CHOICE OF AGRICULTURE AS A COURSE OF STUDY IN TERTIARY INSTITUTIONS AMONG SECONDARY SCHOOL STUDENTS IN EDO STATE, NIGERIA

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Abstract
Inspite of the job opportunities available to agricultural graduates, students preference for agricultural courses has been declining, hence the study assessed the socio-psychological attributes as correlates of students' preference for agriculture at the tertiary education level in Edo state, Nigeria. Employing multi-stage random sampling technique, 760 students from twenty secondary schools across the state were administered validated questionnaire. Data analysis was done using descriptive statistics, Probit regression and Binomial test. Results revealed the average age of the students was 15 years and majority (67.11%) attend urban-based school; most students (98%) had some level of farming experience; have parents (over 80%) who had formal education and have been involved in farm enterprise. Most (97.11%) respondents had poor perception of agriculture. Not surprisingly therefore, very few (2.97%) students indicated willingness to study agriculture at the higher education level, and Binomial test (p<0.01) showed this was significantly low. Major factors affecting the student's choice to study agriculture were employability after graduation (mean=3.09), psychological satisfaction (2.97) and peer group influence (2.93). Probit regression result revealed students' perception of agriculture was the only factor that affected significantly their educational choice to study agriculture at the tertiary level. The study recommends enlightenment campaign targeted at secondary school students to improve their perception of agriculture as course of study.

Keywords: Socio-psychological, Students, Youths, Agriculture, Education, University, Edo, Nigeria.

Background to the Study
Nigerian children and youths are not interested in agricultural practices (Afonja and Omolara, 2013), and according to Akpan (2013), this is the reason for the low patronage of agriculture as a course of study in the nation's tertiary institutions. Yet, if the nation's economy particularly of the rural communities where agriculture is the people's socio-economic activity, the youths must show active interest in studying agriculture beyond the secondary school level. This explains the focus of this study on secondary school students. It is also at the Senior Secondary School Level that the students are assumed to be matured enough to take certain decisions regarding their post-secondary education course of study (Kellaris and Kellaris, 2014). At this phase of their educational development, Oladele (2014) noted, they are deemed to have developed the necessary competences, passion and interest for certain disciplines or course of study.

Going by the unemployment situation in the country which is over 40% (Aremu, 2014) and the economic recession being witnessed by the economies of the world periodically and Nigeria recently (2017-2019), there is need for a paradigm shift in the choice of career, that is, in courses with practical/entrepreneurial opportunities such as agriculture by students. The available job cannot match up with the teeming graduates, mainly from the Arts and Social Sciences (Azubuike, 2013). There is the need for students (youths) and other stakeholders in education to re-examine what will become of the students after graduation, so that the education that is supposed to solve societal problems will not be a major contributor to the problems associated with high unemployment rate when graduates are roaming about the streets without any worthwhile economic engagement. This explains the focus of this study on agriculture education. Food security and its relationship to sustainable rural development have increasingly become matters of concern for developing countries and for the international community. A critical issue in the 21st century is the changes and adaptations required in agricultural education in order for it to effectively contribute to food security, employment generation, sustainable agricultural production and rural development (Yaqub, 2014). This demand that career
opportunities in agriculture be exploited and this will require an educational system that motivates youth to enrol for agricultural courses at the higher levels of education. The above can hardly be obtained with a consistent decline in the study of agriculture in tertiary institutions by the youths (JAMB, 2015). This is because the required attitudes, knowledge and skills needed to promote agricultural development and the nation’s economy are obtainable in the tertiary institutions. The declining enrolment of secondary school students into agricultural courses in tertiary institutions, as revealed by the Joint Admission Matriculation Board (JAMB, 2015), is therefore worrisome, and calls for serious concern to the government and well-meaning Nigerians.

Thus, despite the huge prospects in the agricultural profession, it is still rated poor in terms of the population of students that choose to study agriculture as their first-choice course of study in tertiary institutions in Nigeria. If deliberate efforts are not made to revert this trend, the country will witness dearth of trained manpower to manage her agricultural development policies and processes and other sectors of the economy that agricultural graduates can work in.

Objectives of the Study
The main aim of this study is to assess the socio-psychological attributes of secondary school students’ as correlates of their preference for Agriculture in tertiary institutions in Nigeria. If deliberate efforts are not made to revert this trend, the country will witness dearth of trained manpower to manage her agricultural development policies and processes and other sectors of the economy that agricultural graduates can work in.

Hypotheses of the Study
The following hypotheses were tested in the study:

Ho1: Senior Secondary (SS) school students’ socioeconomic characteristics do not significantly influence their decision to study agriculture in tertiary institutions.

Ho2: Senior Secondary (SS) school students are not significantly disposed towards studying agriculture at the tertiary level.

Methodology

Study Area: Edo state is the study area and it is one of the six states in the South/south geo-political zone of Nigeria. Lying approximately between Latitudes 5°44’N and 7°37’N and between Longitude 5°44’E and 6°43’E (Edo State Statistical Year Book, 2013). It is bounded to Kogi state in the north, Delta state in the southeast and Ondo State in the southwest. The State has 18 Local Government Areas (LGAs), spread across three senatorial zones, namely Edo North, Edo Central and Edo South. The estimated population of the State in 2015 is 4,124,835, using a growth rate of 3% per annum in (Worldometers, 2015).The state has316 public secondary schools.

Research Design and Scope: The study is both survey and correlation in design. To this effect, students were sampled from a population (Ikponmwosa, 2014) while parameters were correlated to achieve the study objectives. The scope of the study is limited to public senior secondary school students (SS2 and SS3).

Data Collection Instrument and Methods: pre-tested and validated questionnaire was used to source for primary data from the students. The instrument was personally administered to the students with support from school teachers.

Population and Sampling Procedure: The population of SS2 and SS3 students in the State is 2378 and 1985 respectively given a total of 4,363 (Edo State Statistical Year Book, 2013). The recommended sample size for this population is 380, based on the Table of sample proportion (Krejcie and Morgan 2007 and Wooldridge and Jefferson, 2014).The sampling procedure was multi–stage, as shown in Table 1.

Table 1: Sampling Distribution

<table>
<thead>
<tr>
<th>Stage 1</th>
<th>Stage 2</th>
<th>Stage 3</th>
<th>Stage 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zone</td>
<td>LGA</td>
<td>Population (N)</td>
<td>Sample (n)</td>
</tr>
<tr>
<td></td>
<td>No of Schools (N)</td>
<td>Schools (n) (20%)</td>
<td>SS 2</td>
</tr>
<tr>
<td>Edo</td>
<td>Etsako West</td>
<td>27</td>
<td>5</td>
</tr>
<tr>
<td>North</td>
<td>Owan West</td>
<td>10</td>
<td>2</td>
</tr>
<tr>
<td>Edo</td>
<td>Esan West</td>
<td>13</td>
<td>3</td>
</tr>
<tr>
<td>central</td>
<td>Igueben</td>
<td>10</td>
<td>2</td>
</tr>
<tr>
<td>Edo</td>
<td>IkpobaOkha</td>
<td>20</td>
<td>4</td>
</tr>
<tr>
<td>South</td>
<td>Uhumwonde</td>
<td>21</td>
<td>4</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>101</td>
<td>20</td>
</tr>
</tbody>
</table>
The 3 senatorial districts of the State were purposively selected in the first stage to give the study a state-wide focus and ensure a fair representation of the three agricultural zones. (Thirty) 30% of the LGAs in each zone were selected at stage 2 using proportionate random sampling given a total of six. To ensure adequate representation of the rural and urban schools, the LG headquarters from Edo Central (Esan West) and Edo North (Etsako West) were deliberately chosen to represent urban schools, while random sampling was employed to choose Igueben and Owain West LGs in Edo Centra land Edo North senatorial district respectively. For Edo South zone, random sampling was used to select Ikpoba-Okha LG from among the urban LGs considered (i.e. Oredo, Ikpoba-Okha and Egor LG), and Uhunmwundel G from among the rural-based LGs (i.e. Oronionmwo, Ovia North East, Ovia Southwest and Uhunmwonde).

In stage 3, 20% of Secondary Schools from the Population of 101 in the Sampled LGs and zones/districts were proportionally sampled to give a total of 20 schools. In the final stage, stratified, proportionate random sampling was employed to sample 16% and 19.1% of the SS2 and SS3 students respectively. A total of 760 students were sampled from the schools. The sampling proportion used (16% and 19.1%) was determined by dividing the recommended sample size (i.e. 380) by the student population (2378 and 1985 respectively) and multiplying by 100.

**Data Analysis Methods**

The data collected were analysed using both descriptive and inferential statistics. The former includes frequency, percentages and mean, while the inferential statistics used were Probit regression and Binomial test. The Probit Regression model was deployed to analyse the hypothesis, which states that students' socio-psychological characteristics do not significantly influence their educational choice of agriculture tertiary institutions. Probit regression is an inferential statistics used were Probit regression and descriptive and inferential statistics. The former includes frequency, percentages and mean, while the latter includes correlation and regression analysis. Correlation analysis was used to determine the strength and direction of the relationship between two variables, while regression analysis was used to determine the relationship between a dependent variable and one or more independent variables.

**Measurement of Variables**

**Students' Academic Preferences (Choice of Agriculture):**

This was measured by asking respondents to indicate from a list, the courses they would like to study at the tertiary education level.

**Knowledge of Career Opportunities in Agriculture:**

A list of different statements intended to capture students' disposition towards agriculture were listed. Students' perception was captured by listing different career opportunities for agricultural graduates are about 14 industries identified in the NSE some of which includes Farm enterprises; livestock farms, crop farms, fishery farm etc; Agro - Allied industries; Research Institutions; Beverage industries; Educational Institutions; Government Ministries; Banking sector; Building and construction firms; Accounting firms; Oil Companies and gas; Energy; Telecommunication Company.

**Students' Perception of Agriculture and Agricultural Graduates**

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**Results and Discussion**

**Personal Characteristics of Respondents**

Fig. 1 shows that female respondents (52.05 %) were in the majority while the males constitute 48.95%. This result is in agreement with the statistics of Edo State Ministry of Education (ESME, 2016) which shows that there were more females than males in public secondary in Edo State.
The age distribution shows that majority of the students (75%) were within the age bracket of 15 – 16 years, with the mean age of 16 years. This result is in line with the stipulated ages (15-19 years) spelt out in the national policy of education (Federal Ministry of Education, 2004), that children within such age range are expected to be in secondary school.

Majority (67.37%) of the students were from families with a modal household size of 5-8, while the average family size was six (6). Large family imposes greater care burdens on household head and has its own challenges. This might also affect the students' ability to pursue tertiary education, especially if parents are lacking in finance (Oladele, 2014). The result for school location shows that more of the schools (67.11%) were located in the urban areas while few (32%) were rural based. This might be as a result of the high population density in the urban centres. Furthermore, parents tend to desire their children to attend urban schools as these are perceived to be more equipped. Azubuike (2013) have noted that many rural based schools are lacking in basic educational facilities such as teachers, laboratory, among others. It is also possible that students attending urban schools are likely to have more information regarding the potential areas graduates of tertiary educational institutions can work, and this might influence their decision to study certain courses at the tertiary level.

Parents' Involvement in Farming and Educational Status

Fig. 2 shows that most (98.16%) of the respondents' parents had been involved in farming activities. Despite this, if the parents' experience of farming is negative, they may discourage their children from pursuing agriculture at the tertiary educational level (Adebo and Sekumade, 2014). The result also reveals that majority of the students' fathers (85.53%) and mothers (81.32%) had formal education. These findings indicate that most of the respondents' parents had formal education, and such may motivate their children to go for higher education (Oladele, 2014). Similar report by Adebo and Sekumade (2014) indicate that parents with formal education tend to encourage and support their children to go for higher education and study their preferred course.

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**Figure**: Personal characteristics of respondents (sex, age, family size & school location)

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Students’ Perception of Agricultural Graduates

The results (Table 2) showed that, the highest perception score obtained by respondents was that agricultural graduates mostly work in the farm (mean = 3.29). The result implies that majority of the students believed that graduates of agriculture mostly work in the farm or are restricted to farm related employment. This perception can negatively affect their decision to study agriculture at the tertiary level. This view, Adeokun (2012) notes, is because of the use of farm labour as a tool of discipline by teachers. The next perception was their belief that: agricultural graduates often do tedious work (mean = 2.88), often encountered stress (fatigue) because of their laborious work (mean = 2.80), are not well paid when employed (have difficulty in securing well-paying job (mean = 2.71) and farm work is very dirty (mean = 2.67). However, the students did not agree that agricultural graduates find it difficult to get job (mean = 2.35) and are not respected in the society (mean = 2.22).

When the result of Table 2 was dichotomised (Fig. 3), the result showed that majority (66.45%) of respondents were unfavourably disposed towards agriculture and agricultural graduates, with 33.55% of them being favourably disposed. This finding agreed with that of Adebo and Sekumade (2014) that most students admitted to study Agriculture at the university had negative perception of the profession. This may affect their willingness to pursue an agricultural degree at the post-secondary educational level and even an agriculture work career as was reported by Anyidoho, Leavy and Asenso-Okyere (2012).

Table 2: Students’ Perception of Agricultural Graduates

<table>
<thead>
<tr>
<th>Statements</th>
<th>Edo central</th>
<th>Edo North</th>
<th>Edo South</th>
<th>Pooled</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agricultural graduates mostly work in the farm</td>
<td>3.42</td>
<td>3.62</td>
<td>3.13</td>
<td>3.29</td>
</tr>
<tr>
<td>They often do tedious work</td>
<td>3.02</td>
<td>1.91</td>
<td>2.85</td>
<td>2.80</td>
</tr>
<tr>
<td>As an agriculturalist one encountered stress</td>
<td>3.02</td>
<td>2.42</td>
<td>2.38</td>
<td>2.71</td>
</tr>
<tr>
<td>Their work is dirty</td>
<td>3.01</td>
<td>1.57</td>
<td>1.00</td>
<td>1.90</td>
</tr>
<tr>
<td>Agricultural graduate finds it difficult to get</td>
<td>2.02</td>
<td>2.42</td>
<td>2.16</td>
<td>2.22</td>
</tr>
<tr>
<td>They are not respected in the society</td>
<td>2.11</td>
<td>2.56</td>
<td>2.87</td>
<td>2.83</td>
</tr>
</tbody>
</table>

*Agreed (mean > 2.50)

Source: Field Survey 2017

Educational Choice of Students

Fig. 4 shows the various academic disciplines available at the tertiary education level and the educational choice of the respondents i.e. those they were willing to study. The result showed that the highest proportion (28.85%) of the respondents preferred Medical Sciences, 20.26% chose Management sciences, while fewer proportion indicated interest in Social Science (11.58%). The least choice of the students was Agricultural sciences (2.89%). This finding is consistent with that of Adebo and Sekumade (2014) and the Joint Admission and Matriculation Board (2016) report, which showed Agriculture to be the least preferred course of study among students seeking admission into tertiary education in Nigeria.
Factors Affecting Tertiary Educational Choice among Secondary School Students

Table 2 showed the factors perceived by the students to affect their preference for a course at the tertiary level. Based on the mean benchmark of 2.50, the result showed that only five factors were important to the students, namely employability after graduation (mean = 3.09), psychological satisfaction (x = 2.97), peer group influence (x = 2.93), self or personal interest (x = 2.88), and prestige associated with the course (x = 2.87).

Table 2: Perceived factors affecting tertiary educational choice among senior secondary school students

<table>
<thead>
<tr>
<th>Factors</th>
<th>Pooled Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employability after graduation</td>
<td>3.09</td>
<td>.92</td>
</tr>
<tr>
<td>Psychological satisfaction (I like the course)</td>
<td>2.97</td>
<td>.63</td>
</tr>
<tr>
<td>Peer group (my friends interest)</td>
<td>2.93</td>
<td>.72</td>
</tr>
<tr>
<td>Self-interest (personally interested in the course)</td>
<td>2.88</td>
<td>.72</td>
</tr>
<tr>
<td>Status symbol or prestige attached/associated with studying the course at the tertiary level</td>
<td>2.87</td>
<td>.72</td>
</tr>
<tr>
<td>Whether the course is popular or not</td>
<td>2.28</td>
<td>1.00</td>
</tr>
<tr>
<td>Whether parents can afford the payment or not.</td>
<td>2.13</td>
<td>1.01</td>
</tr>
<tr>
<td>Finance (whether the course is expensive or not)</td>
<td>2.00</td>
<td>.97</td>
</tr>
<tr>
<td>School counsellor (counselling)</td>
<td>1.81</td>
<td>1.03</td>
</tr>
<tr>
<td>Desire to take after parents (my parents read the course)</td>
<td>1.62</td>
<td>.80</td>
</tr>
<tr>
<td>Subject teacher</td>
<td>1.57</td>
<td>.80</td>
</tr>
<tr>
<td>My parents interest or ask me to</td>
<td>1.49</td>
<td>.76</td>
</tr>
</tbody>
</table>

*Agreed (mean > 2.50)

The results of Table 2 align with that of Estersand Bowen (2014), who identified outcome of such training on the livelihood as an important consideration for enrolment in an urban agricultural education programme. According to Ferry (2006) and Kellaris and Kellaris (2014), the potential of a career to meet the income needs of the worker and peer influence are important factors that guide youths in the career choice. That they perceived the role of schools’ Career Guidance Counsellor to be minimal (x = 1.80) probably reflects the low numbers of such counsellors in the secondary schools (Oladele, 2014).

Influence of Students' Socio-psychological Attributes on Students' Preference for Agriculture at Tertiary Level

Probit regression was used to determine the relationship between the students' socio-psychological characteristics and preference for agriculture in tertiary institutions. The t values for the social attributes (sex, family size, school location, parent's education and farming status) were not statistically significant. However, students' perception of agricultural graduates was significant.

The coefficient for students' perception of agricultural graduates was positive and significant (b = 0.504), which means that there was a positive relationship between students' perception of graduates of Agriculture and their likelihood to study the course at the tertiary level. This implied that the more favourable they view agricultural graduates, the more likely they will be willing to study agriculture at the tertiary education level.
Choice of Agriculture as a Course of Study in Tertiary Institutions

Table 1: Test of Difference in Students’ Educational Choice for Agricultural Graduates

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Frequency</th>
<th>Observed prop.</th>
<th>Test prop.</th>
<th>Prob. Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>738</td>
<td>0.97</td>
<td>0.50</td>
<td>P ≤ 0.01</td>
</tr>
<tr>
<td>Yes</td>
<td>22</td>
<td>0.03</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>760</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Source: field Survey 2017*

Conclusion and Recommendations

The results showed that choice of agriculture as a course of study was not significantly influenced by the students’ and parents’ personal characteristics. However, majority of respondents were unfavourably disposed towards agricultural graduates and agriculture itself. This was found to be the only significant factor of influence on the students’ willingness to pursue an agricultural degree at the post-secondary educational level. This is not good enough for a nation that seeks to shift from a monolithic economy (oil dependent) to a diversified economy with agriculture taking the lead. Such poor perception of the profession as revealed in the study, discourage the students from studying agriculture at the tertiary education level which would ultimately have negative consequences on agriculture and rural development.

Based on the findings of the study, the following recommendations were made:

- Relevant agencies should embark on enlightenment programmes at the secondary schools to alter students’ negative perception about agriculture so they can develop positive interest in the course.
- Also, government should create incentives like giving scholarship and grants to students that are willing to study agriculture at the tertiary education level. This may serve as an impetus for secondary school students to pursue agricultural courses at the tertiary educational level. Similar approach was used by the government of Australia and New Zealand when only few of their students were willing to study agriculture.
- Finally, Agriculture should be made compulsory at the secondary school levels just as civic education is today in Nigeria, to inculcate the importance of the profession, and the spirit of farming in youths.

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**References**


