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*A K M Kanak Pervez, Md Shahriar Kabir, Amitav Saha,
Md Ikbal Hossain, Md Armanul Haque*

*University of Rajshahi
Bangladesh*

STUDENTS' INTEREST IN AGRIBUSINESS AS A FUTURE CAREER

Purpose. This study was conducted among Bangladeshi undergraduate agricultural students to see how likely they were to launch their agribusinesses after awarding Bachelor's degrees.

Methodology / approach. As an agricultural country, agribusiness among the students is increasingly important. To achieve the purpose, we selected undergraduate students from the University of Rajshahi as the respondents. Agriculture, Fisheries, and Veterinary Science students were surveyed to determine their interest in starting an agribusiness (opening their own enterprises) after graduation. Questionnaire data were subjected to a logit regression analysis.

Results. Most students come from rural backgrounds and many work in family farming either directly or indirectly, only a small percentage of them (29.6 %) want to start an agribusiness after graduation. Most students think working for the Government or providing other services is safer than doing business. Except for students whose families had large landholdings, students were not interested in becoming agribusiness entrepreneurs, although female students were more curious than males. The students perceived agribusiness as too risky and preferred civil service or other service sector employment over any business. If they were to set up such companies, they would be the most interested in fruits and vegetables, feed mills, beef, floriculture, and fisheries. Part of the reason for this disinclination to entrepreneurship is South Asian culture, which values security over independence, although agriculture, where the product is perishable, is risky.

Originality / scientific novelty. Over the last 10 years, there has been a decline in total agricultural employment despite a rise in the youth unemployment rate. Encouraging these young people to go into agribusiness, we can reduce unemployment and increase agricultural productivity. But, regarding the interest of young people in Bangladesh in agribusiness, there is no published material. Thus, this study is the first in Bangladesh to assess the interest of agricultural students in starting an agribusiness and describe its determinants.

Practical value / implications. The state wants to encourage agribusiness, but does not have a policy to achieve the goal and universities do not even teach this subject to agriculture graduates. If the government is serious about expanding agricultural entrepreneurship, it will have to invest in agribusiness to reduce its risk: in agricultural mechanisation, better rural transport and infrastructure, insurance for agricultural enterprises, mentors to impart business skills and advice, and a national capital fund to invest in such enterprises and finance them by capital rather than by debt.

Key words: agricultural economics, agricultural extension, Bangladesh, entrepreneurship, rural development.

1. INTRODUCTION

Agribusiness is a strategic initiative that combines agricultural techniques with business concepts to improve the overall sustainability and efficiency of the agricultural sector [1]. This approach considers every step of the agricultural value

chain, starting with production and going through processing and distribution. The use of modern farming techniques, the integration of technical breakthroughs, and the promotion of ecologically conscious behaviours are all critical components in agribusiness growth [2]. Enabling farmers with access to advanced technology, training, and expertise may increase productivity and optimise resource usage. Establishing market linkages that connect farmers with consumers, processors, and the marketplace is critical to agribusiness growth [3].

Bangladesh's economy is mostly based on agriculture. Around 50 % of the national workforce is employed in agriculture, which generates 13.29 % of the country's GDP [4]. Agriculture is a vital component of the nation's economy, but it faces a number of challenges in agricultural entrepreneurship: for example, low productivity, poor infrastructure, and restricted access to finance and technology [5]. Due to its potential to boost production, generate employment, and enhance the standard of living for farmers and rural people generally, agricultural entrepreneurship is seen as a viable option to make progress against rural poverty and unemployment, as well as low agricultural productivity [6–7]. Promoting the growth of agricultural companies, particularly among young people, is crucial for developing agricultural entrepreneurship in Bangladesh.

The benefits of agricultural entrepreneurship for a country include the creation of job prospects, the encouragement of innovation [8], the improvement of productivity, wealth creation, and the enhancement of public welfare. For these reasons, Entrepreneurial growth and economic development of countries are closely related. Promoting entrepreneurship is a national priority for many Governments, especially those in developing countries, to achieve this economic growth. Various training methods and approaches have recently helped people, especially young people, to develop their entrepreneurial knowledge, skills, and talents, which later enabled them to grow into successful entrepreneurs.

Although Bangladesh has made significant progress in some sectors in the last 20 years, agribusiness has not yet reached the necessary level of growth. The country is among the lowest-ranked nations globally regarding its capacity to develop and support entrepreneurs (134 out of 137) [9]. Bangladesh has been rated only 7 out of 100 on the “access to finance or risk capital” scale [10].

Bangladesh has poor start-up expertise, and its people are culturally risk-averse; the savings rate is low, the share market is new and weak, it has been involved in scandals and is not trustworthy, product innovation is not a priority or even an everyday activity in Bangladesh, and the country has little evidence of internationalisation, even in the major cities. For these reasons, young Bangladeshi entrepreneurs have serious difficulties acquiring capital or any other type of finance.

Agribusiness is still underutilised as a potential source of economic diversification. Considering the country's heavy dependence on agriculture and widespread participation in it, it is surprising how little agribusiness has developed. On the other hand, this picture is common for developing countries, in general.

Bangladesh has approximately 150 million agro-based businesses of all sizes

[11]. Only a few of these companies can be described as “successful”. Two or three of these companies export agriproducts. The Government of Bangladesh has provided specific direct and indirect incentives to grow the agribusiness sector, but the industry has had little uptake and success despite these incentives.

Bangladesh has high youth unemployment, of around 44,000,000 [12], and the current unemployment rate of young people in Bangladesh, ages 15–24, is nearly 15 % [13]. This rate has been rising for years. Figure 1 shows that Bangladesh’s youth unemployment rate has changed since 1991.

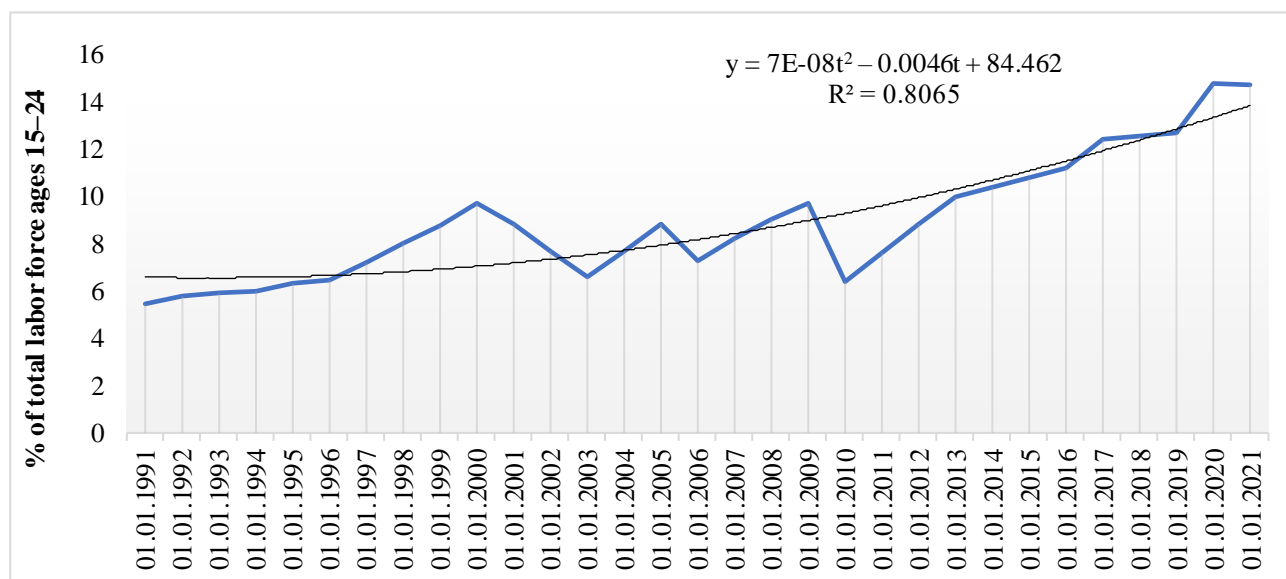


Figure 1. Changes in the youth unemployment rate of Bangladesh during 1991–2021

Source: built based on Bangladesh Youth Unemployment Rate [13].

The agricultural industry in Bangladesh is losing young people day by day. Young people seem less interested in working in the fields yearly than their ancestors. Work in the agricultural industry – including agribusiness – is a low-status profession. Thus, educated young people are perceived as uninterested in the sector [14].

Young people under 24 compose approximately one-third of Bangladesh’s total population. They are known to be underutilised in the economy. Therefore, youth unemployment is rising. While the young unemployment rate has increased over the last 10 years, overall employment in agriculture has decreased [15]. We can reduce unemployment and improve agricultural production by getting these young people into agribusiness ventures.

There is no published literature about young people’s interest in entering agribusiness in Bangladesh. So, this research has been undertaken among undergraduate agricultural students in Bangladesh to assess their propensity to start agricultural enterprises after awarding their Bachelor of Science (Honours) degrees and to find out the determinants of starting agribusiness ventures in Bangladesh.

2. LITERATURE REVIEW

Agribusiness has the potential to contribute to Bangladesh’s economy,

employment, food security, and overall economic growth [16]. With a large agricultural sector and a growing population, the country has immense potential for agribusiness development.

Agribusiness encompasses various value-added activities in the agrifood supply chain [17]. The economic role of agribusiness is to add value to farm products, enhance agricultural productivity, and promote market integration [18]. Today's farmers, processors, and traders can also enter agribusiness, improving their living standards and contributing more to national economic growth and rural development.

2.1. The rise of graduate entrepreneurship. Graduate entrepreneurship refers to starting and running businesses after graduation [19]. People who had a bachelor's or MS degree and decided to pursue entrepreneurship as a profession were the defining characteristics of this group. Graduate entrepreneurs are in various industries and sectors, often bringing unique skills and knowledge to their businesses. Graduate entrepreneurship is becoming increasingly popular as more graduates start their businesses rather than seek traditional employment. In addition, research shows that graduates are more likely to create their own companies than non-graduates [20].

Graduate entrepreneurship has emerged as a dynamic force in many industries in Bangladesh. The new idea of graduate entrepreneurship was prompted by the fact that the number of educated people in Bangladesh has increased over the past 20 years. The productivity of the education sector in producing graduates has vastly outstripped the economic growth that might have created jobs for these graduates, which require their level of training and can offer salaries commensurate with their needs and potential value to the economy [21]. Thus, unemployment and, even more commonly, underemployment have become serious problems in Bangladesh, as in most developing countries.

The availability of quality education, entrepreneurship support programs, and the changing mindset toward self-employment have created an environment for graduates to venture into entrepreneurship [22]. This shift is particularly relevant in agribusiness, where innovative ideas and technological advancements can revolutionise traditional farming practices and value chain operations. Graduate entrepreneurs bring fresh perspectives, technical expertise, and managerial skills to the agricultural sector, enabling them to identify market gaps and develop innovative solutions [23]. Furthermore, they leverage their education and networks to introduce modern farming techniques, agri-tech applications, and value-added products. Additionally, these entrepreneurs often contribute to job creation by establishing agricultural enterprises and attracting investment.

2.2. Graduate entrepreneurs' mindset and education. Studies have explored the connection between entrepreneurial mentality and the importance of education in forming entrepreneurial attitudes. Research has shown that education is vital in developing the knowledge, skills, and attitudes necessary for entrepreneurship [24]. Education allows individuals to acquire domain-specific knowledge, such as business management, finance, marketing, and innovation, essential for entrepreneurial success [25]. Moreover, education equips individuals with critical thinking, problem-solving,

and decision-making skills that are crucial for identifying and pursuing entrepreneurial opportunities [16; 26].

Furthermore, education influences the development of an entrepreneurial mindset by fostering an attitude of risk-taking, creativity, and opportunity recognition [27]. Through education, people can be exposed to entrepreneurial role models, case studies and hands-on learning opportunities that can shape their perceptions of entrepreneurship and increase their self-esteem and confidence in entrepreneurial endeavours [28]. In addition to acquiring knowledge and skills, education provides access to networks and resources vital for entrepreneurial success [16; 29]. Educational institutions often serve as incubators for entrepreneurial activities, offering mentorship programs, networking events, and access to funding and support services that can facilitate the transition from education to entrepreneurship.

It is important to note that while education can contribute to developing an entrepreneurial mindset, it is not the only determinant of entrepreneurial success. Other factors, such as individual traits, personal experiences, and environmental factors, also have a significant impact on entrepreneurial behaviour and outcomes [30].

2.3. Agribusiness and graduate entrepreneurship in Bangladesh. Graduate entrepreneurship in the agribusiness sector in Bangladesh has accepted increasing interest in recent years. The potential of graduate entrepreneurship in agribusiness is Bangladesh's increasing demand for food and agricultural products. The country has a large population and a growing middle class, driving demand for high-quality, value-added agrarian products [31]. Additionally, the Government in Bangladesh has prioritised the development of the agribusiness sector through policy initiatives, such as the National Agriculture Policy 2018, which aims to promote entrepreneurship, innovation, and investment in the sector. The Agricultural Value Chain Development Project (AVCDP) focuses on enhancing agribusiness competitiveness by providing technical assistance, access to finance, and market linkages.

Furthermore, universities and research institutions are trying to establish incubation centres, entrepreneurship development programs, and mentorship networks to nurture and support graduate entrepreneurs. These initiatives offer guidance and mentorship, enabling aspiring entrepreneurs to turn their ideas into viable businesses [32]. The Bangladesh Agricultural University Innovation and Incubation Centre (BAUIIC) and the Agribusiness for Trade Competitiveness Project (ATCP) are notable examples of such initiatives. Still, other agricultural universities have not attempted such activities.

By leveraging innovation, technology, and entrepreneurial skills, graduates can contribute to improved productivity, value addition, and market integration. The government's support and initiatives, coupled with the efforts of educational institutions, play a crucial role in fostering a favourable ecosystem for agricultural entrepreneurship. Continued investment in this sector, targeted policies, and capacity-building initiatives will empower graduates to become agents of change and contribute to the sustainable development of Bangladesh's agricultural sector.

3. METHODOLOGY

3.1. Population and sampling. This research aims to ascertain the variables statistically significantly influencing undergraduate agricultural students' willingness to launch agribusinesses. Participants were purposively selected to gather information from undergraduate students studying for Bachelor of Agriculture, Fisheries or Veterinary Science at the University of Rajshahi. The University of Rajshahi was purposively selected as it is the second largest and oldest institution in the country and the biggest and most prestigious institution of higher learning in Bangladesh. The institution has spent 70 years offering higher education and research since its founding in 1953. Therefore, this university's undergraduate agriculture, fisheries, and veterinary programs were the population for the study. The total number of students was 605, and 25 % of the population was selected as the sample for the analysis. Thus, the sample size was 152. The respondents were determined using the Table of random numbers from the list of students taken from the concerned department.

3.2. Measurement of the variables. A questionnaire was used as the data collection tool to gather details about the students' backgrounds, perceptions about agribusiness, and attitudes toward agricultural education. The perceived character of agribusiness was assessed on a 5-point Likert scale. Cronbach's alpha was used to measure instrument reliability, and a 0.78 value was obtained. Cronbach's alpha value was higher than 0.70, suggesting a satisfactory degree of dependability, so they were chosen as a risk item [33].

The independent variables were undergraduates' impressions of agribusiness and their backgrounds and personal characteristics (determinants). There were ten questions (X_1 – X_{10}) about the perception of agribusiness in Bangladesh, with a Likert-type scale ranging from 1 to 5, with one signifying strongly disagree and five denoting strongly agree. These elements have been recognised as significant influences on Bangladesh's agricultural sector entry. The students' ten personality traits (X_{11} – X_{19}) were asked. They are presented in Table 1.

Table 1

Socio-demographic variables and their measurements

| Variable | Measurement (scale) | Variable | Measurement (scale) |
|---|-------------------------|---|---------------------------------------|
| Age (X_{11}) | In actual year | Living in rural areas (X_{16}) | 0 – urban areas; 1 – rural areas |
| Sex (X_{12}) | 0 – female; 1 – male | Agricultural engagement in the family farm (X_{17}) | 0 – non-engagement; 1 – engagement |
| Education (X_{13}) | Year of schooling | Family land (X_{18}) | In hectare |
| Mothers' educational level (X_{14}) | Year of schooling | Annual family income (X_{19}) | 0000 Bangladeshi Taka (BDT) |
| Fathers' educational level (X_{15}) | Year of schooling | X_1 – X_{10} | Likert-type scale ranging from 1 to 5 |

Source: developed by the authors.

SPSS was used to analyse the data. The data were summarised using frequencies, percentages, averages, and standard deviations. Correlation coefficients and binary

logistic regression determined the relationship between the dependent and independent variables. Finally, based on the explanatory variables, including students' qualitative perceptions of agriculture and personal/background traits, the logit model specification was used to calculate the likelihood of the respondent going into agricultural entrepreneurship.

3.3. Logistic regression model. Logistic regression is a statistical technique for examining a dataset in which one or more independent factors affect an outcome; when estimating the result, it is a dichotomous variable [34]. The dependent variable in logistic regression is binary or dichotomous, indicating that it only includes data that is recorded as 1 for "True", "Yes", 0 for "False", or "No", respectively. Additionally, logistic regression estimates the parameters using the likelihood ratio instead of the traditional linear regression, which computes the parameters using the least squares approach. In this method, the predicted response variable is a function of the probability that a particular observation (person) would fall into one of the two categories of the dichotomy.

Given that the dependent variable in the current research was binary (dichotomous), the binary logistic regression's purpose was as follows: where Z is the input variable, and $f(Z)$ is the result. This function has the benefit that the input variable may have positive and negative values, while the result, $f(Z)$, can be between 0 and 1.

$$f(Z) = e \cdot Z : (1 + e \cdot Z) = 1 : (1 + e \cdot (-Z)). \quad (1)$$

The variable Z reflects the aggregate effect of a group of factors, and the variable $f(Z)$ describes the probability that this action will lead to a particular result.

A further measure of the overall contribution of all participating independent variables to the model is expressed by variable Z , which has the definition:

$$Z = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_k X_k. \quad (2)$$

Here, β_0 is the intercept of the regression line, and β_i is the coefficient of the independent variables, which express the contribution of each variable.

The explanatory variable enhances the chance of a good result when the coefficient has a positive value. A negative coefficient number, on the other hand, indicates that the variable makes the result less likely. Additionally, a high coefficient value would suggest that the independent variable significantly influences the likelihood that the event will occur. In contrast, a low value would indicate that the independent variable has little influence on the possibility of experiencing the relevant outcome.

3.4. Conceptual framework. The research aims to understand the factors influencing students' interest in pursuing agribusiness careers in Bangladesh (Figure 2). It considers demographic factors like age, gender, parental education, agricultural engagement, resource accessibility, and the business environment. Hypotheses suggest that these factors significantly impact students' career inclinations. Through logistic regression analysis, the study seeks to identify key determinants of interest and provide insights for policymakers and stakeholders. Ultimately, the findings aim to inform strategies for promoting agribusiness as a viable and attractive career path for undergraduate students, thereby contributing to the sustainable development of Bangladesh's agricultural sector.

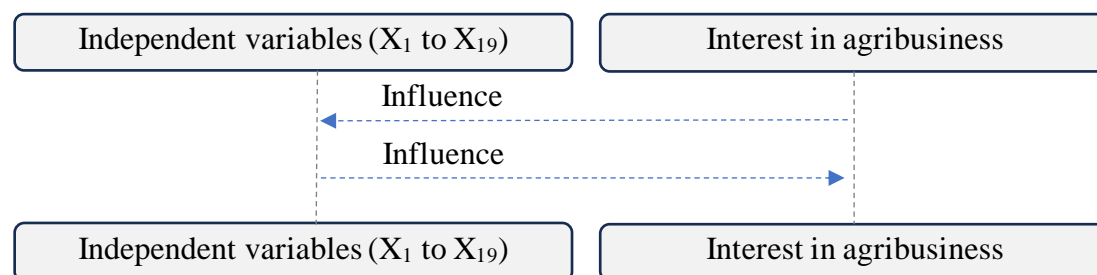


Figure 2. Conceptual framework

Source: developed by the authors.

4. RESULTS

4.1. Socio-demographic characteristics. Table 2 contains respondents' socio-demographic characteristics. From the findings, the majority of participants (93.4 %) were between the ages of 20 and 25, a tiny minority (4.6 %) were under 20, and the remaining (2.1 %) were between the ages of 26 and 30. There were more female participants (57.9 %) than male participants (42.1 %). The majority (53.3 %) of the respondents were students of agriculture (53.3 %), followed by fisheries (27.0 %) and veterinary (19.7 %). Most of the participants were studying in 2nd year (44.1 %), followed by year 1 (30.3 %), year 3 (14.5 %), and year 4 (11.2 %). While most mothers had a secondary education level (27.0 %), most fathers had a higher education level (46.7 %). Even ten years ago, women's literacy and educational levels were far lower in Bangladesh than men's [35].

Most students (75.0 %) resided in rural areas, while only 52.6 %, directly and indirectly, participated with their families in agricultural activities.

Table 2

Socio-demographic characteristics of the students

| Independent variable (Scaling) | Frequency (f) | Percentage (%) |
|--------------------------------|---------------|----------------|
| 1 | 2 | 3 |
| <i>Age, years</i> | | |
| Up to 20 | 7 | 4.6 |
| 20–25 | 142 | 93.4 |
| 26–30 | 3 | 2.0 |
| Above 30 | 0 | 0.0 |
| <i>Gender</i> | | |
| Male (1) | 64 | 42.1 |
| Female (0) | 88 | 57.9 |
| <i>Subject</i> | | |
| Agriculture (1) | 81 | 53.3 |
| Fisheries (2) | 41 | 27.0 |
| Veterinary (3) | 30 | 19.7 |
| <i>Level, year</i> | | |
| First (1) | 46 | 30.3 |
| Second (2) | 67 | 44.1 |
| Third (3) | 22 | 14.5 |
| Fourth (4) | 17 | 11.2 |

Continuation of Table 2

| 1 | 2 | 3 |
|--------------------------------|-----|------|
| <i>Education of mother</i> | | |
| Illiterate (0) | 8 | 5.3 |
| Primary (1) | 26 | 17.1 |
| Secondary (2) | 41 | 27.0 |
| Higher secondary (3) | 39 | 25.7 |
| Higher education (4) | 38 | 25.0 |
| <i>Education of father</i> | | |
| Illiterate (0) | 8 | 5.3 |
| Primary (1) | 9 | 5.9 |
| Secondary (2) | 27 | 17.8 |
| Higher secondary (3) | 37 | 24.3 |
| Higher education (4) | 71 | 46.7 |
| <i>Living</i> | | |
| Urban area (0) | 38 | 25 |
| Rural area (1) | 114 | 75 |
| <i>Agricultural engagement</i> | | |
| Engage (1) | 72 | 47.4 |
| Non-engage (0) | 80 | 52.6 |

Source: developed by the authors.

4.2. Student's willingness to start agribusiness venture. Although most students are from a rural background and many are directly or indirectly engaged in family farming, very few (29.6 %) are interested in starting an agribusiness following graduation (Figure 3).

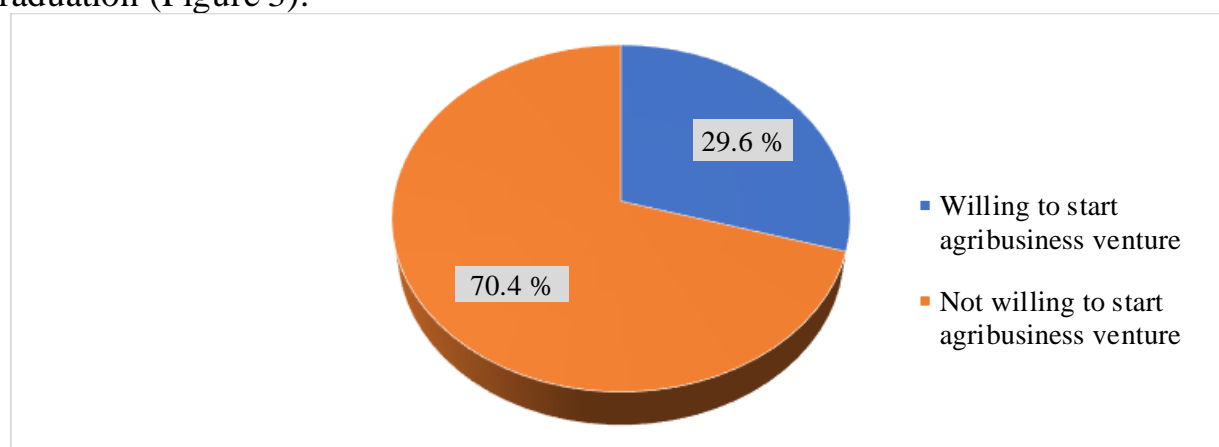


Figure 3. Percentage of students willing to start agribusiness after graduation

Source: developed by the authors.

The perceptions of agribusiness among Bangladeshi undergraduate students are shown in Table 3. The Table lists the mean and standard deviation (SD) scores for each of the ten variables that impact students' desire to participate in agribusiness. The highest mean score of 3.36, with a low degree of variability (SD = 0.93), indicates that the respondents had a generally positive opinion of the accessibility of the agriproduct market. On the other hand, consistency in agribusiness pricing obtained the lowest mean score of 1.84, suggesting a less positive view despite comparatively low response variability (SD = 0.86). The answers were very different and mostly agreed on a few

variables. These variables were how easy it is to get agricultural supplies (mean = 2.98, SD = 1.17), how cost-effective transportation services are (mean = 2.78, SD = 1.04), and how easy it is to manage agribusiness risk (mean = 3.00, SD = 1.17). The price of agribusiness is stable (A₇) shows the lowest mean (1.84). Thus, most of the students disagree with this statement.

Table 3

Students' perceptiveness on the nature of agribusiness in Bangladesh

| Reasons for willingness | Mean | SD |
|---|------|------|
| Agriproduct markets are accessible (A ₁) | 3.36 | 0.93 |
| Agricultural inputs are available (A ₂) | 2.98 | 1.17 |
| Transportation services for agribusiness are affordable (A ₃) | 2.78 | 1.04 |
| Easy to manage agribusiness risk (A ₄) | 3.00 | 1.17 |
| Post-harvest facilities are affordable (A ₅) | 2.52 | 1.22 |
| Favourable land tenure agreement (A ₆) | 3.09 | 0.96 |
| The price of agribusiness is stable (A ₇) | 1.84 | 0.86 |
| Market competition is favourable (A ₈) | 2.78 | 1.05 |
| Access to loans in agribusiness is favourable (A ₉) | 3.01 | 0.95 |
| Agricultural pest management is affordable (A ₁₀) | 2.98 | 0.94 |

Source: developed by the authors.

4.3. Probability of students' starting agribusiness ventures. Cox Snell R² and Nagelkerke R² (pseudo-R squared), according to the results of the logistic analysis in Table 4, were 0.414 and 0.589, respectively. These suggest that the independent variables may account for between 41 and 58 % of the variance in undergraduates' readiness to launch an agribusiness. Easy to manage agribusiness risk (A₄), affordable post-harvest facilities (A₅), respondents' gender, and the family's total land area were the best indicators of undergraduates' propensity to launch an agribusiness after graduation. The regression model's 2 test revealed significance at an alpha level of 0.00, proving that the variables in the model significantly contribute to the explanation of students' willingness to launch their agribusinesses following graduation.

Table 4

Logistic regression results, the determinants of agriculture undergraduate students' inclination to move to agribusinesses later completing their degrees

| Variables | β coefficient | Wald | Sig. | Exp(B) |
|-------------------------------------|------------------------|--------|-------|--------|
| 1 | 2 | 3 | 4 | 5 |
| Age | 1.190 | 0.851 | 0.356 | 3.288 |
| Gender | -1.466 | 5.493 | 0.019 | 0.231 |
| Level | -0.045 | 0.022 | 0.882 | 0.956 |
| The educational level of the mother | -0.010 | 0.001 | 0.973 | 0.990 |
| The educational level of the father | -0.030 | 0.012 | 0.913 | 0.970 |
| Living | 1.441 | 3.198 | 0.074 | 4.225 |
| Agricultural engagement | 0.118 | 0.038 | 0.845 | 1.126 |
| Family land size | 1.946 | 13.645 | 0.000 | 7.000 |
| Annual family income | -0.010 | 0.007 | 0.935 | 0.990 |

Continuation of Table 4

| 1 | 2 | 3 | 4 | 5 |
|---|--------|--------|-------|-------|
| Agriproduct markets are accessible (A_1) | -0.429 | 1.691 | 0.193 | 0.651 |
| Agricultural inputs are available (A_2) | -0.030 | 0.011 | 0.915 | 0.970 |
| Transportation services for agribusiness are affordable (A_3) | -0.515 | 2.784 | 0.095 | 0.598 |
| Easy to manage agribusiness risk (A_4) | 0.650 | 6.856 | 0.009 | 1.916 |
| Post-harvest facilities are affordable (A_5) | 0.940 | 12.570 | 0.000 | 2.560 |
| Favourable land tenure agreement (A_6) | 0.256 | 0.761 | 0.383 | 1.292 |
| The price of agribusiness is stable (A_7) | -0.178 | 0.285 | 0.593 | 0.837 |
| Market competition is favourable (A_8) | 0.075 | 0.068 | 0.794 | 1.078 |
| Access to loans in agribusiness is favourable (A_9) | -0.261 | 0.677 | 0.411 | 0.770 |
| Agricultural pest management is affordable (A_{10}) | -0.562 | 2.780 | 0.095 | 0.570 |
| Constant | -4.939 | 2.221 | 0.136 | 0.007 |

Note. Model summary: Cox Snell $R^2 = 0.414$; Naglkerke $R^2 = 0.589$; $X_2 = 81.25$; Sig (p-value) = 0.00.

Source: developed by the authors.

4.4. Suitable agribusiness perceived by students. The students who want to establish agribusiness ventures after graduation were also asked to mention three to five business ideas that they have in mind for agribusiness. Figure 4 summarises the findings; fruit and vegetable farming (24) and feed mills (24) were at the top. Beef fattening (23), floriculture (21) and fishing (21) are also in the top five. Among the crops, fruits, vegetables, honey, and flowers are high-value crops in Bangladesh. Cereals get low prices in Bangladesh. Rice prices are a big political issue, and almost everyone eats rice daily. Governments pressure rice producers to stabilise cereal prices, especially rice. Thus, students prefer high-value crops.

Beef fattening is also a popular business that produces high value within a short time. High local beef prices and an Indian crackdown on cattle smuggling encourage entrepreneurs to start businesses in this sector.

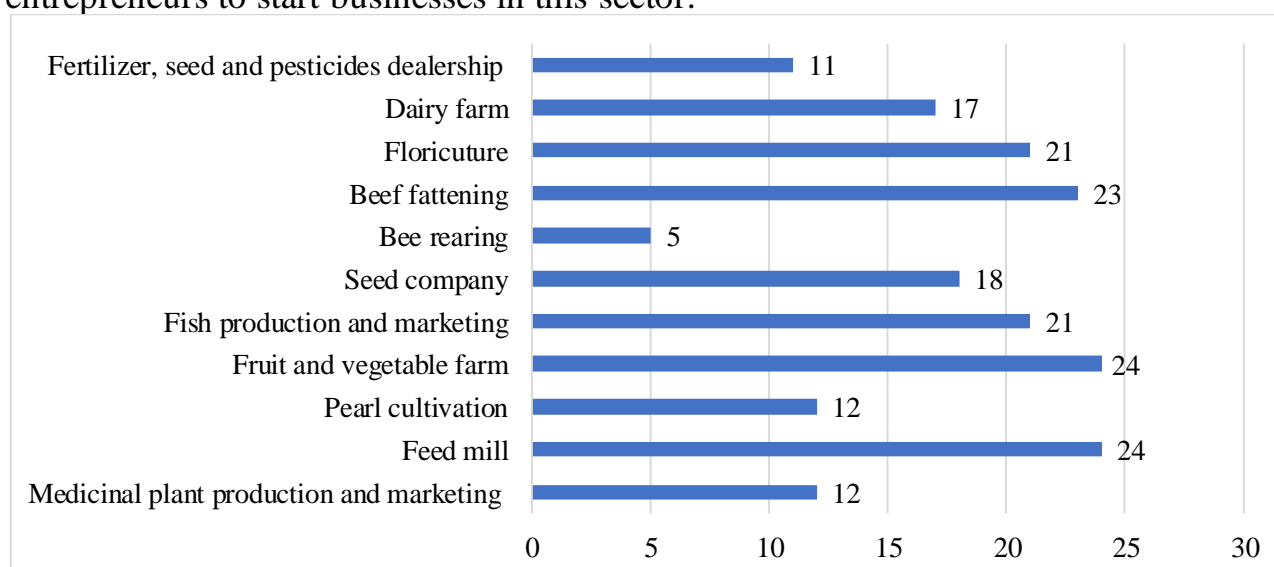


Figure 4. Suitable agribusiness ventures in Bangladesh as perceived by undergraduate agricultural students

Source: developed by the authors.

In light of the findings, policymakers and educational institutions in Bangladesh are advised to create an atmosphere that encourages students to pursue agribusiness careers. This may be accomplished by making post-harvest facilities more accessible. Initiatives should also be made to lessen the risks connected to agriculture, especially those resulting from unstable markets and price volatility. Gender-specific assistance programs should be implemented to capitalise on the increased interest of female students in launching agricultural companies and provide equal chances and resources. Additionally, offering land access or financial incentives must encourage more students to pursue agribusiness initiatives, as we found the association between family land size and entrepreneurial motivation. Stressing high-value commodities like fruits, vegetables, honey, and flowers and livestock projects like fattening cattle may help students' interests match market needs and eventually result in profitable and sustainable agribusiness companies.

5. DISCUSSION

The student undergraduate cohort is young, with a small majority of female students and a majority aged between 20 and 25 years old. This is consistent with the larger trend of more women pursuing higher education in Bangladesh, even though traditionally, women have had lower educational attainment than men [36]. There was a clear preference for agricultural studies among rural students, as shown by most respondents pursuing degrees in agriculture, fishery, and veterinary sciences. According to the research, these educational inclinations are shaped by rural origins and family engagement in agriculture, which is consistent with Bangladesh's traditional agricultural economy [37].

In Bangladesh, students prefer civil service and industry jobs. Research in Bangladesh found that among business graduates, only 8.2 % want to enter entrepreneurship [38], and the rest are willing to join the service sector. This scenario is worse for the other subject students. Most students believe government jobs and other services are safer than business [39]. They always think the service sector is risk-free.

In the logistic regression analysis, gender shows $p\text{-value} = 0.019$, $Wald = 5.49$, with a negative β value, which means females are more interested in establishing agribusiness ventures than men are. Nowadays, women are more successful in entrepreneurship than men in the country, particularly in small and medium-sized businesses (SMEs) [40]. Moreover, females are more sincere and more knowledgeable about issues related to payment. As a result, microfinance was successful in Bangladesh because 95 % of the participants were women [41]. Fostering women's entrepreneurship will positively promote the growth of Bangladesh. The family's total land area and the willingness to start an agribusiness venture are significant, where β coefficient is 1.946, $Wald$ is 13.645, and $p\text{-value} = 0.000$. Thus, the respondents with high land tenure are interested in starting agribusinesses. People in Bangladesh with high land area ownership have greater access to land because the land is almost the only security accepted by banks in Bangladesh. If borrowers have enough land, banks

will waive their requirement of significant cash investment in the new business. In addition, many respondents believe that their families will support them in farming as they already have the land to produce agricultural products.

Among the ten statements of students' perceptions on the nature of agribusiness in Bangladesh, "Easy to manage agribusiness risk (A_4)", has β coefficient of 0.650, Wald = 6.856, and p-value = 0.009. Students who believe agribusiness risk is easily manageable are interested in starting agro-industry ventures. Agribusiness is perceived as risky, as it deals with perishable goods. Price fluctuations for agricultural products are widespread in Bangladesh, which is the primary reason for risk in agribusiness [42].

A positive perception of "Post-harvest facilities are affordable (A_5)" is positively related to the students' willingness to start agribusiness ventures. Post-harvest management is one of the essential aspects of agribusiness in Bangladesh. However, in Bangladesh, many farmers lose their investments due to a lack of post-harvest facilities [43]. Therefore, we can infer that good post-harvest facilities, including storage, can increase the undergraduate willingness to start agribusiness ventures.

Students have conflicting opinions on agribusiness. They recognise the markets for agricultural products are easily accessible, with the highest mean score (3.36) suggesting a generally favourable view. The lowest mean score (1.84) for price stability, on the other hand, emphasises serious worries about pricing inconsistency and market instability. These opinions matter a lot since they affect students' inclination to pursue careers in agriculture. The propensity to launch agricultural operations is positively correlated with variables like controllable agribusiness risk and reasonably priced post-harvest facilities. According to this research, increasing post-harvest infrastructure and lowering perceived risks may inspire more students to think about pursuing jobs in agriculture.

These conclusions are further supported by the logistic regression analysis, which demonstrates that students' propensity to launch agribusiness operations is significantly influenced by factors such as gender, family land size, and views of manageable agribusiness risk and reasonably priced post-harvest amenities. It's interesting to note that female students had a stronger inclination to pursue agriculture, which might be a reflection of larger trends in Bangladesh that indicate an increase in female entrepreneurship, especially in SMEs. This conclusion is significant because it suggests that promoting agro-entrepreneurship may provide gender-specific possibilities as well as constraints [44].

The survey also found that students thought that fruit and vegetable farming, beekeeping, fattening cattle, and floriculture were the best agribusiness operations. These choices are in line with economic and market developments since high-value animals and crops provide higher financial returns than staples like rice, which are more vulnerable to price stability and political pressures [45]. Students' interest in high-value agribusinesses indicates a deliberate change in their focus toward more profitable and sustainable farming methods.

The study emphasises the need for focused initiatives to support agribusiness among Bangladeshi undergraduate students. Improving financial support mechanisms,

resolving concerns related to market stability, and developing training programs centred on agribusiness management are critical first steps [46]. Agribusiness endeavours may also be greatly increased by using family land resources and creating an atmosphere that encourages female entrepreneurs. When these steps are used in conjunction with strong governmental support, students' attitudes about agribusiness may be changed, and this will eventually help Bangladesh's agricultural and economic growth.

6. CONCLUSIONS

Although most respondents live in and grew up in a rural environment (75 %) and engaged in agricultural activities (47.4 %), 70.4 % are not interested in starting agribusinesses when they graduate. They want to take the State sector or other service employment. Several reasons for students' reluctance to become agro-entrepreneurs were identified, in particular: (i) agricultural prices are notoriously unstable in Bangladesh; (ii) competition is fierce; (iii) post-harvest facilities are not affordable.

All of this adds up to risk. Fluctuating prices mean that what is bought today can be overpriced for the market when it arrives in front of buyers. Fierce competition means that even if an agricultural entrepreneur thinks he / she has a niche today, another new supplier can take his / her buyers tomorrow. The inability to cover the cost of post-harvest facilities means that the entrepreneur's product can rot before the buyers see it. Add to this the fact that agricultural products are one of the most perishable products: unfavourable weather, pests, etc., can wipe out one's best efforts.

South Asians are not entrepreneurial in general. There is a little social safety net for those who try risky businesses and lose out: that can "mean starvation". Finally, since the colonial days of British rule, the State sector has always been too large and overpaid. So, the question arises as to why take the risks of failure in business when one can get a high-status, high-paying job for life, doing little work with modern housing, food rations, health insurance etc.

Other findings from the logistic regression model include: (1) females are more interested in establishing agribusiness ventures than males ($p\text{-value} = 0.019$); (2) only those from families that own large amounts of farmland are interested in agribusiness ($p\text{-value} = 0.000$).

Bangladesh's government is trying to encourage young graduates to start agribusiness ventures, but they have no policy to achieve this goal. To make agribusiness attractive, the Government should create a generous scheme, funded by high premiums on actual turnover, of Agricultural Enterprise Insurance to share the inherent risk of the business. They should provide mentors to enterprises to improve their business skills. The Government should also create a National Agricultural Investment Corporation so that Bangladeshis can "invest in tomorrow's lunch", which can invest in agro-enterprises, taking a half share in the enterprises as security which can be paid off out of profits, so that these enterprises are funded out of capital instead of debt. Such a corporation can also invest in the mechanisation of agriculture. Better rural transport and infrastructure are needed to move products in and out of rural areas

more quickly and reliably. There is no natural constituency for agricultural enterprise, so the State must create one if it wants one.

The University of Rajshahi and other agricultural universities offer no specific courses in agribusiness development for agriculture, fisheries, and veterinary education courses. If students have never read the subject, how can they decide to make it their life career? Agricultural universities need to remedy this lack.

7. LIMITATIONS AND FUTURE RESEARCH

The key limitations of the research are the sample size and representativeness. Findings may not be broadly applicable as the data does not accurately reflect the variety of students in Bangladesh's various institutions and regions. Using a cross-sectional design, data is collected for the research at one specific period. This approach may restrict the depth of comprehension by failing to account for seasonal differences in occupational inclinations or longitudinal changes in students' interests.

Finally, follow-up research is needed to learn how young agribusiness people do in practice, what they do well, what they contribute, what problems they have, and what services they need. Based on such research, policies can be improved, targeted and strengthened.

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