

Predictors of agripreneurial career exploration among undergraduate agricultural students of Abubakar Tafawa Balewa University Bauchi Nigeria

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Abstract

Institutions are under growing demand to supply marketable students. In this direction, a study was conducted to determine the factors that affect the career choices of undergraduate agriculture students at Abubakar Tafawa Balewa University in Bauchi. A sample of 100 students was chosen through random sampling and surveyed using a structured questionnaire. Data analysis included simple linear regression and descriptive statistics. Results showed that multiple factors influence students' career choices, with agricultural marketing being the most popular choice. There was a significant relationship between students' course of study and their intention to become agricultural entrepreneurs. Working experience and previous academic performance were found to be predictors of students' intention to start agribusinesses. The main obstacles to students achieving their goals as agricultural entrepreneurs were accessing loans and high interest rates. Recommendations included providing soft loans with lower interest rates to students who have received entrepreneurial training and expanding the study to include other universities in the state.

Key words: Agripreneur, career exploration, undergraduates, intention

1. Introduction

According to the World Bank, the unemployment rate in Nigeria has increased significantly over the last decade, from 6.4% in (2010) to 33.3% in Q4 (2020). The large increase has affected the ability of young Nigerians to find employment opportunities.

The way in which people advance in their careers is changing, making it more difficult to make career-related decisions. Factors such as competition, new technology, demographic changes, and the emergence of new industries are all important considerations when planning a career. University students choose their career paths for a variety of reasons,

including family, passion, salary, and previous work experiences. Additionally, the people in a student's life, such as parents, teachers, and recent employers, can also play a significant role in influencing their career decisions (Fizer, 2013).

Career exploration is the process of investigating and considering potential jobs to make an informed decision about a career path. It is an important step in the career-planning process, as it allows individuals to gain a better understanding of the various options available to them and to make a more informed decision about their future. Navin's research suggests that many undergraduate students struggle with this process, as they may have limited

information about different career options or may not know how to go about researching and evaluating these options. as mentioned by Julius et al., (2016), it is important to consider various work options before choosing a career to improve professional growth, success, and contentment. Factors such as living situation, unique qualities, and educational achievement can affect a person's career exploration and should be taken into account.

This statement suggests that various elements, such as the person's surroundings, innate characteristics, and educational achievements, play a role in shaping their experiences and outcomes. (Watson et al., 2010) and also (Julius *et al* 2016) all concur. This statement is referencing a study by Issa and Nwalo in 2008, in which they found that many prospective undergraduate students have difficulty choosing a career path and finding the right professional pathway. Carlos et al. (2009) found that several factors contribute to the choice of a career in agriculture, including sex, past agricultural exposure, previous academic status, family educational status, and family

The broad objective of the study is to examine predictors of Agripreneurial career choice among undergraduate agricultural students. The specific objectives of the study were to:

- i. Examine the agribusiness career choice of the students.
- ii. Determine the relationship between students' course of study and their Agripreneurial intention.
- iii. Determine the predictors of Agripreneurial intention among students in the study area.
- iv. Identify barriers associated with achieving students' goals as Agripreneurs.

affluence. These factors are important to understand because they can affect a student's expectations for their future and overall satisfaction with their chosen career. (Mkong et al., 2021).

An individual's environment, talents, skills, and academic achievement can all play a role in determining their career choice. Factors such as the home environment, the school or educational system, and the individual's social and cultural background can all influence the choices they make. If an individual makes a career choice that does not align with their talents, skills, or interests, it may lead to disappointment and failure. Research has shown that these external factors can have a significant impact on an individual's career choices.

The factors that influence career choices are complex and can include input from parents, friends, and counselors, but may also vary from person to person. Research on career choice is ongoing and is a concern in higher education, including at the Abubakar Tafawa Balewa University in Bauchi, Nigeria, where there is a lack of information on the specific factors that influence the career choices of agriculture bachelor students.

2. Literature Review

Theoretical Framework

The Social Cognitive Career Theory (SCCT), suggests that the atmosphere in which an individual interacts in a process impacts their skills, abilities, and educational advancement. This theory is linked to the self-efficacy theory of Bandura (1977) which suggests a mutual influence of the interaction between the public and nature. It offers three models of career development: development of academic and professional interests, how individuals make choices about career and education, and stability in education. Another theory that is related to it is the theory of happenstance, which emphasizes the importance of recognizing and taking advantage of unplanned or unexpected

events in one's life to bring new possibilities.

Factors Influencing Students' Career Choice

According to Hunkar (2015), affluent youths tend to view environmental conservation as less important than those with lower income. The study also suggests that as income increases, environmental awareness and concern for physical surroundings decrease. Additionally, the study suggests that a person's inherent interest in a field is the primary factor influencing their decision to pursue a specific vocation, and that students perform better when their study preferences align with the teaching style of the instructor.

Career exploration is the process of researching and considering different occupations before making a decision on a chosen vocation. It is important for individuals, particularly teenagers, to engage in career exploration as it can lead to increased career success and happiness. With changing socioeconomic factors and realities, it is necessary for individuals to also engage in detailed career planning to adapt and succeed in their chosen field. (Wattles, 2009).

A person's choice of profession is influenced by various factors such as self-esteem, social values, family background, professional expectations, and career counseling. Research in Kenya has found that rural students tend to seek advice from their families more than urban students, and that parents play a significant role in students' career choices. Other factors that influence career choices include family influence, gender, and socioeconomic status. Understanding these elements is an important ongoing subject in higher education. (Mathombela, 1997).

3. Methodology

Research Design: An explanatory survey approach was employed in the study to investigate determinants of agribusiness

choice of occupation across university agriculture undergraduates. **Area of the Study:** Bauchi State lies between 9.3^o and 12.3^o North of the equator and 8.5^o and 11^o Oriented East of the Prime Meridian. The state is surrounded by eight states, with a combined land area mass of around 549,260 square kilometers, accounting for approximately 5.3% of Nigeria's entire surface area.

Population of the Study: The population of the study consisted of 2018/2019 final year students from the Faculty of Technology Education (Agricultural Education Option) and Faculty of Agriculture & Agricultural Technology (Crop-Production, Animal-Production, Soil-Science and Agricultural Economics & Extension options).

Sample and Sampling Techniques: The sample size for this research study was 100 respondents selected using a stratified proportionate sampling followed by systematic random sampling since the number of students in the programmes were not equal

Instrument for Data Collection: A self-designed, adopted structured questionnaire was used to collect primary quantitative data. Part A consist of six items used to collect information on factors influencing students' career choice. Part B has eight items on areas of career choice among students. Section C has nine items on barriers associated with achieving students' goals as agripreneurs.

Validation of Instrument: The questionnaire was validated by three lectures, one from the Faculty of Technology Education Agricultural Education option, and two from the Faculty of Agriculture, Agricultural Economics and Extension department

Reliability of the Instrument: The reliability of the instrument was determined



by Alpha Cronbach’s reliability test. The coefficient was 0.82 which was highly reliable for the instrument to be administered.

Method of Data Collection and Analysis:

The data were collected by the researchers and the class captains of the various sampled agriculture programmes of the two faculties. Data obtained through the questionnaires was analyzed with the aid of Statgraphics Centurion version 19. Specifically, the study was analyzed using multiple sample comparison, simple and multiple linear regression analyses to achieve the specific objectives of the study. The linear model was thus specified as

Table 1

Relative Frequencies probabilities for the area of career choice interested by students

Level	Count	Probe.	Estimated Probability	Hypothesized Probability
Agricultural Marketing	24	0.2424	0.2424	0.1250
Agro-Processing	15	0.1515	0.1515	0.1250
Bee Keeping	6	0.0606	0.0606	0.1250
Fisheries	6	0.0606	0.0606	0.1250
Cattle Fattening	5	0.0505	0.0505	0.1250
Poultry Production	22	0.2222	0.2222	0.1250
Crop Production	13	0.1313	0.1313	0.1250
Ornamental & Horticultural Gardening	8	0.0808	0.0808	0.1250
Total	99	1.0000		

Source: Field survey, 2019

The data in Table 1 shows that the majority of students in the sample preferred careers in agricultural marketing, poultry production, and agro-processing. However, there was variation in the career choices among the students, as the estimated probabilities did not match the hypothesized probabilities. This suggests that students have different factors that influence their career choices, and they must weigh their interests and academic aptitude when making a decision.

Julius et al., (2016) did a study to evaluate Factors that impact profession choices among students in an attempt to uncover the enigma surrounding job choices among students. The findings show that a variety

$$Y=b_1(X_1) + b_2(X_2) + b_3(X_3) + b_4(X_4) + b_5(X_5) + b_2(X_6) \dots\dots\dots (1)$$

Where: Y= area of interest (nominal value)

X₁= Previous educational performance (nominal value)

X₂= Working experience (years)

X₃ =Media and extension personnel (nominal value)

X₄= Friends’ influence (nominal value)

X₅= Relatives influence (nominal value)

X₆= School location (nominal value)

4. Results and Discussion

Objective 1: Choice of agribusiness areas among students in the study area

of factors impact undergraduate students' job choices. According to Sokalyan (2013), the major reasons for students' major choice were their interest in the subject and the potential job opportunities. Divergent findings have been made regarding the influence of advisors such as parents, teachers, and friends. However, in other studies, the influence of such advisors was found to be significant (Rodrigue *et al.*, 2019). The subject chosen by an individual may impact his selection regarding the type of profession he want to pursue. The selection on which subject to choose is thus critical because of the impact it has for students.

The study by Julius et al. in 2016 found that a variety of factors impact undergraduate students' job choices. According to Sokalyan (2013), the major reasons for students' major choices were their interest in the subject and the potential job opportunities. The influence of advisors such as parents, teachers, and friends on

Table 2

Chi-square probability test for the area of career choice interested by students

Test	Chi-Square	DF	Probe>Chi-square
Likelihood Ratio	30.7460	7	<.0001*
Pearson	31.5051	7	<.0001*

Source: Computed from field survey data, 2019

Table 2 confirms the findings in Table 1, showing a significant difference in the areas of career choice among students in the two faculties. Both the Likelihood ratio and

students' job choices has been found to be mixed, with some studies showing modest effects and others showing significant effects. The subject chosen by an individual may also impact their profession choice, making the selection of a major critical for students.

Pearson chi-square test indicate a high level of statistical significance.

Objective 2: Relationship between students' course of study and their agriprenuerial intention

Table 3

Simple linear regression analysis result of the relationship between students' course of study and their agriprenuerial intention

Source	Sum of Squares	DF	Mean Square	F-Ratio	P-Value
Model	2185.22	1	2185.22	1865.74	0.0000
Residual	114.78	98	1.17123		
Total	2300.0	99			
Correlation Coefficient	0.97				
R-squared	95.01%				
R-squared (adjusted for df.)	95.01%				
Standard Error of Est.	1.0822				
Mean absolute error	0.9264				
Durbin-Watson statistic	0.1351				

Source: Computed from field survey data, 2019

The researchers found that there is a statistically significant relationship between students' course of study and their agriprenuerial intention at a 95% confidence level, as indicated by the P-value of the F-ratio statistic being less than 0.05. The R-Squared statistic shows that the model explains 95.01% of the variability in agriprenuerial intention. The correlation coefficient of 0.974728 suggests a

relatively strong relationship between the variables. The standard error of the estimate is 1.08224, and the mean absolute error is 0.926358. The Durbin-Watson statistic tests for correlation in the residuals.

Objective 3: The predictors of career choice among the respondents in the study area

Table 4

Multiple linear regression analysis for the predictors of students' choice of agribusiness area.

<i>Parameter</i>	<i>Estimate</i>	<i>Standard Error</i>	<i>t- statistic</i>	<i>P-value</i>
Previous educational performance (X ₁)	+1.09662	0.443976	2.47	0.0153
Working experience (X ₂)	+4.48172	0.520157	8.6161	0.0000
Media and extension contact (X ₃)	-1.78541	0.514391	-3.47092	0.0008
Friends' influence (X ₄)	-2.98165	0.509936	-5.8471	0.0000
Relative influence (X ₅)	-2.46955	0.452972	-5.45188	0.0000
School location (X ₆)	-1.81958	0.640368	2.84146	0.0055

Source: Computed from field survey data, 2019

The output likely displays the coefficients of the multiple linear regression model, as well as statistics such as R-squared and p-values, that indicate the strength and significance of the relationship between the predictor variables and the outcome variable (Choice of agribusiness). The equation of the fitted model would be an equation that uses the coefficients of the predictor variables to predict the value of the outcome variable.

$$=1.09662 (X_1) +4.48172 (X_2) -1.78541 (X_3) -2.98165 (X_4) - 2.46955 (X_5) + 1.81958 (X_6)$$

The table revealed that (X₁) and (X₂) are indigenous variables, whereas, (X₃) to (X₆) were exogenous variables. This is to say (X₁) and (X₂) are internal factors and have a positive contribution, whereas, (X₃) to (X₆) are external factors which have negative contributions in predicting students' choice of agribusiness.

The choice of agriculture as a university major is affected by various factors, including the student's sex, pre-university farming experience, educational background, the mother's income, and

household income, as shown in a study by Mkong et al. (2021). Another study by Abdul Aziz and Norhlilmatur (2013) found that attitudes, acceptance, and knowledge influence youth engagement in agricultural entrepreneurship, but also identified other important factors such as family support, government support and promotion through festivals and carnivals. The study found that attitude and acceptance have a significant relationship with youth interest in becoming entrepreneurs, while knowledge does not. Both studies indicate that the decision to become involved in agriculture entrepreneurship is influenced by multiple factors, not just attitude, acceptance, and knowledge.

The study suggests that undergraduate students' career choices are mostly influenced by intrinsic factors, such as internal values. This aligns with current research that has found that entrepreneurial education can have a significant impact on students' intentions to start their own business for self-employment (Oguntimehin and Olaniran, 2017).

Table 5

Analysis of Variance (ANOVA) for the multiple linear regression analysis

<i>Source</i>	<i>Sum of Squares</i>	<i>DF</i>	<i>Mean Square</i>	<i>F-Ratio</i>	<i>P-Value</i>
Model	1972.2	6	328.7	93.26	0.0000
Residual	327.799	93	3.52472		
Total	2300.0	99			
R-squared =	85.75 %				
R-squared (adjusted for d.f.) =	84.98%				
Standard Error of Est. =	1.87742				
Mean absolute error =	1.25361				
Durbin-Watson statistic =	0.594368				

Source: Computed from field survey data, 2019

The ANOVA test shows that there is a statistically significant relationship between the variables at a 95% confidence level. The R-squared statistic indicates that the model explains 85.75% of the variability in the data. The adjusted R-squared is more suitable for comparing models with different numbers of independent variables and is 84.98%. The standard error of the estimate is 1.87742 and can be used to construct prediction limits for new observations. The mean

absolute error is 1.25361 and the Durbin-Watson statistic tests for correlation in the residuals.

This statement suggests that the variable "Previous educational performance" (X1) is a significant predictor of the outcome "area of agribusiness choice" because its P-value (0.0153) is less than 0.05. This means that it is likely that this variable has an effect on the outcome, and therefore should not be removed from the model.

Objective 4: To identify barriers associated with achieving students' goals as agripreneurs

Table 6

Multiple sample comparison results in barriers associated with achieving students' goals as agripreneurs

	<i>Average</i>	<i>Standard deviation</i>	<i>Coefficient of variation</i>
Accessing loans	4.06061	1.06731	26.28%
NAFDAC/SON registration	3.67677	0.998246	27.15%
Cost and Profit	3.44444	0.981692	28.50%
Nature of Competition	3.39394	1.13226	33.36%
Nature of inputs, uses	3.37374	1.18309	35.068%
Nature of agribusiness training	3.46465	1.1979	34.57%
Returns on investment	3.39394	1.23568	36.41%
Access to market survey reports	3.51515	1.16377	33.101%
High interest rate on loans	3.65657	1.21354	33.19%
Total	3.55331	1.14765	32.30%

Source: Computed from field survey data, 2019

Table 7

ANOVA result from multiple sample comparison result in barriers associated with achieving students' goals as agripreneurs

<i>Source</i>	<i>Sum of Squares</i>	<i>DF</i>	<i>Mean Square</i>	<i>F-Ratio</i>	<i>P-Value</i>
Between groups	38.3591	8	4.79489	3.73	0.0003
Within groups	1133.86	882	1.28555		
Total (Corr.)	1172.22	890			

Source: Computed from field survey data, 2019

The ANOVA table is used to determine if there are significant differences between the means of two or more groups. The table decomposes the variance of the data into two components: a between-group component (variance between groups) and a within-group component (variance within groups). The F-ratio, which is calculated as the ratio of the between-group variance to the within-group variance, is used to determine if there is a statistically

significant difference between the means of the groups. If the P-value of the F-test is less than 0.05, it indicates that there is a statistically significant difference between the means of the groups at the 5% significance level. In the given statement, the F-ratio equals 3.73 and the P-value is less than 0.05, hence the researchers concluded that there is a statistically significant difference between the means of the 9 variables of barriers associated with

students' goal for achieving their level.
agriprenuerial goal at the 5% significance

Table 8

Kruskal-Wallis test for multiple comparison result in barriers associated with achieving students' goals as agripreneurs

	<i>Sample Size</i>	<i>Average Rank</i>	<i>Rank</i>
Accessing loans	99	565.061	1 st
NAFDAC/SON registration	99	470.626	3 rd
Cost and Profit	99	415.768	6 th
Nature of Competition	99	406.414	8 th
Nature of inputs, uses	99	404.303	9 th
Nature of agribusiness training	99	425.874	5 th
Returns on investment	99	415.374	7 th
Access to market survey reports	99	437.98	4 th
High interest rate on loans	99	472.601	2 nd
Test statistic	= 33.8736	P-Value	= 0.000

Source: Computed from field survey data, 2019

The Kruskal-Wallis test is used to determine if there is a statistically significant difference in the median of multiple groups. In this case, the test is being applied to nine predictor columns in order to determine if there is a difference in the median of each column. The null hypothesis is that the median is the same for all columns, but the P-value is less than 0.05, indicating that there is a statistically significant difference among the rankings of the barriers at a 95% confidence level. The results suggest that difficulty in accessing loans is the most influential factor serving as a barrier to achieving students' goal as agripreneurs, followed by high interest on the loans.

According to Ardi (2018), the most significant barrier to growth of any entrepreneurial business was based upon motivational factors. If there is not a strong obligation of the organization to grow the business, then it is unlikely to happen of its own accord. However, even if the commitment to growth is demonstrated, then issues such as management capability, funding, sales or marketing capacity and poor product or service offering has also been featured as being the internal barriers to firm growth. Entrepreneurs encounter barriers, e.g. Lack of adequate support from

the state, limited support from business environment institutions, or ineffective management of financial resources might widen competitive gap between firms. Based on the findings, it is concluded that demographic factor does not affect entrepreneurial intention while personal factors, environmental factors and family background affect entrepreneurial intention.

Findings of the Study

1. The major choice of students' agriprenuerial intention is agricultural marketing.
2. There was a significant relationship between students' course of study and their agriprenuerial intention.
3. Working experience and previous education, performance was the predictors of students' agriprenuerial intention.
4. The Accessing loans and high interest rate with low coefficient of variation were the major barriers associated with achieving students' goals as agripreneurs



5. Conclusion and Recommendations

Conclusion

1. Students are interested in agribusiness, not production or rearing or ornamental & horticultural gardening because it involves small capital base.
2. The predictors of students' agriprenuerial intention were intrinsic. Mentor, families and peer group friends influence was not a significant predictor
3. Financial factors were the major barriers associated with achieving students' goals as agripreneurs

Recommendations

It is suggested that more focus should be placed on education to guide students towards specific career choices in agriculture, and that students should be made aware of financial aid options for starting agricultural businesses. It also suggests that agribusiness should be included in the curriculum for agricultural students, and that the government should provide loans for new agribusinesses. Additionally, further research should be conducted to better prepare students for self-reliance in the field.

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