


Driving Factors for Agricultural Graduates' Involvement in Agribusiness Enterprise in Nigeria


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Abstract

Eradicating the high level of youth unemployment remains a global challenge, especially in sub-Saharan Africa. Youth involvement in agriculture, which could have lower unemployment, is low. Despite a high volume of literature on youth involvement in agriculture, agricultural graduates have received little research attention. Therefore, this study assessed agricultural graduate involvement in agribusiness enterprises to fill the research gap. Data were collected from 200 agricultural graduates who were randomly selected. Descriptive statistics and logistic regression were methods of data analysis. The results revealed that, unlike other youths, agricultural graduates had a positive opinion about agriculture. Although about half were involved in agribusiness, almost all of them were willing to engage in it if supplied with production resources, especially land and capital for start-ups. Family land, access to credit, perceived benefits, attitudes, location, and gender significantly influenced agricultural graduates' participation in agribusiness. To be self-employed and an employer, to be financially independent, to be food secure, due to access to land, due to access to credit, parental influence, satisfaction, and personal growth, and to continue the family business were the reasons why agricultural graduates became involved in agribusiness enterprises. On the other hand, lack of capital, lack of access to land, the risk involved in agriculture, poor agricultural pricing, poor agricultural support from the government, seeking a white-collar job, and peer influence were reasons why some agricultural graduates were not involved in agribusiness. Hence, agricultural graduates should be encouraged and supported with resources, especially arable land, and capital, by the government, development agencies, and financial institutions to ensure effective participation in agribusiness.

Keywords: Agribusiness enterprise, Agricultural graduates, Factors, Participation, Youth

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1. Introduction

Unemployment among the youth, which is a key driver of poverty, remains a serious global phenomenon and a concern to world leaders, researchers, and policymakers, which makes it the eighth Sustainable Development Goal. Globally, there is a 13% youth unemployment rate, 40% in sub-Saharan Africa (SSA) (ILO, 2020), and 42.5% in Nigeria (National Bureau of Statistics, 2022). Nigerian youths' unemployment rate remains a major social, economic, and political barrier in the country (Fasakin et al., 2022). Further escalation of the present unemployment rate in Nigeria and other SSA nations among youths will have detrimental effects such as migration of youths from one economy to another, as it is currently seen where youths are leaving less developed or developing countries for developed nations, which could consequently create an economic crisis in such developed countries. It could also increase brain drain in an economy, increase crime and violence, increase income inequalities, and increase rural-to-urban migration (Mulema et al., 2021).

Eradicating or at least reducing unemployment requires youths to engage in entrepreneurial activities as the government cannot provide jobs for every citizen, especially in developing countries. Because of the abundance of arable land in Africa, agribusiness is an important agricultural entrepreneurship activity (agriprenurship). To boost agricultural output and sustainable food production, students at the primary and secondary school level were taught agriculture in most African countries, and some studied it at the higher institution level. Graduates of agriculture are trained professionals in their different areas who are also expected to be entrepreneurs given their training backgrounds in livestock farming, crop production, agricultural and food processing, and marketing, creating jobs and employing workers. Thus, agricultural graduates' engagement in agribusiness will not only serve as a means of self-employment but also as a means of providing jobs for other youth globally, especially in SSA. Youths' involvement in agricultural activities will play a critical role in food availability, employment, and poverty reduction (Fasakin et al., 2022; Mukaila, 2022).

Agriculture remains the mainstay of the economies of most developing countries in the world, Nigeria included. It provides employment and means of livelihood for the majority of the people living in the rural and urban areas of these countries (Liu et al., 2020; Mukasa et al., 2017) and attracts private investors (Geza et al., 2021), which consequently enables the achievement of economic goals (Magagula and Tsvakirai, 2020). Therefore, agriculture is a critical pathway to empowering youths as it provides them with several opportunities to create jobs (Akron and Kotu, 2022; Mulema et al., 2021) and reduce poverty among them (Osabohien et al., 2021).

Despite its numerous benefits, youth are disinterested in agriculture, as they see it as a poor man's business with low profits (Afande et al., 2015; Daum and Regina, 2017; Magagula and Tsvakirai, 2020; Mulema et al., 2021; Yami et al., 2019). Meanwhile, these are the views of most young people who did not study agriculturally related courses. The agricultural graduate could have a different opinion on agriculture than other youth. Although a graduate of agriculture can be an employee of the government, there are business opportunities for him or her to explore agriculture based on the training, and they are likely to see agriculture as a business—agribusiness. Thus, agricultural graduates have critical roles to play in the agricultural sector globally. In Nigeria, they are needed to boost agricultural outputs and restore Nigeria's glory as a food-self-sufficient nation.

Several studies (Adeyanju et al., 2021; Afande et al., 2015; Akron & Kotu, 2022; Ibrahim et al., 2021; Mabe et al., 2021; Magagula and Tsvakirai, 2020; Maritim, 2020; Mukaila, 2022; Mulema et al., 2021; Ng'atigwa et al., 2020; Ogunmodede et al., 2020; Osabohien et al., 2021; Twumasi et al., 2019; Udemezue, 2019; Yami et al., 2019; Yusoff et al., 2016) have been conducted on youth engagement in agricultural participation; yet, little is known about agricultural graduates' participation in agribusiness, especially in Nigeria, creating a research gap in the literature on youth involvement in agriculture.

Thus, this study contributes to the literature by (i) assessing agricultural graduates' opinions on agriculture; (ii) examining their level of involvement in agribusiness; (iii) investigating the driving factors of agricultural graduates' involvement in agribusiness; (iv) evaluating the reasons agricultural graduates participate in agribusiness enterprises; and (v) evaluating agricultural graduates' reasons for not participating in agribusiness enterprises. The results of this study would serve as a policy reference point for enhancing food production and eradicating unemployment through agricultural graduates' participation in agribusiness. This would consequently result in agricultural transformation and economic growth.

2. Materials and Methods

2.1. Study area and data collection

This study was conducted in Enugu State, located in Southeastern Nigeria. The state hosts the University of Nigeria, a first-generation university established in 1960 with the Faculty of Agriculture as a pioneer faculty.

The study adopted a survey design method, using a multi-stage sampling procedure. The first stage involved choosing three distinct locations: a university (University of Nigeria, Nsukka), a government secretariat (Nsukka local government area secretariat), and ten autonomous communities within Enugu state (Lejja, Opi, Nru, Orba, Nguru, Ibagwa, Igbo Eze, Ogwogo Nike, Abakpa Nike, and Emene Nike). The University of Nigeria and the Nsukka local government area secretariat were purposefully selected due to the availability of a large population of agricultural graduates in the locations. However, the ten communities were randomly selected. In stage two, ten agricultural graduates were randomly selected from each of the ten communities and Nsukka LGA secretariat, and ninety were randomly selected from the University of Nigeria. In all, a total of 200 respondents were used for the study.

From November to December 2022, data were primarily collected using a pre-tested structured questionnaire. The questionnaire contains information on the socio-economic characteristics of agricultural graduates, information on their involvement in agribusiness, their willingness or non-willingness to venture into the agricultural enterprise(s), their opinions about agriculture, and their reasons for involvement or non-involvement in agriculture.

2.2. Data analyses

Data were analysed using descriptive statistics, and logistic regression.

Descriptive statistics such as percentages, frequency, mean, and distribution tables were used to describe the socioeconomic characteristics of agricultural graduates and to assess agricultural graduates' involvement in agribusiness.

A four-point Likert scale was used to assess agricultural graduates' opinions on agriculture, evaluate the reasons agricultural graduates participate in agribusiness enterprises, and evaluate agricultural graduates' reasons for not participating in agribusiness enterprises. The four-point scale of 1-4 was assigned as follows: strongly agree as 4 points, followed by agree as 3 points, then disagree as 2 points, and strongly disagree as 1 point. To arrive at the decision rule, the average weight was calculated with the four-point scale as $(4 + 3 + 2 + 1)/4 = 2.50$. Hence, the benchmark for the Likert mean score was established at 2.50. The established value was used to decide if the responses given by agricultural graduates were accepted or rejected. Therefore, based on the above criteria, any response with a score of 2.50 and above was regarded as accepted or a main reason and any that fell from 2.49 downward were regarded as rejected or not a main reason, as the case may be.

Involvement in agribusiness is a dummy outcome, whether an agricultural graduate participates in agribusiness or not. Thus, logistic regression was used to investigate the driving factors of agricultural graduate involvement in agribusiness, as it can perfectly estimate the drivers of a dummy outcome. This has been widely employed by researchers (e.g., Akrong and Kotu, 2022; Cheteni, 2016; Ogunmodede et al., 2020) to investigate drivers of participation in agriculture. It is explicitly represented as:

$$Y = \beta_0 + \beta_1 FL + \beta_2 A + \beta_3 YG + \beta_4 AC + \beta_5 PI + \beta_6 PB + \beta_7 Ed + \beta_8 At + \beta_9 G + \beta_{10} L + e \quad (\text{Eq. 1})$$

Where,

Y is the probability of an agricultural graduate's involvement in agribusiness (1 = involved, 0 = not involved)

FL is family land (1 = yes, 0 = no),

A is age (years),

YG is years after graduation,

AC is access to credit (1 = yes, 0 = no),

PI is parents' influence (1 = positive, 0 = negative),

PB is perceived benefit (4 = high, 3 = medium, 2 = low, 1 = non),

Ed is education level (5 = PhD, 4 = MSc, 3 = BSc, 2 = Higher National Diploma, 1 = Ordinary National Diploma),

At is attitudes (1 = positive, 0 = negative),

G is gender (1 = male, 0 = female),

L is the location (1 = rural, 0 = urban),

β_0 is constant or intercept, β_1 to β_{10} are the coefficients, and e is the error term.

Following logistic regression estimation, we calculated the marginal effects of the explanatory variables to provide an easy and comprehensive interpretation of the coefficient and to demonstrate its predictive power.

3. Results and discussion

3.1 Socioeconomic characteristics of the agricultural graduates

Table 1 presents the socioeconomic characteristics of agricultural graduates. The proportion of male agricultural graduates was slightly higher than their female counterparts. This indicates that both males and females studied agriculturally related courses; however, males were more than females. The majority of agricultural graduates were between the ages of twenty-six and thirty, followed by those between the ages of thirty-one and thirty-five, and those between the ages of twenty and twenty-five. Their average age was 27.5 years. This indicates

Table 1. Socio-economic profile of the agricultural graduates

Variables	Categories	Frequency	Percentage
Gender	Male	117	58.5
	Female	83	41.5
Age Mean = 28.4	20 - 25	33	16.5
	26 - 30	96	48
	31 – 35	71	35.5
Education Level	OND	14	7
	HND	34	17
	B.SC	107	53.5
	M.SC	42	21
	PhD	3	1.5
Marital status	single	121	60.5
	Married	79	39.5
Membership in social organization	Yes	111	55.5
	No	89	44.5
Occupation	Crop farming	65	32.5
	Livestock farming	17	8.5
	Business	2	1
	Salary earner	99	49.5
	Artisan	2	1
	Agricultural processing/marketing	15	7.5
Years of experience Mean = 4.53	1-5	139	69.5
	6-10	61	30.5
Access to credit	Yes	82	41.0
	No	118	59.0
Access to agricultural extension	Yes	67	33.5
	No	133	66.5
Parents/Relatives' opinion about agriculture	Positive	100	100
	Negative	0	0
Access to family land	Yes	69	34.5
	No	131	65.5

that the respondents were youths who were energetic, adequately mature, and emotionally stable enough to partake in agriculture. The larger proportion of the agricultural graduates had a Bachelor of Science degree. This was followed by the Higher National Diploma, a Master of Science degree, the Ordinary National Diploma, and a Doctor of Philosophy. Thus, the respondents were well-trained professionals in agriculture. The larger proportion of the respondents was single, while the smaller proportion was married.

Over half of the graduates belong to a societal organization, while 44.5% do not belong to any organisation. A social organisation such as a cooperative society motivates members to save which consequently helps them to achieve beneficial and favourable outcomes in their farming business (Akanbi et al., 2022; Mukaila et al., 2022). About half of the agricultural graduates were salary earners working in the Ministry of Agriculture, universities, and the private sector. About 33% of the agricultural graduates were in crop production. This was followed by livestock production, agricultural processing and marketing, business, and artisanship. The male agricultural graduates were mainly involved in crop farming, while the females were involved in agricultural processing and marketing. This is an indication that young females prefer off-farm agribusiness activities to on-farm activities. The opposite is true for male agricultural graduates. This could be related to the higher energy demand of on-farm agricultural activities than off-farm activities, and males possess the required energy for on-farm farming activities, *ceteris paribus*. The majority of the respondents had less than six years of working experience, with an average of 4.53 years. A larger proportion of agricultural graduates did not have access to credit facilities, which could influence their decision to participate in agricultural enterprises. In the same vein, access to agricultural extension was low. This could inhibit their participation in agriculture, as agricultural extension could assist them in getting land for farming and further train them (Falola et al., 2022a). The parents and relatives of the agricultural graduate had positive opinions about agriculture; thus, there are no family hindrances to their participation in agriculture. A few of the agricultural graduates had access to family land. This could influence their participation in agriculture. Because the youth cannot afford to buy land for agribusiness purposes due to poor funding, family land or inherited land is the primary source of youth access to arable land in Nigeria.

3.2 Agricultural graduates' opinion about agribusiness

Table 2 presents agricultural graduates' opinions or views about doing agriculture as a business. The result showed that agricultural graduates deemed it fit for the government to empower agricultural graduates with agricultural production resources such as capital in the form of a grant or loan, fertilizer, improved seeds and seedlings, land, machinery, and equipment, among others, for effective participation in an agricultural enterprise. The agricultural graduates also view agriculture as a profitable enterprise, unlike other youths who see agriculture as not profitable. They further opined that agricultural graduates and other graduates should participate more in the agricultural sector than other sectors due to their youthful age, level of education, and skills needed to boost agricultural output in the country. They, however, disagreed that no formal education is needed to establish agribusiness farms; thus, education plays a critical role in the establishment of agribusiness. They also disagreed that a white-collar job is preferable to farming and that agriculture is for the poor, in contrast to the belief of other youths who did not take agriculturally related courses that agriculture is for the poor.

Table 2. Agricultural graduate opinion or view about agriculture

Respondents' opinions or views about agriculture	Mean	Std. Dev.	Decision
The government should empower agricultural graduates	3.71	0.50	Agreed
Agriculture is a profitable enterprise	3.64	0.59	Agreed
Agricultural graduates should participate more in the agricultural sector than non-agricultural sector	3.05	0.88	Agreed
Graduates should participate more in the agricultural sector than non-agricultural sector	3.01	1.14	Agreed
No Formal education/training is needed for the establishment of agribusiness	2.44	0.90	Disagreed
White-collar jobs are better than farming	2.43	0.90	Disagreed
Agriculture is for the poor	1.84	0.92	Disagreed

3.3 Agricultural graduates' involvement in agribusiness and their intention to participate

Table 3 presents the results of agricultural graduates' involvement in agricultural enterprises and intentions to participate among those currently not involved in agricultural enterprises. Agricultural graduates' involvement in

agricultural enterprises was about half (48.5%). This implies that about five out of every ten agricultural graduates participate in agricultural enterprises. The current level of agricultural graduates' participation was relatively low, considering that this set of youths were trained to venture into agriculturally related activities, which could be due to several reasons. The few that were involved in agricultural enterprises engaged in crop production, livestock production, agricultural processing, and agricultural marketing. This result further implies that agricultural graduates are not fully involved in agribusiness enterprises despite being trained in the sector. This could be due to a lack of land and capital, which makes some of them prefer white-collar jobs in the banking sector, the Ministry of Agriculture and Rural Development, universities, and the private sector because they involve less physical stress and do not require start-up capital. According to Udemezue (2019), today's youths are uninterested in agriculture because it does not provide the types of dividends and status lifestyles that young people today desire and expect.

Almost all of the agricultural graduates who are not currently involved in agribusiness enterprises are willing to participate or intend to become involved in agriculture soon if the necessary support is provided. This is an indication that although agricultural graduate participation in agriculture is not as high as expected, the agricultural graduates are ready to involve themselves in food production and other agriculturally related activities so far, given the availability of needed agricultural facilities, which would serve as motivation for them.

Table 3. Agricultural graduates' involvement in agribusiness and their intention

Variables	Categories	Frequency	Percentage
Involvement in agriculture	Yes	97	48.5
	No	103	51.5
Intention to participate among those currently not involved in agriculture	Yes	101	98.1
	No	2	1.9

3.4 Factors influencing agricultural graduates' involvement in agriculture

Table 4 presents the driving factors for agricultural graduate involvement in agribusiness. Family land, access to credit, perceived benefits, attitudes, location, and gender were the significant factors that influenced agricultural graduates' participation in agriculture.

Family land had a positive influence on agricultural graduates' participation in agriculture. According to the marginal effect, the availability of family land suitable for farming increased the likelihood of agricultural graduates participating in agribusiness enterprises by about 26%. Thus, agricultural graduates who had access to land were involved in agriculture. This is because agriculture depends on the availability of land, and most graduates cannot afford to purchase land; hence, they depend on family or inherited land. The unavailability of land will push most agricultural graduates into other sectors that do not require land ownership or access. This is supported by the findings of Maritim (2020) and Twumasi et al. (2019) that youths' access to land increased their likelihood of engaging in agriculture.

Access to credit had a positive influence on agricultural graduates' involvement in agriculture. The marginal effect implies that access to credit facilities increased the likelihood of agricultural graduates' involvement in agribusiness enterprises by 11.8%. Because farmers' capital is always not enough, credit is an important source of capital in agribusiness firms; thus, credit facilities increase the amount of capital available for investment (Falola et al., 2022b; Gbigbi, 2022). As a result, agricultural graduates who have received external financial assistance will venture into agriculture because they will have the capital required to establish an agribusiness farm. A similar finding was reported by Fletschner and Kenney (2014) and Ng'atigwa et al. (2020), who found that youth's access to credit increased their probability of engaging in agriculture.

The perceived benefit had a positive influence on agricultural graduates' participation in agribusiness. According to the marginal effect, perceived benefits increased the likelihood of agricultural graduates' involvement in an agricultural enterprise by 9.4%. Agricultural graduates who believed agriculture provided significant benefits engaged in agricultural activities, whereas those who did not believe agriculture provided significant benefits did not participate in agribusiness. This is because engagement in any business depends on the perceived benefits or perceived utility derived from such a business. This is in line with Maritim (2020), who reported that youths' perceptions of the benefits of agriculture increased their probability of engaging in agriculture.

Attitudes had a positive influence on agricultural graduates' participation in agribusiness. The marginal effect implies that agricultural graduates' positive attitudes towards agriculture increased their probability of venturing into agricultural enterprise by 33%. Thus, agricultural graduates who had a positive attitude towards agriculture were involved in agribusiness enterprises, while those with negative attitudes were not. Individual attitudes play a critical role in excelling in any field and profession, and one must have a positive attitude before embarking on any business enterprise (Baah, 2015; Salleh and Njeru, 2005). This result is supported by Thomas and Eforuoku (2016) and Maritim (2020), who found that youths' attitudes were a key factor that influenced their involvement in agriculture.

Gender had a positive influence on agricultural graduates' participation in agribusiness. According to the marginal effect, being male increased the likelihood of agricultural graduate involvement in an agricultural enterprise by 17.3%. This could be because men possess the physical strength required for agriculture, while most young women prefer a white-collar job to agriculture. Thus, male agricultural graduates were more involved in agriculture than their female counterparts, which is in line with Ng'atigwa et al. (2020).

The location had a positive influence on agricultural graduates' participation in agribusiness. The marginal effect indicates that living in rural areas increased the likelihood of agricultural graduates participating in agricultural enterprises by 15.5%. Given that agriculture is dominated by rural areas due to the availability of key agricultural production resources (land) and a favourable environment, agricultural graduates who live in rural areas are more likely to go into farming than their city counterparts. Mulema et al. (2021) found that being located in an urban area negatively influenced Zambian youths' engagement in agribusiness and vice versa. Akrong and Kotu (2022) also opined that youths located in rural areas are likely to be involved in farming, while those in urban areas are likely to participate in non-farming activities. Thus, putting social infrastructure in rural areas will motivate young graduates to stay and start agribusiness enterprises in rural areas.

Table 4. Factors influencing agricultural graduates' involvement in agribusiness

	Marginal Effect	Coef.	Std. Err.	Z	P>z
Family land	.2591303	1.481877*	.7862055	1.88	0.059
Age	-.0061851	-.0374929	.3856065	-0.10	0.923
Years after graduation	-.0192514	-.1166982	.3671308	-0.32	0.751
Access to credit	.1176195	.7129878***	.2536938	2.81	0.005
Parents influence	.0619222	.375361	.5408272	0.69	0.488
Perceived benefit	.0943792	.5721096*	.3163253	1.81	0.071
Education level	-.0719057	-.4358793	.3119335	-1.40	0.162
Attitudes	.3304605	2.003191**	.7964118	2.52	0.012
Gender	.1731843	1.444014*	.8595321	1.68	0.092
Location	.1545368	.9367735*	.4884166	1.92	0.055
_cons		-4.943819	3.692372	-1.34	0.181

LR chi² = 25.26, Prob > chi² = 0.0049, Pseudo R² = 0.2929, Log-likelihood = -30.484819

*** P<0.01, ** P<0.05, * P<0.1

3.5 Reasons for agricultural graduates' participation in agribusiness

Table 5 shows agricultural graduates' responses to their reasons for participating in agriculture. The first major reason for agricultural graduates' participation in agricultural enterprises was to be food secure. Due to the high level of food insecurity in the country, the agricultural graduates go into crop production, livestock rearing, agricultural processing, and agricultural marketing to have a nation with zero hunger, which is in line with achieving the second Sustainable Development Goal of the United Nations. They added that they bought food that they did not produce on their farms with the money they earned from their farming activities. The second major reason an agricultural graduate embarked on agriculture was to become financially independent. Agriculture has gone beyond just producing food for the immediate family (subsistence farming); agriculture is now seen as a business (agribusiness); thus, agriculture is a form of sustainable income generation. Young graduates ventured into agribusiness enterprises to have a sustainable income and, consequently, to be financially independent. The third major reason for their participation in agribusiness is their satisfaction and personal growth. They were

content with venturing into agriculture because they wanted to contribute to the nation's growth in terms of food security and the economy.

Being self-employed was another major reason for agricultural graduates to become involved in agriculture. This could be related to the need for financial security through effective business management. Agricultural graduates also venture into agriculture to be employers and reduce the high level of unemployment among youths in the country. Maritim (2020) stated that youths participated in agribusiness due to a lack of jobs. Access to land was also a main reason for agricultural graduates' participation in agriculture. The land is an important factor in production, as most farming activities happen on the land; thus, graduates who have access to land embark on agriculture. Therefore, access to land plays a critical role in agricultural graduates' involvement in agriculture and related enterprises. This is in line with Maritim (2020), who reported that youth's access to land was the main reason for their participation in agribusiness. Another main reason for agricultural graduate participation in agriculture was access to credit. Capital is a key factor of production not only in agribusiness but across other business ventures; thus, the availability and accessibility of financial assistance from both formal and informal sources motivate agricultural graduates' involvement in agribusiness. However, most of them access financial assistance from the informal sector, especially from family and friends. Maritim (2020) reported a similar finding that youth's access to credit was a key factor in their participation in agribusiness. Parents' influence was also a main reason for agricultural graduates' involvement in agricultural enterprises. The parents of those involved in agriculture motivated and encouraged them through the provision of financial resources and by giving their family land for agricultural purposes. To continue a family business was also considered a main reason for agricultural graduates' involvement in agribusiness. An agricultural graduate whose family business is farming was motivated to embark on agribusiness to sustain their family's farming business. Peer influence was not considered the main reason for agricultural graduates' participation in agriculture.

Table 5. Agricultural graduates' responses on their reasons for participating in agribusiness

S/N	Reasons for Participating in Agriculture	Mean	Std. Dev.	Decision
1	To be food secure	3.85	0.50	Main
2	To be financially independent	3.55	0.56	Main
3	For my satisfaction and personal growth	3.52	0.56	Main
4	To be self-employed	3.51	0.65	Main
5	To be an employer	3.51	0.61	Main
6	Access to land	3.28	1.03	Main
7	Access to credit	2.56	1.04	Main
8	Parents influence	2.55	1.04	Main
9	To continue the family business	2.54	1.05	Main
10	Peer influence	2.27	1.08	Not main

3.6 Reasons for non-participation in agribusiness by some agricultural graduates

Table 6 presents the responses of some agricultural graduates regarding their reasons for not being involved in agribusiness. Lack of access to land, which was an important factor in production, was a major barrier to agribusiness participation for some agricultural graduates; thus, it was the main reason for agricultural graduates' non-participation in agriculture. Since most agricultural activities occur on land in developing countries, graduates who have no access to land are constrained from becoming involved in agriculture. In most African settings, youths are constrained by a lack of access to land (Lindsjö et al., 2021). This is in line with Gichimu and Njeru (2014), who stated that most youths who are interested in agriculture are constrained by a lack of land. In the same vein, lack of capital, which was also a factor in production, hindered agricultural graduates from participating in agricultural enterprises. Capital is needed to establish an agribusiness firm, cultivate crops, or rear livestock; thus, young graduates without capital or who could not access external finance (credit) were unable to participate in any agricultural enterprise. Mulema et al. (2021) and Muthomi (2017) also reported that youths are not involved in agriculture due to a lack of credit to finance the establishment of the farm. Yusoff et al. (2016) also reported that lack of funds was responsible for agricultural students' non-intention to go into agribusiness.

Poor agricultural pricing was also a major barrier to participation for some agricultural graduates. Poor agricultural product pricing due to their perishable nature impeded agricultural graduates' involvement in agricultural enterprises. Poor agricultural pricing results in low revenue from agribusiness farms, which consequently lowers the motivation of agricultural graduates to participate in agriculture. Agricultural graduates' non-participation in agribusiness was also due to the high risk involved in agriculture. Some are afraid of losing their invested capital due to risks and uncertainties such as crop failure, flooding, diseases, and poor yield, among others. Poor government agricultural support was also a main reason for some agricultural graduates' non-involvement in agribusiness. Some agricultural graduates in this category (i.e., non-participants) lamented the lack of agricultural support available to youth, which prevented them from becoming agripreneurs. Yusoff et al. (2016) also reported that inadequate support from the government was responsible for the inability of students to go into agribusiness. Therefore, the provision of empowerment facilities such as financial support, storage facilities, an efficient market, and land will allow youth to make significant contributions to agricultural development (Ng'atigwa et al., 2020).

Seeking a white-collar job was also a major reason some agricultural graduates did not participate in agriculture. This could also be linked to a lack of production resources, such as land and capital, needed to participate in agricultural enterprises. Some gave the impression that they seek white-collar jobs to raise funds to establish an agribusiness farm. The agricultural graduates who did not participate in agriculture agreed that peer influence was also a main reason for not participating in agriculture. On the other hand, parental influence was not the main reason for agricultural graduates' non-participation in agriculture.

Table 6. Agricultural graduates' responses on their reasons for non-participating in agriculture

S/N	Reasons for not participating in agriculture	Mean	Std. Dev.	Decision
1	Lack of access to land	3.90	0.31	Main
2	Lack of capital	3.83	0.47	Main
3	Poor government agricultural support	3.62	0.49	Main
4	Poor agricultural pricing	3.03	1.05	Main
5	Risks involved in agriculture	3.00	1.28	Main
6	Seeking a white-collar job	2.90	1.18	Main
7	Peer influence	2.59	1.05	Main
8	Parent influence	2.45	1.12	Not main

4. Conclusions

This study investigates agricultural graduate participation in agribusiness. The study concludes that agricultural graduates had a positive opinion about agriculture, unlike other youths. Agricultural graduates' participation in agribusiness is currently not as high as expected, which is due to a lack of production resources such as land and capital at their disposal. However, almost all of them have the intention to engage in agribusiness if adequate support is given to them. The factors influencing agricultural graduate involvement in agribusiness are access to family land, access to credit, the perceived benefit of agribusiness, attitudes, location, and gender. The key motivating factors for agricultural graduates' involvement in agribusiness are to be financially independent, be self-employed, be food secure, be employers, and due to access to land, and credit. On the other hand, lack of access to land, lack of capital, the risk involved in agriculture, poor agricultural pricing, poor agricultural support from the government, and seeking a white-collar job are the key reasons for non-participation in agribusiness by some agricultural graduates.

To enhance agricultural graduate participation in agricultural enterprises, there is a need for the provision of accessible arable land and capital (grants and/or credit) by the government, development agencies, and financial institutions. Graduates' participation in agricultural enterprises could only be effective when there are available resources, both materially and financially, that could promote effective delivery. Graduates will not be motivated, and their attitude toward venturing into agricultural enterprises could be hampered if there is no availability of resources. Hence, they should be encouraged and supported with every needed resource to ensure effective participation in an agricultural enterprise. The establishment of agribusiness villages (a large expanse of land for agriculture and related activities) with the needed modern facilities by the government will solve the problem of land constraint among agricultural graduates. They can also be encouraged through the subsidization of agricultural

inputs such as fertilizers and improved seeds and seedlings. The agricultural graduates on their side should join resources to form an association (cooperative society), where they can help themselves financially and enjoy economies of scale.

Ethical Statement

There is no need to obtain permission from the ethics committee for this study.

Conflicts of Interest

We declare that there is no conflict of interest between us as the article authors.

Authorship Contribution Statement

Concept: RM, FEA, CFE.; Design: RM, FEA, CFE.; Data Collection or Processing: RM, CFE; Statistical Analyses: RM; Literature Search: RM, FEA, CFE; Writing, Review and Editing: RM, FEA, CFE.

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