific objectives will be to: identify agricultural business enterprises operated by graduates in the study area; determine factors influencing graduates

to take to entrepreneurship in agricultural business in the study area; and identify factors that constrain graduates from investing in agricultural business in the study area.

## II. METHODOLOGY

This study will be carried out in Delta State of Nigeria. The state lies roughly between longitude  $5^{\circ}00'$  and  $6^{\circ}45'$  east and latitude  $5^{\circ}00'$  and  $6^{\circ}30'$  north. Delta state was created in August 27, 1991. It was carved out of the former Bendel state. It has 25 local government areas. The state has its capital at Asaba. Delta state has a population of 4,098,401 (National Population commission (NPC), (2006). The Delta state Household and Housing survey (2006) analysed a total population of 24,239 broken down into 12,507 males and 11,732 females. Delta as an agrarian State is richly endowed with land suitable for growing various tropical crops. The climate is essentially tropical humid with annual rainfall of 1500-2600mm distributed evenly throughout the wet season (April to October). The mean elevation is 122m. Diurnal temperature varies between  $27^{\circ}\text{C}$  and  $31.9^{\circ}\text{C}$  (NRCRI, 2020). A large proportion (75.0%) of the total population of Delta State engages in agricultural production (Emerole, 2004). Food crops grown are yam, cassava, cocoyam and maize, while the cash crops include oil palm, rubber, cocoa, banana and various types of fruits. Livestock such as goats, sheep, cattle, pigs and poultry are reared in the state. Trading also occupy a prime position in the economic activities of the people (ABSADP, 2005).

Both purposive and multistage random sampling techniques were used. Purposively two organizations, namely National Youth Service Corp (NYSC), Delta state and Delta State agricultural procurement agency Ltd both in Delta state were chosen. The list of tertiary graduate staffs of Delta State agricultural procurement agency Ltd was obtained from the Institution's personnel office, while the list of graduates serving in Delta state was obtained from NYSC secretariat Abraka. These lists formed the sample frame, Sixty (60) respondents who were randomly selected from each of these lists to give a grand sample size of one hundred and twenty respondents. Data for this study was obtained from both primary and secondary source. The primary data was obtained through the use of a well-structured questionnaire while other relevant information were generated through unpublished research works, internet, magazines, textbooks, journals etc.

### Model Specification

The probit regression model is presented as below as expressed by Gujarati (2003)

$$F_{zi} \text{ ----- (1)}$$

Where

$$Z_i = \beta_0 + \beta_1 X_1$$

$$Y_i = \beta_1 + \beta_2 X_{2i} - \beta_k X_{k1} + u_i \text{ ----- (2)}$$

$Y_i$  is unobserved but  $Y_i = 0$  if  $Y_i = 1$  if  $Y_i > 0$

$$P(Y_i = 1) = P(Y_i \geq 0)$$

$$P(U_i \geq -\beta_1 - \beta_2 X_{2i} - \beta_k X_{kL}) \text{ ----- (3)}$$

Where  $i = 1, 2, \dots$  (60 respondents)

Where  $Y_1 =$  entrepreneurship decision for agricultural business (Dichotomous dependent variable 1 = yes, 0 = No)

$\beta =$  A factor of unknown coefficients

$X_1 =$  Age (years)

$X_2 =$  Household size (number)

$X_3 =$  Gender (male =1, female=0)

$X_4 =$  Access to credit (Naira)

$X_5 =$  Employment Status (employed=1, unemployed=0)

$X_6 =$  Marital Status (married =1, otherwise=0)

$X_7 =$  Income level of sponsor (Naira)

$X_8 =$  Access to land (hectares)

## III. RESULTS AND DISCUSSION

### Socio Economic Characteristics of the Respondents

#### Gender of the respondents

The distribution of the respondents according to gender is shown in Table 1. The study reveals that female graduates were more involved in certain agribusiness activities. This was attested by 66.7% dominance of female graduates that are into various agricultural business enterprises against 33.3% of male agro-entrepreneurs graduates. This may be due to the fact that females generally make greater responsibilities for agricultural production and enhanced economic contributions to family needs as the male abandon farming and other related entrepreneurship in agricultural business to seek for high paying white collar jobs in the cities. This result is contrary to Nwibo and Alimba (2021) that young male agro-entrepreneurs dominate in agribusiness

ventures which is attributed to their greater access to investment capital than the females who have greater role in household domestic activities.

**Table 1: Distribution of Agricultural graduate in agricultural business according to gender in Delta State**

Gender	Frequency	Percentage
Male	40	33.3
Female	80	66.7
Total	120	100.00

Source: Field Survey data, 2021.

### Age of Respondent

The distribution of graduates according to age is shown in Table 2. The table shows that majority (83.33%) of graduates in agro enterprise business in the state were within the age range of 21 and 30 years, while 10.0% and 6.67% of them were within the age range of 31 and 40 years and 41-50 years respectively. This is an indication that the agro-entrepreneurs in the study area were mostly youths, going by definition of youth as a person aged between 12 and 30 years by the Vision 2021 Report (2005). The implication is they are within the active productive work force, energetic, innovative to participate more in tedious agribusiness and rural development activities. This is also an indication that agriculture employs a high percentage of youths, especially in the rural areas where agriculture is the major occupation for self-reliance and generation of income (Kompman, 1999).

**Table 2: Age Distribution of agricultural graduates in agricultural entrepreneur business in Delta State**

Age (years)	Frequency	Percentage
20 – 30	100	83.33
31 – 40	12	10.0
41 – 50	8	6.67
Total	120	100.00
Mean	28.63	
Standard deviation	7.627	

Source: Field survey data 2021

### Marital Status of Respondents

The distribution of the respondents according to marital status is shown in table 3. The table shows that 74.2% of agricultural graduates in agricultural business were single, while 25.8% of them were married. None of the respondents were divorced. This reinforces that single persons were more involved in entrepreneurship in agricultural business in the study. This may be due to the reasons that married persons with children may not be relieved of some filial responsibilities and may not therefore be able to devote more time to the obligations and tedious nature of entrepreneurship in agricultural business.

**Table 3: Distribution of the Respondents according to marital status**

Marital status	Frequency	Percentages
Single	89	74.2
Married	31	25.8
Total	120	100.0

Source: Field Survey Data, 2021

### Household Size

Table 4 shows the distribution of the respondents according to household size. The table revealed that a good proportion (56.67%) of the agro entrepreneurs had household sizes of between 5 and 8 members, while 35.83% and 7.5% of them had between 1 and 4 and 9 and above persons respectively. The mean household size was 5.37 persons. This result indicates that these respondents have moderate family sizes. This has implications on labour supply to the business. This may justify the need to augment family labour with hired labour. In the absence of well-functioning labor markets, larger households face fewer labor bottlenecks at critical points in the farming cycle such as agricultural business (Ezeh *et al*, 2012).

**Table 4: Distribution of respondents according to household size**

Household size	Frequency	Percentage
1-4	43	35.83
5-8	68	56.67
Above 8	9	7.5
Mean	5.37	-
Standard deviation	1.96	-
Total	120	100.0

Source: Field Survey Data, 2021

### Employment status of the respondents

The distribution of the respondents according to their employment status is shown in Table 5. The table shows that 34.2% of the agricultural graduate in the study area were employed while a very good proportion (65.8%) of them were not employed. This has implication on entrepreneurship decision for agricultural business, because an employed graduate is likely to have some experience, savings and income needed to finance agricultural entrepreneurship business as well as the chances of accessing agricultural credit.

**Table 5: Distribution of respondents according to their employment status in Delta State**

Employment status	Frequency	percentage
Employed	41	34.2
Unemployed	79	65.8
Total	120	100.0

Source: Field survey data, 2021

### Access to credit

Table 6 shows the distribution of the respondents according to access to agricultural credit. Data in Table 6 show that majority (60.8%) of the agricultural graduates in agricultural business in the study area received agricultural credit for their agricultural business venture while 38.3 % of them had no access to credit. Inadequate capital is a major problem confronting small-scale enterprises including farmers in Nigeria. However, lack of access to credit facilities constitutes a constraint in purchasing raw materials and other enterprise inputs. Meanwhile, access to credit is regarded as one of the key elements in raising agricultural productivity (Anyiro & Oriaku, 2021).

**Table 6: Distribution of Respondents According to Access to Credit Facilities**

Access to credit	Frequency	Percentage
Yes	74	61.7
No	46	38.3
Total	120	100

Source: Field Survey Data, 2021

### Access to land

The distribution of the respondents according to access to land is presented in Table 6. The Table revealed that a good proportion (57.5%) of the graduates in agricultural business enterprise had access to land while 42.5 % of them had no access to land. Land is regarded as the major factor of production and its access has serious implications on decision to embark on agricultural business. Access to land is still mediated via patrilineal systems (Aluko and Amidu, 2021), in spite of the intentions of the 1978 Land Use Act. User rights often follow marriage, inheritance or borrowing.

**Table 7: Distribution of Respondents According to Access to land**

Access to credit	Frequency	Percentage
Yes	69	57.5
No	51	42.5
Total	120	100

Source: Field Survey Data, 2021

### Occupation of Respondents' Sponsor

The distribution of graduates' according to primary occupation of their sponsors is shown in table 8. The Table shows that, 22.5% of the respondents' fathers were into business, 17.5% of them were traders, 16.67% were farmers, while 43.3% of them were civil servants. This implies that, very few of the respondents were from farming background and this may positively influence their choice of careers outside agriculture.

**Occupational distribution of respondents' father in Delta State, Nigeria**

Occupation	Frequency	Percent
Farming	20	16.67
Public servant	52	43.3
Traders	21	17.5
Business/self employed	27	22.5
Total	120	100

Source: Field Survey Data, 2021

### Income level of Respondents

Table 9 examined the monthly income level of respondents' in entrepreneurship in agricultural business venture in Delta state. The table revealed that 60.00% of respondents in agribusiness had monthly income of less than ₦50, 000 and were classified as low income group. Also, 34.17% of the respondents had monthly income of between ₦51,000 and ₦100, 000. These were grouped as middle income class while 5.83% of them had annual income above ₦100,000. These were grouped as the high income class and comprised solely the big business agricultural entrepreneurs. These classifications were based on Okorji, (1999) and Ezeh, (2007). The mean monthly income graduates in agri-business was ₦11,276.5 The income status of the respondents has implication for decision, choice of agro business enterprise as well as sustainability of the agribusiness enterprise. Nwibo and Alimba (2021) noted that income level of an individual plays a great role in shaping the type of agribusiness enterprise to venture into. This finding is justified on the ground that the supply of farm inputs such as fertilizer, agrochemicals among others is capital intensive and as such requires steady flow of income for business sustainability.

**Table 9: Distribution of the respondents According to their monthly Income level**

Category of Income Group	Income ranges	Frequency	Percentages
Low	Below ₦50,000	72	60.00
Medium	₦50,000-100,000	41	34.17
High	Above 100,000	7	5.83
Total		120	100.00
Mean	₦ 11,276.5		
Standard deviation	21032.3		

Source: Field Survey Data 2021

### Involvement of Graduates' in Agricultural entrepreneurship business

Table 10 identified different agricultural business activities operated by Agricultural graduates in Delta state, Nigeria. The table shows that the respondents were moderately involved in arable crop production mainly cassava (50.83%) and vegetable production (20.0%). Also, 35.0% of the respondents were involved in animal production which includes poultry production, pig production, goats and sheep among others. Meanwhile a fairly good proportion of the respondents operated a fish farm while 20.83% of them were into Consultancy service for farmers. Graduates in the study area were lowly engaged in fruit production (17.5%), rice production and processing (13.33%), Designing of machines and equipment for processing(0.83%), Transportation of farm production from different farms (15.83%), Processing of different agricultural produce (value addition) (20.0%), Packaging of finished agricultural produce (18.33%), Supplying of improved seed varieties of farm/farmers (13.33), marketing/distribution of different agricultural produce (16.67%), Supplying animal feeds to farmers (15.83%) and flower production (4.14%). The finding implied that agricultural graduates were more involved in crop production and livestock production. Gwary, Pur and Bawa (2020) in their study reported that young agricultural entrepreneur are more interested in crop production, probably due to the short gestation period of the crop varieties produced, which ensures quick turnover. In line with the view of Akpantaku *et al.* (1998) participation in livestock production may be attributed to the protein needs of the farmers.

In addition to the view of Gwary, Pur and Bawa (2020), livestock production could be more capital intensive than crop production, hence the preference for crop.

Meanwhile, the low involvement of agricultural graduates in Flower production could be attributed to the perceived low and seasonal/occasional demand of the product which attracts low and seasonal income.

**Table 10: Distribution of Respondents by Level of involvement in Agricultural Activities**

Agricultural activities	Frequency*	Percentages
Pomology (fruit production)	21	17.5
Olericulture (vegetable production)	24	20.0
Cassava production	61	50.83
Rice production /processing	16	13.33
Designing of machines and equipment for processing	1	0.83
Transportation of farm production from different farms	19	15.83
Processing of different agricultural produce (value addition)	24	20.0
Packaging of finished agricultural produce	22	18.33
Supplying of improved seed varieties of farm/farmers	16	13.33
Consultancy service of farmers	25	20.83
Marketing/distribution of different agricultural produce	20	16.67
Supplying animal feeds to farmers	19	15.83
Floriculture (flower production)	5	4.17
Fish rearing (aquaculture)	38	31.67
Animal production (poultry ,snail, glasscutter or pig)	42	35.0

Source: Field survey data, 2021

\* Multiple responses recorded

### **Determinants of Entrepreneurship Decision for Agricultural Business among Graduates**

The Probit regression model of the factors influencing the decision of graduates for entrepreneurship in agricultural business in Delta State Nigeria is presented in table 11. Overall, the model predicted 58.32 percent of the sample correctly and posted a log likelihood value of -35.051181 and a goodness of fit chi-square value of 54.2 which was statistically significant at 1.0% level.

In the model, five out of nine explanatory variables were statistically significant at given levels and these include gender, access to land, access to credit, age and employment status of respondents. In this table, a positive sign on the variable's coefficient indicates that higher values of the variable increase agricultural graduates' entrepreneurship decision for agricultural business and vice versa when a negative sign is obtained.

Specifically, The coefficient (-0.3903819) of gender was negative and statistically significant at 1.0% alpha level. The sign of the variable is not in conformity with a priori expectation. It implies that being a female agricultural graduate would increase the likelihood to decide to take to entrepreneurship in agricultural business. This may be due to the fact that females generally make greater responsibilities for agricultural production and enhanced economic contributions to family needs as the male abandon farming and other related entrepreneurship in agricultural business to seek for higher wage paying white collar jobs. Meanwhile, this is not in tandem with Okwoche (2012) that female youth have less likelihood to embark on agricultural business because of its tedious nature.

The coefficient (0.0032198) of age was positive and statistically significant at 99.0% confidence level. The sign is in conformity with a priori expectation. It implies that as the agricultural graduate advances in age, the more the tendency to decide for entrepreneurship in agricultural business. This is expected because an older entrepreneur is considered economically and emotionally matured to bear the rigours involved in agricultural business enterprise. This result is in agreement with Nwojo (2021) that older agricultural entrepreneurs are considered better credit risks in the sense that they are rational decision makers. Also, Graham (1999) opined that older agro-entrepreneurs have very high efficiency in their production and are more confident that they can handle difficulties/problems that can occur in the farm business hence, are not worried about the risks.

The coefficient of employment status (0.3118966) was positive and statistically significant at 10.0% probability level. The sign of the variable is in tandem with a priori expectation. The implication is that being an employed agricultural graduate will increase entrepreneurship decision for agricultural business. This is probably because an employed graduate is likely to have some experience, savings and income needed to finance agricultural entrepreneurship business. Also employed graduates have greater access to investment capital than the unemployed. However, Weissleder and Heckelei (2020) inferred that lack of knowledge or experience gained from being employed is responsible for inability to recognize opportunities, for failure to plan with sufficient accuracy, or for fear of not being able to execute plans properly.

Agricultural graduates' micro credit access gave a positive coefficient of 0.2510901 and was highly significant at 1.0% alpha level, indicating that agricultural graduate with access to agricultural micro credit had increases chances for entrepreneurship decision in agricultural business The sign identity of this variable makes sense for this study and conforms to a priori expectation. Access to credit is regarded as one of the key elements in raising agricultural productivity, income and entrepreneurship decision (DBSA, 2005).

Conversely, the coefficient of access to land (-0.1169886) had significant effect on agricultural graduate's decision to embark on entrepreneurship in agricultural business. This is evident from its negative coefficient and its significance at 1% (P<0.01). The sign of the variable is at variance with normal expectation. It implies that decision of taking entrepreneurship in agricultural business increases among agricultural graduate with no access to land. In as much as this result contradicts normal expectation, however it is expected in this study considering the few number of agricultural graduates that have access to land in the study area. This however accounted for the posture of this result.

**Table 11. Binary Probit Regression Coefficients of Factors Influencing the Decision of Agricultural Graduates for Entrepreneurship in Agricultural Business in Delta State Nigeria**

Variable	Estimated coefficients	Standard errors	Z	P> z
Gender	-0.390381***	0.1362944	-2.54	0.011
Age	0.003219***	.0008419	4.61	0.000
Marital status	-0.1451205	0.1506549	-0.92	0.356
Household size	-0.0018493	0.016645	-0.11	0.911
Employment status	0.3118966*	0.2222324	1.50	0.134
Fathers' occupation	-.435987	0.5749992	-0.73	0.463
Income level of sponsor	-9.61e-07	7.40e-07	-1.23	0.220
Access to micro credit	0.251090***	0.010162	11.73	0.000

Access to land -1.169886\*\*\* 0.01104 -7.19 0.000  
 Number of observations at one: 67  
 Number of observations at zero: 53  
 Log likelihood: -35.051181  
 Wald chi2 = 54.52  
 Cases predicted correctly (%): 58.3

**Source: Field Survey data, 2021.**

- \* Significant at 10.0% level
- \*\* Significant at 5.0% level
- \*\*\* Significant at 1.0% level

**Perceived constraints to investment Decision in agricultural business**

Table 12 shows the constraints hindering agricultural science graduates from investing in agricultural business in Delta State. Respondents identified a wide range of constraints they perceived to militate against their investment in agricultural entrepreneur business. The Table revealed that inadequate startup capital (76.67%) was the major constraints that have militated against respondents’ decision to invest in agricultural business in the study area. Other serious constraint identified by agricultural graduates is possible market for agricultural product (60.0%). This is due to the fact that the size of market explains how massive the product of an agribusiness firms could be consumed. It equally implied better prospects for an investor since it equates to a greater demand for its goods and services, and offers the investor economies of scale. This was in consonance with the finding of Weissleder and Heckelei (2020) and does not corroborate Dauda (2007), who noted that market is not a constraint to growth in an agribusiness investment. A Land procurement issue was identified (60.0%) as a problem facing graduate entrepreneurship in agricultural business. Access to land is still mediated via patrilineal systems (Aluko and Amidu, 2021), in spite of the intentions of the 1978 Land Use Act. User rights often follow marriage, inheritance or borrowing. Land access is severely curtailed by the way land is inherited, owned and passed on.

The degree of risk associated with agribusiness investments was also identified (52.0%) as a strong inhibitor for agribusiness and decision to invest in agribusiness. The level of risk associated with a business has the capacity to sway-off many investors as many entrepreneurs attempt to avert risk by venturing into a less risky business. Agriculture across the board is notorious for the volatility of its returns. Environmental factors such as drought, disease and natural disasters - as well as volatility in commodity prices and costs, including oil prices affecting the cost of transportation can severely reduce the return on investment. The finding is justified by that of Miguel, *et al.* (2004) who inferred that investors face significant economic risks due to the instability of political and financial institutions, uncertainty about government policy, incomplete or non-existent markets, war, corruption, and social issues in the region, among other factors. The table also revealed that 26.66% of agricultural graduate complained of Identification of agro-enterprise while 35.0% and 20.0% others complained of Water availability and poor perception of agricultural business respectively.

**Table 12: Perceived constraints to investment in agricultural business in Delta State**

Constraints	Frequency*	Percentage
Inadequate capital to start up the business	92	76.67
Identification of agro-enterprise	32	26.66
Possible market for product	72	60.00
Land procurement issues	72	60.00
Water availability	42	35.0
Poor perception	24	20.00
Climate and other related risk factors	63	52.5

Source: Field survey data, 2021

\* Multiple responses record

**IV. CONCLUSION**

Based on findings, a good proportion of 66.7% of the graduates are females. It implies that being a female agricultural graduate would increase the likelihood to decide for entrepreneurship in agricultural business. This may be due to the fact that female generally make greater responsibilities for agricultural production and enhanced economic contributions to family needs as the male abandon farming and other related entrepreneurship in agricultural business to seek for white collar jobs in the cities. Also the posture of this result may be due to the dominance of female in agricultural business in the study area. The study result further concluded that Age, employment status of respondents and access to credit positively influenced graduates decision to take to entrepreneurship in agricultural business at varied levels of significance while, gender and access to land negatively influenced graduates decision to take to entrepreneurship in agri-business at 1.0% level of significance

## Recommendations

1. Lending institutions should be established by the government to grant soft loans to tertiary graduates who want to embark on agricultural business.
2. Tertiary graduates should be encouraged to develop a more positive attitude towards self-employment. In pursuit of this goal government should establish centre for training tertiary graduates in diverse agricultural enterprises.
3. Government should map out some portions of land and set up agencies to help lease out these lands at low cost to tertiary graduates that want to venture into agribusiness.

## REFERENCES

- [1]. Akpantaku, S.O.;A.M., Omotayo; and A.B., Oyesola (1998). Poultry farmers Willingness to participate in Nigerian Agricultural insurance Scheme in Ogun state, Nigeria, In Oduguwa, O.O, Fanimo, A.O and Osinowo, O.A (eds). Proceedings of Silver Anniversary Conference of Nigeria Society of Animal Production, held at Gateway Hotel, Abeokuta Ogun State, Nigeria, 21-26<sup>th</sup> March, 1998, Pp552.
- [2]. Alimba, J.O. (1990). Linkages Between Farm and Non-farm Enterprises in selected Rural Area of Anambra State, Nigeria (unpublished) M.Sc. Dissertation, University of Nigeria, Nsukka.
- [3]. Aluko, B.T., and Amido, A. (2021) Women and Land Rights Reforms in Nigeria. Paper presented at 5th FIG regional conference, on Promoting Land Administration and Good Governance. Accra, Ghana, March 8-11, 2021
- [4]. Amanor, K.J (2021) Global Food chains African small holders and WorldAmuseghan Sunday Adejmolola and Tayo-Olajubutu Olufumilayo.department of arts education ,Adekunle Ajasin university,Akungba, ondo state.African journal of business management vol 3(3)Pp 80-88
- [5]. Anyiro, C.O.and Oriaku B.N (2021). Access to and Investment of Formal Micro Credit by small Holder Farmers in Delta State, Nigeria. A case study of ABSU Micro Finance Bank, Uturu. The Journal of Agricultural Sciences.6(2): 69-76.
- [6]. Arunma, O (2021). The Role of Entrepreneurship in transforming the Bank Governance. Journal of Agrarian change, 9(2): 247-262.
- [7]. chains. The European Journal of Development Research, 18(4), P. 572-592.
- [8]. Chimobi, U. (2021). Poverty in Nigeria: Some Dimensions and Contributing Factors. Global Majority E-Journal, Vol. 1, No. 1: Pp. 46-56.
- [9]. Cloete, E. and Doens, M. (2020). B2B e-marketplace adoption in South African Agriculture. Information Technology for Development. 14(3): Pp. 184-196.
- [10]. Dauda, O. 2007. Entrepreneurship Education. Learning Organisation. 5(3): 144. 155. <http://www.isebe2007.org/view.php.15/03/2021>. Delhi V. kas Publishing House PVT Ltd.
- [11]. Delta State Agricultural Development Project (ABSADP) (2005). "A Colossus in Agricultural Transformation". Pp 1-4
- [12]. Destipande, M.U (1984) Entrepreneurship of small scale industries, Deep
- [13]. Development Bank of South Africa (DSBA) (2005). Development Report 2005, Agriculture in South Africa's Second Economy. [www.dbsa.org/document/developmentreport/dev](http://www.dbsa.org/document/developmentreport/dev). Accessed 12/11/09. Development. Washington, Dc World Bank.
- [14]. Eboh, E.C; Okoye, C and Ayichi, D. (1995). "Rural Development in Nigeria: Concepts, Process and Prospect". Enugu Auto century Publishing Company.
- [15]. Emerole, C. O. (2004). "Determinants of Household Income and Consumption Expenditure of Smallholder farmers in Delta State, Nigeria" Ph.D Thesis, Michael Okpara University of Agriculture, Umudike, Umuahia, Nigeria.
- [16]. Ezeh C.I, Anyiro C.O., Ehiemere I.O and Obioma N.Q (2012). Gender Issues on Poverty Alleviation Programmes in Nigeria; the Case of the National Fadama 1 Development Project in Delta State, Nigeria. Agris on-line Papers in Economics and Informatics. 4(3): 15-20.
- [17]. Ezeh C.I. (2007). "Poverty Profiles and Determinants of Expenditures of Rural Women Households in Delta State, Nigeria". The Nigerian Journal of Development Studies 6(1): 187-204.
- [18]. Ezike, K.N.N. Nwibo, S. U and Odoh, N.E (2021) Agribusiness and Finance, John Jacob's Classic Publishers Ltd. Enugu.
- [19]. Falkang, J. and Alberti, F. (2000) The assessment of entrepreneurship education, industry and Higher Education. Vol 14 (2): pp 101-108
- [20]. Gibb, A.A. (1995) Learning skills for all: the Key to success in small business development. A paper presented at the international council for small business both world conference Sydney, Australia.
- [21]. Graham, J. R. 1999. Herding among Investment Newsletters: Theory and Evidence. Journal of finance. 54 (1):237-268.
- [22]. Gujarati, D.N. (2003). Basic Econometrics. Tata McGraw-Hill Edition, New York.
- [23]. Gwary, M.M., Pur, J.T. and Bawa,D.B. (2020). Socio-economic Determinants of Youths' Involvement in Agricultural activities in Askira/Uba Local Government Area of Borno State. In: Ladele, A.A. et al (eds). Policy Advocacy Role in Agricultural and Rural Transformation in Nigeria. Proceedings, 17th Annual Congress of the Nigerian Rural Sociological Association (NRSA), NRCRI, Umudike, 19th-22nd August. Pp.15-23
- [24]. Herrington, M. Kew, J. and Kew. P. (2020). Global Entrepreneurship monitor. South Africa Report Cape town: Graduate School of Business University of Cape Town.
- [25]. Humphrey, J (2021). Policy implication of trends in agribusiness valye Independent National Electoral Commission (INEC) (2020). Nigerian Atlas on Electoral Constituencies. O. Balogun (ed) INEC Abuja.
- [26]. Kessler, A. (2007). Success factor for new businesses in Austina and the Czech Republic. Entrepreneurship and Regional Development.1(1) Pp 381-403.
- [27]. Kompmann, M. (1999). Sector programmes and how it can contribution to poverty Reduction and Gender Equity. Agriculture and Rural Development, Vol.6, No. 2, pp. 8 -9.
- [28]. Learning, Nottingham Trent University.
- [29]. Li, J. and Matlay, H. (2021). Chinese entrepreneurship and small business development. An overview and research agenda. Journal of Small business and enterprise Development, 13(2): Pp. 248-262
- [30]. Mathias Dimis M Song W (2021) social economic impact of graduate unemployment on Nigeria and vision 20:2020. International journal of development and sustainability 2(1).Pp1-29

- [31]. Matlay, H. (2005) Entrepreneurship education in Uk business schoolsconceptual, contextual and policy considerations. Journal of small business and Enterprise Development, 12 (4): Pp. 627-643.
- [32]. Miguel, E., Satyanath, S., and Sergenti, E (2004). Economic Shocks and Civil Conflicts: An Instrumental Variables Approach. Journal of Political Economy, 112 (4).
- [33]. National Population Commission (NPC) (2021). The Population Census of the Federal Republic of Nigeria Analytical report at the National Population Commission- Abuja.
- [34]. National Root Crops Research Institute (NRCRI) (2003). Annual Report. Umudike, Umuahia, Delta State, Nigeria.
- [35]. National Root Crops Research Institute (NRCRI). (2020). Annual Report. Umudike, Umuahia, Delta State, Nigeria.
- [36]. New Economic Partnership for African Development (NEPAD) (2020). Business Foundation. The official Guide Nigerian Economy. Seventh Convocation Lecture, Igbenedion, University, Okada, Edo State.
- [37]. Nwaigbo, E.C. and Famoriyo, S. (1981). Problems of Agricultural Finance in Nigeria: Problem and prospects. Preceding of seminar organized by the CBN April, 17<sup>th</sup>-30<sup>th</sup>, 1981, in Ojo, M.O. (eds), CBN October, 1981, Lagos
- [38]. Nwibo, S. U. and Okorie, A. (2013) Determinants of Entrepreneurship Among Agribusiness Investors in South-East, Nigeria. European Journal of Business and Management.5(10)
- [39]. Nwibo, S. U. and Alimba, J. O (2021) Determinants of Investment Decisions among Agribusiness Investors in South-East, Nigeria. IOSR Journal of Business and Management.8(2):60-67
- [40]. Nwojo, I.M (2021). Demand and Decision Factors in the Procurement of Agricultural Credit from Financial Institutions by Small Scale Farmers in Ikwano Local Government Area of Delta State. B.Sc project, department of Agricultural Economics and Extension, Delta State University Uturu, Umuahia Campus, Umuahia, Delta state, Nigeria.
- [41]. Nwoke, Hyacinth Ude, **Ude, Kingsley David**, Ugbor, Ugonma Joy Kalu, Igwe, Chukwuemeka Obasi & Ogu, Esomchi Chris-Santus (2021). E-Governance and Economic development in Sub-Saharan Africa: A case of Nigeria. International Journal of Development strategies in Humanities, Management and Social Science (IJDSHMSS). DOI: 10.48028/ijprds/ijdshtmss. International scientific research comitium, United Kingdom.
- [42]. Nwoke, Hyacinth Ude, **Ude, Kingsley David**, Ugbor, Ugonma Joy Kalu, Igwe, Chukwuemeka Obasi & Ogu, Esomchi Chris-Santus (2021). Comparative analysis of Sub-saharan African states National Economies: Covid 19 Epoch. International Journal of Development strategies in Humanities, Management and Social Science (IJDSHMSS). DOI: 10.48028/ijprds/ijdshtmss. International scientific research comitium, United Kingdom
- [43]. Obed Racheal U, Okpukpara Benjamin C & **Ude Kingsley D**. (2021). Performance of formal financial institution in credit extension to small holder farmers in Enugu state, Nigeria. Journal of Agriculture and Veterinary Science (ISOR-JAVS). India. Volume 14. [www.isorjournals.org](http://www.isorjournals.org).
- [44]. Ogundele, O. J. K.and Olayemi, O.O (2004) Entrepreneurial Education a Social Economic Reconstruction, Nigerian Journal of curriculum and instruction, Vol. 12, No 1: Pp.161- 165
- [45]. Okorji, E.C. (1999). Consequences of Agricultural Productivity of Crops Stereotyping along sexline, Anambra State. M.Sc. Thesis, Department of Agricultural Economics, University of Nigeria, Nssuka, Enugu State, Nigeria.
- [46]. Okwuoche, V.A, Age, A.I, and Alegwu F.O (2012).An assessment of Youths Participation in Agriculture and Rural Development, Benue State, Nigeria. Agricultural Journal, 7(5):365-369
- [47]. Onyekwe, Chris N., Osuofor, Ogonna O, **Ude, Kingsley D**. & Chioma P. Onwuelmie (2021). Level of Awareness and Climate-Smart Agricultural Technologies used by Rice Farmers in South-east, Nigeria. In Ogunji, J.O., I.I. Osakwe, R.U. Onyeneke, S.C. Iheanacho & M.U. Amadi (eds). Climate Smart Agriculture and Agribusiness Development in Nigeria. Proceedings of the 54<sup>th</sup> Annual conferences of the Agricultural Society of Nigeria held at Alex Ekwueme Federal University Ndufu Alike, Ebonyi State, Nigeria, 31<sup>st</sup> January – 4<sup>th</sup> February, 2021, 199-206
- [48]. Osuofor Ogonna Olive & **Ude Kingsley David** (2021). Valuation of Rice Farmers' Preferences and Willingness to Pay for Climate-Smart Agricultural Technologies in South-east, Nigeria. Asian Journal of Economic Modelling. DOI: 10.18488/journal.8.2021.91.48.57. Vol. 9, No. 48-57. AESS Publications.
- [49]. Rae, D. (1999). Entrepreneurial Identity and Capability; the Role of Rae, D. and Carswe M. (2000). The development of a conceptual model and its implication in the design of learning experience. Journal of Education training. Vol 42(5). pp 220-227.
- [50]. Say, J.B. (1994). A treatise of Political Economy or the production, Distribution and consumption of wealth.
- [51]. Schumpeter, J.A. (1959). The theory of Economic Development Harvard University Press Cambridge Massachusetts
- [52]. Singh, P.B (1986) Developing entrepreneurship for Economic Growth, New
- [53]. Smith, N.R. (1967). The entrepreneur and his firm: The relationship between type of man and type of company. East Lansing, M.I: Michigan state university.
- [54]. The National Agriculture Handbook (2021). Department of Agriculture's forestry and Fisheries
- [55]. Timmons, J. (1999). New Ventures creation, Entrepreneurship in the 21<sup>st</sup> century. Iruin McGraw Hill P 27-30
- [56]. UNDP (2021). Human Development Index Report 2021
- [57]. UNDP, Nigeria-UNDAF II 2021-2012
- [58]. Vision 2021 report (2005): Youth, Development and Empowerment.
- [59]. Weissuleder, L. M. and Heckelei, T. 2020. Analysing Major Determinants of European FDI into the Mediterranean Countries. Paper presented in the 12th Congress of the European Association of Agricultural Economist, Bon, Germany.
- [60]. World Bank, 2007. World Development Report 2007: Agriculture for World Bank, 2020. World Bank development report, 2020
- [61]. World Bank, 2021. World Development Report 2021.

Enwa Sarah, et. al. "Determinants of Entrepreneurship Decision for Agricultural Business among Tertiary Graduates in Delta State, Nigeria." *IOSR Journal of Agriculture and Veterinary Science (IOSR-JAVS)*, 15(03), 2022, pp. 01-10.