

## Challenges of Rural Entrepreneurship in the Cumilla District of Bangladesh

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### Abstract

Rural entrepreneurship is a crucial driver of both local and national economic development, often regarded as a key strategy for alleviating unemployment and boosting GDP growth. In recent years, governments have intensified efforts to promote entrepreneurship to address these economic challenges. Despite such initiatives, rural entrepreneurs continue to confront substantial obstacles that hinder their growth and sustainability. This study investigated the challenges faced by rural entrepreneurs in the Cumilla District of Bangladesh, focusing specifically on four agro-based sectors: poultry, nursery, dairy, and fisheries. Primary data were collected from 80 entrepreneurs

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equally distributed across these sectors, using a structured questionnaire with closed-ended questions measured on a five-point Likert scale. To complement this, secondary sources including academic literature, reports, and media publications were reviewed to establish a comprehensive theoretical framework on rural entrepreneurship. Data analysis was performed using SPSS software, employing descriptive statistics and inferential tests such as means, standard deviations, and t-tests. Additionally, sectoral comparisons were conducted to identify disparities in access to resources and support mechanisms. The study revealed that rural entrepreneurs in Cumilla face critical challenges, including limited capital formation, prohibitive interest rates, inadequate training opportunities for skill and managerial development, and restricted market access and knowledge. However, a key limitation lies in the narrow sectoral focus, as rural entrepreneurship encompasses a far broader spectrum of activities beyond the four agro-based sectors examined.

**Keywords:** *Entrepreneur, entrepreneurship, rural entrepreneur, challenges of rural entrepreneurs*

## **Introduction**

Entrepreneurship plays a crucial role in the economic development of densely populated countries like Bangladesh, where job creation remains a pressing challenge. According to the World Bank (2024), the unemployment rate in Bangladesh was 5.06% in 2023. The government faces constraints in generating public sector jobs, while job growth in the private sector is influenced by various factors, including fuel prices, political stability, labour conditions, foreign direct investment (FDI), and a stable supply of foreign currency. Additionally, both man-made and natural disasters present significant hurdles to employment generation. For example, the COVID-19 pandemic, the Russo-Ukrainian War, and recent floods affecting several districts in Bangladesh have all adversely impacted job opportunities, especially for young job seekers. Considering these challenges, young unemployed

individuals must take the initiative to become self-reliant by acquiring technical skills through training (Islam, 2024). Islam also highlights that the skills gap is a major factor contributing to rising unemployment, as many job seekers are unable to secure desirable positions due to a lack of necessary skills. This growing unemployment crisis represents a significant barrier to the country's economic growth. Entrepreneurs, however, play a vital role in driving economic development by promoting industrialization. They transform resources—such as land, labour, and capital—into goods and services, thereby stimulating national income. In doing so, entrepreneurs contribute to increasing the net national product (NNP) and per capita income, both of which are key indicators of economic growth.

Various institutions are working to promote entrepreneurship in Bangladesh. For example, the Bangladesh Academy for Rural Development (BARD), established in 1959, is a leading organization dedicated to rural development in the country. BARD is internationally recognized for its "Cumilla Approach to Rural Development" model. The organization has conducted 7,825 long, medium, and short-term training courses, seminars, workshops, and orientation programmes, benefiting a total of 260,435 participants. Additionally, BARD offers 25 specialized training programmes focused on small entrepreneurship development to promote entrepreneurial growth (BARD, 2022).

### **Statement of the research problem**

The growth and development of an economy largely depend on its people's ability to engage in productive economic activities. In Bangladesh, millions of graduates are either unemployed or underemployed (Islam, 2024). Despite actively seeking employment, many are unable to find suitable job opportunities, which presents a significant challenge to the country's economy. Several factors contribute to the high unemployment rate among graduates, including skill mismatches, lack of job specialization, corruption, and an outdated curriculum (Rashid & Islam, 2020). In this context, promoting entrepreneurship in rural areas—among

both educated and uneducated individuals—could offer a viable solution to the unemployment crisis. The potential for expanding entrepreneurial activities in the Cumilla District of Bangladesh is higher than in other regions, as the district has a literacy rate of 53.3% (BBS, 2011). According to the BBS report, the district's workforce is engaged in various sectors, including agriculture (47.31%), non-agricultural labour (2.54%), industry (1.25%), commerce (15.78%), transport and communication (4.05%), services (11.80%), construction (1.48%), religious services (0.35%), remittance (4.83%), and other sectors (10.61%). As the agriculture sector serves as the backbone of the district's economy, local people are engaged in various agro-based activities such as poultry, dairy farming, nurseries, and the production of fruits, vegetables, paddy, oilseeds, fish, jute, wheat, and more (ICMPD, 2022). The entrepreneur of the district faces several challenges that hinders their business operations including a lack of adequate training, financial support, managerial expertise, marketing knowledge, political harassment, a gender-biased society, limited IT skills, and inadequate infrastructure. Addressing these challenges through skill development and logistical support could motivate the people of Cumilla to pursue entrepreneurial ventures.

### **Research questions**

The study aimed to explore the following research questions:

- i. Do rural entrepreneurs in the Cumilla District receive sufficient financial support to operate their businesses?
- ii. Is the technical support available in the Cumilla District conducive to the expansion of rural entrepreneurial activities?
- iii. Are the storage and distribution systems in the Cumilla District favourable for the growth of rural entrepreneurship?
- iv. Are rural entrepreneurs in the Cumilla District well recognized within their communities?

## **Objectives of the study**

The study aimed to achieve the following objectives:

- i To identify the key challenges hindering the growth of rural entrepreneurs in the Cumilla District.

To compare various unrelated sectors that receive better support for expanding rural entrepreneurial activities in the Cumilla District

## **Review of Literature**

### **Entrepreneur and Entrepreneurship**

The term "entrepreneur" comes from the French word "entreprendre," which originally referred to an organizer of musical or other forms of entertainment. An entrepreneur is someone endowed with above-average abilities in organizing and coordinating the factors of production—namely, land, labour, capital, and enterprise (Veerabhadrapa, 2009). According to Steve (2010), an entrepreneur is an individual who creates and runs a company. Moreover, the International Labour Organization (ILO) identifies several characteristics of an entrepreneur, including a risk-taking attitude, leadership skills, originality, self-confidence, result-orientation, and a future-oriented mindset (Butt, 1998). On the other hand, entrepreneurship refers to the act of creating value by identifying a business opportunity and using risk-taking attitudes along with communicative and leadership skills to mobilize human, financial, and material resources, all of which are essential for establishing a new business or organization (Shane & Venkataraman, 2000).

### **Entrepreneurship and economic development**

Development is a broad concept that encompasses the enhancement of human resource capabilities. One of the key challenges in promoting economic development is improving individuals' standards of living while simultaneously driving

national economic growth. Economic development is one of the most accessible and effective measures for analysts to make cross-national comparisons (Martin, 1997). Traditionally, a country's economic output is viewed as a function of capital and labour inputs, along with technological progress (Solow, 1957). Naudé (2012) argues that entrepreneurship plays a crucial role in shaping development dynamics, while Nexford University (2024) emphasizes that entrepreneurship contributes to economic development in various ways, including improving living standards, generating new jobs, reducing poverty, promoting community development, ensuring economic independence, optimizing resource utilization, and increasing both per capita income and Gross National Product (GNP). Ahmed (2021) further supports these findings, asserting that entrepreneurs serve as key agents of change, driving structural transformation and contributing to a country's economic development. He also highlights that entrepreneurship generates employment by creating new enterprises. Economic development cannot occur without the expansion of entrepreneurial activity. Toma et al. (2014) reinforce Naudé's (2012) argument, asserting that economic development and entrepreneurship are deeply interconnected. Therefore, to achieve sustainable economic development and realize the benefits outlined by Nexford University, it is essential to place a greater emphasis on fostering entrepreneurship within any economy.

### **Types of entrepreneurships**

Entrepreneurs can be classified into various categories. Four main types of entrepreneurs are widely recognized. The first is the innovative entrepreneur, who actively seeks opportunities to introduce new ideas and technologies, explore untapped markets, and establish new ventures. The second type, the adoptive or imitative entrepreneur, replicates the strategies and methods of existing entrepreneurs, preferring to adopt technologies and practices pioneered by others rather than innovate on their own.

The third type is the Fabian entrepreneur, who is characterized by extreme caution and skepticism, often hesitant to take risks or embrace change. Lastly, drone entrepreneurs are those who cling strictly to traditional practices and technologies, resisting the adoption of newer innovations. Despite technological advancements, they remain reluctant to abandon outdated systems, even when it results in diminishing returns. Among these four types, the adoptive or imitative entrepreneur is particularly well-suited for the rural areas of Cumilla District, as they can effectively utilize local resources—such as land, labour, capital, and available technologies—to conduct their business activities. This is especially relevant given that the district's economy is primarily agro-based (BBS, 2011).

### **Rural entrepreneur**

Rural entrepreneurship can be defined as the creation of new organizations that introduce innovative products, services, or markets, or that apply new technologies in rural environments (Wortman, 1990). It plays a vital role in driving economic development in many countries worldwide. By enhancing agricultural productivity and stimulating economic growth, rural entrepreneurship is crucial in addressing poverty and food insecurity, especially among the world's most disadvantaged populations (Baumol, 1990). Many entrepreneurs are motivated not only by monetary incentives or profit, but also by personal, societal, or cultural goals. In rural areas, natural, social, cultural, and heritage resources can serve as valuable assets for entrepreneurial activities (Stathopoulou et al., 2004). Rural entrepreneurship is typically developed around seven key industries: mineral-based, forest-based, agro-based, polymer and chemical-based, engineering and non-conventional, service-based, and the textile industry (Khanka, 2015). Among these categories, entrepreneurial ventures tend to emerge based on the availability and accessibility of local resources in specific regions. Governments should implement comprehensive policies that

promote rural development, which can be achieved by expanding entrepreneurial activities in these regions. To support this, fostering entrepreneurial and marketing skills among rural populations through targeted training programmes is essential—yet, this need remains largely unmet in the context of Bangladesh (Mukul, 2021).

### **Significance of rural entrepreneurship**

Entrepreneurship can serve as a powerful economic driver, particularly in rural areas where the rural economy plays a vital role in the overall development of a nation's economy (Ribeiro-Soriano, 2017). Rural entrepreneurship can foster capital formation, reduce unemployment, and alleviate poverty within communities. To develop rural areas, it is crucial to support individuals in starting their own businesses. Start-ups, in particular, are essential for strengthening national and regional economies. Entrepreneurship is a key element of regional development, and today, many governments are actively encouraging youth to pursue careers in this field. Rural entrepreneurship plays a critical role in improving living standards, creating jobs, reducing poverty, and utilizing local resources (Ihejiamaizu & Chinonye, 2019). Given the significant pressure of unemployment, expanding rural entrepreneurship in Bangladesh could be an effective strategy for boosting economic growth.

### **Rural women entrepreneurs**

Rahman et al. (2022) conducted a qualitative study to examine the challenges faced by rural women entrepreneurs involved in family businesses in the Khulna, Shatkhira, and Sylhet Districts of Bangladesh. Their research highlighted that these women encounter financial, social, cultural, and skill-related obstacles. Hossain et al. (2009) carried out both quantitative and qualitative research to identify the factors influencing women's entrepreneurial development in Bangladesh. Their findings

revealed that women's desire for financial independence, decision-making power, access to start-up capital, knowledge and skills, and responsibilities toward their children are key factors in their pursuit of entrepreneurship. Although religion can sometimes present a barrier, the study found that it does not significantly affect women's entrepreneurial pursuits. These findings offer a realistic understanding of the socio-economic context in Bangladesh, where many rural communities tend to confine women to domestic roles.

### **Effect of technology in rural entrepreneurship**

Technological breakthroughs have created significant opportunities for the growth of entrepreneurship. Advances in digital technologies, platforms, and tools have opened up new possibilities for rural entrepreneurs. According to Lewis (1996), technological changes driven by privatization and structural adjustments have introduced both new economic opportunities and challenges, fostering the emergence of technology-based organizations in rural areas. In this context, development Non-Governmental Organizations (NGOs) and agencies can play a crucial role in promoting enterprises among marginalized populations. Prasetyo & Setyadharma (2022) highlighted that digitalization has the potential to transform rural entrepreneurship by providing new opportunities for family businesses and driving local economic growth.

### **Challenges of rural entrepreneurship**

The expansion of entrepreneurship faces several challenges, including inadequate funding, lack of knowledge and information, gender inequality, and insufficient institutional support from both government and non-government organizations (Akter, 2024). These findings are further supported by Afsar & Rahman (2022), who emphasize that funding remains a key barrier to expanding entrepreneurial activities in Bangladesh. Additionally, Thakur & Alam (2022) identify similar challenges faced by rural

entrepreneurs, such as a lack of leadership skills, skilled human resources, financial support, and insufficient government assistance, all of which hinder entrepreneurial growth in rural areas. Alongside these challenges, adapting to advanced technology to meet the demands of a modern workforce has become another major obstacle, especially in the context of the 21st century (Ullah, 2020). In this context, training should be provided to rural entrepreneurs in Bangladesh to enhance their knowledge, skills, and abilities (KSA), particularly in areas where opportunities are limited (Mia, 2017). Government support, particularly in navigating the process of obtaining licenses, is another critical challenge for entrepreneurs in Bangladesh. For instance, launching a garment factory in Bangladesh requires more than 20 licenses, a process that is both time-consuming and expensive, ultimately discouraging young entrepreneurs (Ahmed, 2024).

### **Research gap**

The literature review reveals a significant research gap in the area of entrepreneurship development and its impact on rural areas, particularly at the district level. While scholars such as Lewis (1996) and Prasetyo & Setyadharma (2022) have explored the effects of technology on rural entrepreneurship, comprehensive studies focusing specifically on rural contexts are lacking. A major gap identified is methodological, with many existing studies relying on qualitative approaches, indicating a need for more quantitative research based on primary data. Additionally, most studies focus on entrepreneurs abroad, which highlights a contextual gap in literature. Only one study by Rahman et al. (2022) examines entrepreneurship in the districts of Khulna, Satkhira, and Sylhet. More notably, no research has been conducted on rural entrepreneurship in Cumilla District, highlighting a clear location gap. Furthermore, there is a lack of studies examining specific sectors such as poultry, dairy farming, nurseries, and fisheries, pointing to the need for research that explores the prospects and

challenges of rural entrepreneurship in these sectors within the context of Cumilla District. Another identified gap is temporal, as one-quarter of the reviewed literature dates back to before 2000. Finally, much of the existing research relies on secondary data, revealing a need for studies that address real-world applications of the findings. This study aims to fill these gaps by investigating the prospects and challenges of rural entrepreneurship in Bangladesh, specifically within Cumilla District.

### **Conceptual Framework**

The development of a nation is intrinsically linked to the advancement of its rural population. Islam (2014) emphasizes that both the public and government must recognize the challenges arising from the socio-economic and demographic conditions faced by rural communities. Creating employment opportunities through a focus on education, qualifications, and skill development is essential. According to Toufique (2017), the rural economy in Bangladesh has become increasingly complex due to the growth of the non-farm sector, migration, commercialization, infrastructural improvements, and the involvement of new actors such as non-governmental organizations (NGOs). Despite these transformations, agriculture continues to play a central role in the rural economy. Multiple factors—including the unemployment rate, economic growth, per capita income, access to bank credit, infrastructure development, investment in research and development (R&D), and the quality of human capital—are strongly associated with the growth of rural entrepreneurship. These factors help uncover market opportunities, which are essential for entrepreneurial success (Olmo-García et al., 2023). Moreover, the development of entrepreneurial and marketing skills is critical for rural entrepreneurs. These competencies should be supported by government and legislative institutions through targeted training programmes and the inclusion of skill-based content in academic curricula (Mukul, 2021). Women also represent a vital segment of the rural population. Bhuiyan & Abdullah (2007) observe that

rural women are becoming increasingly aware of their socio-economic rights and are more actively pursuing available opportunities. Additionally, cooperative models can significantly contribute to the expansion of rural entrepreneurship. Based on the preceding literature, the key factors influencing rural entrepreneurial activities are outlined below.

### **Research Design**

This study primarily adopted a quantitative approach, focusing on entrepreneurs from various upazilas within Cumilla District. Entrepreneurs from Cumilla District made up the population for this research. A sample of 80 entrepreneurs was selected for the study, with the sample size determined using Cochran's formula (Nam, 1992). The calculation of the sample size is presented below:

$$n = \frac{Z^2 pq}{e^2}$$

$$= \frac{1.96^2 * 0.5 * 0.5}{0.11^2}$$

$$= 79.37 \text{ or } 80$$

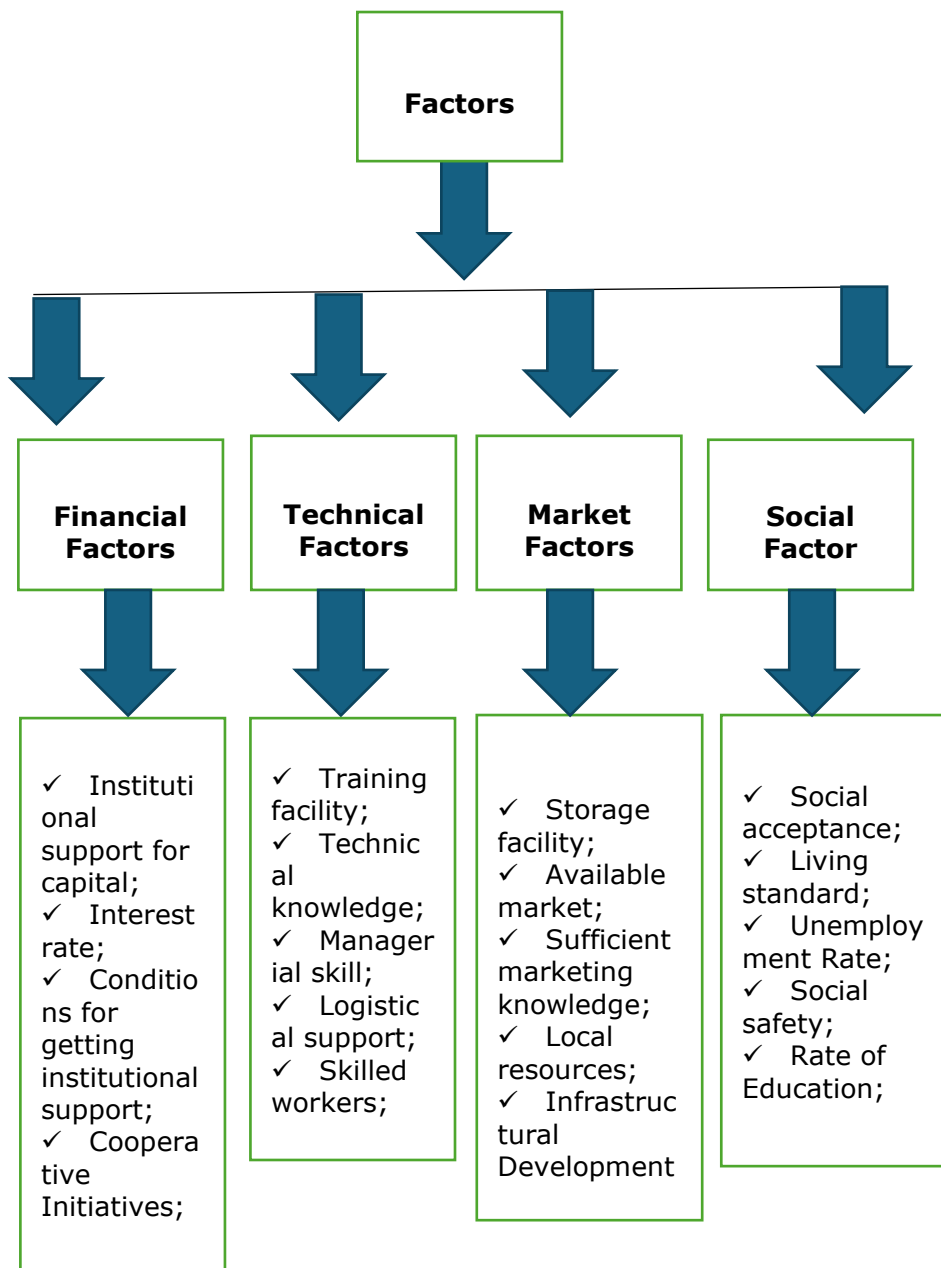
Where

- ✓ *e* means the margin of error, which is assumed as 11% or 0.11%
- ✓ *p* is the proportion of the population i.e. 50% or 0.5,
- ✓ *q* is 1 – *p* or 1-0.5 or 0.5.
- ✓ *Z* value at the 95% confidence level is 1.96

The sample consisted of 80 entrepreneurs, evenly distributed across four sectors, with 20 entrepreneurs selected from each sector according to the ration. The questionnaires were randomly distributed among the entrepreneurs. In this study, the convenience sampling technique was employed to select the respondents. Primary data were collected from rural entrepreneurs across different upazilas in Cumilla District: Muradnagar, Cumilla

Sadar South, Adarsho Sadar, Chandina, Daudkandi, Brahmanpara, Homna, Laksam, Debidwar, Burichong, and Titas. A total of 110 entrepreneurs were given the questionnaire in person, of which only 63 (57%) were completed and returned. The remaining 17 questionnaires were completed via Google Forms. The selection of these upazilas was also based on the convenience sampling method. As Khanka (2015) identified, seven categories of industries suitable for rural entrepreneurial activities—one of which is the agro-based industry—and given that agriculture is the main source of Cumilla's economy (BBS, 2011), this study purposively selected four specific agro-based sectors: poultry, dairy farming, nurseries, and fisheries. These sectors were chosen based on ICMPD's (2022) identification of popular agriculture-related occupations in the region, with the aim of exploring the challenges faced by rural entrepreneurs working in these fields. Both primary and secondary data were used in the study.

Primary data was gathered using a structured questionnaire with a five-point Likert scale: Strongly Agree, Agree, Neutral, Disagree, and Strongly Disagree. The majority of the questions were closed-ended. Secondary data were collected from various sources, including books, articles, reports, websites, and newspapers. The primary data were analyzed using SPSS (version 23), with statistical measures such as mean, standard deviation, and t-test applied to interpret the results. A comparative analysis was also carried out between unrelated sectors to determine which sector benefits from superior facilities. The five response categories were numerically coded for analysis as follows: Strongly Agree = 5, Agree = 4, Neutral = 3, Disagree = 2, and Strongly Disagree = 1. A one-sample t-test was conducted to test the hypotheses.



**Figure 1.** Factors affecting the expansions of rural entrepreneurship

### **Hypotheses of the study**

Based on the research objectives, the following hypotheses have been formulated for the study:

H<sub>0</sub>: There is no significant difference in the responses of rural entrepreneurs regarding financial support for their business.

H<sub>0</sub>: There is no significant difference in the responses of rural entrepreneurs regarding technical support.

H<sub>0</sub>: There is no significant difference in the responses of rural entrepreneurs regarding storage and distribution facilities.

H<sub>0</sub>: There is no significant difference in the responses of rural entrepreneurs regarding social acceptance.

### **Limitations of the study**

The study has several limitations that future researchers can address. For instance, the study focused only on agro-based products such as fishery, dairy farming, nursery, and poultry. In practice, however, rural entrepreneurs are engaged in a diverse range of sectors beyond these common agro-based activities. Therefore, future researchers should explore other areas to provide a more comprehensive understanding of the entrepreneurial challenges faced in rural communities. On the other hand, one-third of the reviewed literature is based on secondary data collected before 2000, which presents a significant limitation. Additionally, the sample size is relatively small, limiting the ability to draw definitive scientific conclusions. A larger sample would likely produce more reliable results. Furthermore, the research is confined to a single district, which may not accurately reflect the broader rural entrepreneurship landscape across the country. Including additional districts would provide a more comprehensive understanding of the challenges faced by rural entrepreneurs in Bangladesh. Moreover, factors such as respondents' age, income level, education, and gender were not considered, despite their known influence on entrepreneurial success. Despite these limitations, the study is expected to contribute as a significant

resource for future research, contributing to the understanding of key issues related to expanding entrepreneurial activities and supporting the development of the rural economy in Bangladesh.

## Analysis and Findings

The analysis of the primary data is presented below in brief:

**Table 1.** *Duration of work*

<b>Years</b>	<b>Frequency</b>	<b>Percent</b>
01-05	32.00	40.00
06-10	18.00	22.50
11-15	9.00	11.30
More than 15	21.00	26.30
<b>Total</b>	<b>80.00</b>	<b>100.00</b>

*Note.* Survey data

Table 1 shows the respondents' work experience in entrepreneurship, highlighting their involvement in the field. The largest group (40%) had less than 5 years of experience, suggesting many are early-stage entrepreneurs. Those with 6 to 10 years made up 22.5%, while 26.3% had over 15 years. Only 11.3% reported 11 to 15 years of experience, the smallest segment. This distribution reflects a diverse experience range, with a strong presence of newer entrants.

Table 2 presents the respondents' perceptions of financial support for rural entrepreneurship. The mean score for "shortage of capital" (F-I) is 3.46 (SD = 0.63), indicating a common concern about limited access to funding. This reflects a major barrier to business growth and innovation in rural areas. In contrast, the mean scores for access to institutional loans (F-II), satisfaction with interest rates (F-III), and conditions of financial aid (F-IV) all fall below 3.00, showing general dissatisfaction. Respondents expressed frustration with high interest rates, limited lending options, and rigid loan terms. Sectorally, the mean scores for these factors

ranged from 2.36 to 2.21, reinforcing the perception of inadequate financial support. Overall, the data highlighted a significant gap between rural entrepreneurs' financial needs and available resources. Addressing these issues—through lower interest rates, easier loan access, and tailored financial products—is essential to support sustainable rural enterprise development and unlock their growth potential.

**Table 2.** Analysis of respondents' perceptions of financial support

<b>Sector</b>	<b>Calculation</b>	<b>F-I</b>	<b>F- II</b>	<b>F- III</b>	<b>F- IV</b>	<b>Overall</b>
<b>Poultry</b>	Mean	3.35	2.45	1.60	1.55	2.24
	SD	0.59	0.69	0.50	0.51	0.57
<b>Fishery</b>	Mean	3.48	2.33	1.52	1.52	2.21
	SD	0.60	0.79	0.67	0.75	0.70
<b>Nursery</b>	Mean	3.57	2.21	1.52	1.52	2.21
	SD	0.77	0.63	0.51	0.51	0.61
<b>Dairy farming</b>	Mean	3.45	2.70	1.70	1.60	2.36
	SD	0.60	0.80	0.47	0.50	0.59
<b>Overall</b>	Mean	3.46	2.42	1.58	1.55	
	SD	0.64	0.74	0.54	0.57	
<b>Overall Mean Rank</b>		1	2	3	4	

\*SD= Standard deviation

Note. Survey data

**Table 3.** One-sample t-test for the response on financial support

<b>Sl. No.</b>	<b>Details</b>	<b>Test value = 3.00</b>	
		<b>t</b>	<b>p value</b>
F-I	Shortage of capital	6.51	0.00
F-II	Availability of institutional support for capital	-6.92	0.00
F-III	Satisfactory interest rate	-23.22	0.00
F-IV	Favorable conditions for getting institutional support	-22.69	0.00

\*df= degree of freedom;  $p < 0.05$

Note. Survey data

Table 3 summarizes the results of a one-sample t-test assessing the adequacy of financial support for rural entrepreneurs, using 3.00 as the neutral benchmark on a 5-point Likert scale. All financial support factors yielded p-values of 0.00, indicating statistical significance at the 0.05 level. This leads to the rejection of the null hypothesis, confirming a significant difference from the neutral value. The results show that rural entrepreneurs perceive financial support as inadequate across all dimensions. These consistently low p-values suggest that dissatisfaction is widespread and it is not due to chance. Overall, the test provides strong evidence that current financial mechanisms are insufficient, highlighting an urgent need for targeted policy reforms and improved access to funding.

Table 4 highlights the respondents' perceptions of technical support available for rural entrepreneurship, revealing mixed views on various factors. The highest mean score was for 'Skilled Workers' (F-V) at 3.53 (SD = 1.23), indicating generally positive views on labour availability, though opinions varied. 'Logistical Support' (F-IV) scored moderately well with a mean of 3.18 (SD = 0.73), reflecting some satisfaction. However, 'Training Facility' (F-I) and 'Managerial Skill' (F-III) both scored below neutral at 2.86 (SDs = 0.75 and 0.85), showing dissatisfaction with training opportunities and management development. The lowest mean, 2.56 (SD = 0.73), was for 'Technical Knowledge' (F-II), signaling a significant gap in access to relevant expertise. Sector-specific data showed that Nursery and Dairy Farming entrepreneurs perceived better technical support (means above 3.00), unlike other sectors scoring between 2.80 and 2.96. Overall, these findings point to an urgent need for vocational training, technical workshops, and management support to strengthen rural entrepreneurs' capabilities and ensure their businesses can thrive and compete effectively.

**Table 4.** Analysis of respondents’ perceptions on technical support

Sector	Calculation	Factor					Overall
		F-I	F- II	F- III	F- IV	F- V	
Poultry	Mean	2.95	2.35	2.65	3.35	3.50	2.96
	SD	0.51	0.59	0.75	0.58	1.43	0.77
Fishery	Mean	2.52	2.57	2.76	2.95	3.19	2.80
	SD	1.03	0.75	0.89	0.80	1.16	0.93
Nursery	Mean	2.94	2.68	2.74	3.05	3.73	3.03
	SD	0.62	0.94	0.81	0.62	1.09	0.82
Dairy farming	Mean	3.05	2.65	3.30	3.40	3.75	3.23
	SD	0.69	0.59	0.86	0.82	1.21	0.83
Overall	Mean	2.86	2.56	2.86	3.18	3.53	
	SD	0.75	0.73	0.85	0.73	1.23	
<b>Overall Mean Rank</b>		3	5	4	2	1	

\*SD= Standard deviation

Note. Survey data

**Table 5.** One-sample t-test for the response on technical support

Sl. No	Details	Test Value = 3.00	
		t	p value
F-I	Training facility	-1.62	0.10
F-II	Technical knowledge	-5.38	0.00
F-III	Managerial skill	-1.44	0.15
F-IV	Logistical support	2.29	0.02
F-V	Skilled workers	3.90	0.00

\*SD= Standard deviation,  $p < 0.05$

Note. Survey data

Table 5 shows the results of a one-sample t-test assessing technical support availability for rural entrepreneurs, using 3.00 as the neutral benchmark on a Likert scale. The p-values for factors F-II (technical knowledge), F-IV (logistical support), and F-V (skilled workers) were all below 0.05, leading to the rejection of the null hypothesis. This indicates that entrepreneurs perceive

significant inadequacies in these areas. In contrast, p-values for F-I (training facilities) and F-III (managerial skills) exceeded 0.05; so, the null hypothesis could not be rejected, suggesting these supports are viewed as adequate. Overall, the results reveal a mixed perception of technical support availability, with clear gaps in critical areas like technical knowledge, logistics, and skilled labour. Addressing these weaknesses through focused interventions is essential to strengthen rural entrepreneurship and enhance business effectiveness.

**Table 6.** Analysis of respondents' perceptions on storage and distribution facility

<b>Sector</b>	<b>Calculation</b>	<b>F-I</b>	<b>F- II</b>	<b>F- III</b>	<b>Overall</b>
<b>Poultry</b>	Mean	3.15	3.95	2.65	3.25
	SD	0.36	0.82	0.87	0.68
<b>Fishery</b>	Mean	3.23	3.76	2.76	3.25
	SD	0.70	0.70	0.99	0.80
<b>Nursery</b>	Mean	3.36	3.94	2.84	3.38
	SD	0.59	0.97	0.76	0.77
<b>Dairy farming</b>	Mean	3.35	4.25	2.95	3.52
	SD	0.48	0.85	0.51	0.61
<b>Overall</b>	Mean	3.27	3.97	2.80	
	SD	0.55	0.84	0.80	
<b>Overall Mean Rank</b>		2	1	3	

\*SD= Standard deviation

Note. Survey data

Table 6 shows respondents' views on the adequacy of storage and distribution facilities for rural entrepreneurs. The factor 'available market' (F-II) scored a high mean of 3.97 (SD = 0.84), indicating broad agreement that market access supports their activities. 'Storage facility' (F-I) also scored above the benchmark at 3.27 (SD = 0.55), suggesting moderate adequacy. However, Marketing knowledge' (F-III) received a lower mean of 2.80 (SD = 0.80), highlighting a significant concern over insufficient marketing

expertise. Overall, aggregated means across sectors exceed 3.25, reflecting generally positive perceptions of storage and distribution, with marketing knowledge as the main shortfall. The dairy farming sector recorded the highest score at 3.52 (SD = 0.61), indicating better perceived support compared to other sectors. These results emphasize the need for targeted marketing education and training to strengthen rural entrepreneurship, especially in sectors lagging behind dairy farming in infrastructure and support.

**Table 7** One-sample t-test for the response on storage and distribution facility

Sl. No.	Details	Test Value = 3.00	
		t	p value
<b>F- I</b>	Storage facility	4.46	0.00
<b>F- II</b>	Available market	10.36	0.00
<b>F- III</b>	Marketing knowledge	-2.23	0.02

\*SD= Standard deviation;  $p < 0.05$  Note. Survey data

Table 7 presents the results of a one-sample t-test evaluating the adequacy of storage and distribution facilities for rural entrepreneurs, using 3.00 as the benchmark. The p-values for all factors are below 0.05, indicating statistically significant differences from the test value. Consequently, the null hypothesis—assuming no difference between the sample mean and the benchmark—is rejected for all factors. This means respondents perceive storage and distribution facilities as inadequate to support their entrepreneurial activities effectively. Despite some positive mean scores noted in Table 6, the statistical analysis reveals that these facilities do not meet operational needs or expectations. These findings highlight systemic infrastructure and logistical challenges faced by rural entrepreneurs. Addressing these gaps through targeted policy measures and infrastructure improvements is essential to enhance the sustainability and growth of rural enterprises.

**Table 8.** Analysis of respondents' perceptions on social recognition

<b>Sector</b>	<b>Calculation</b>	<b>F-I</b>	<b>F- II</b>	<b>F- III</b>	<b>Overall</b>
<b>Poultry</b>	Mean	3.85	3.75	3.30	3.63
	SD	0.67	0.63	0.80	0.70
<b>Fishery</b>	Mean	3.66	3.33	3.33	3.44
	SD	0.91	1.11	0.79	0.94
<b>Nursery</b>	Mean	4.00	3.73	3.94	3.89
	SD	0.74	0.65	0.84	0.74
<b>Dairy farming</b>	Mean	3.75	3.85	3.25	3.62
	SD	0.72	0.36	0.64	0.57
<b>Overall</b>	Mean	3.81	3.66	3.45	
	SD	0.76	0.76	0.80	
<b>Overall Mean Rank</b>		1	2	3	

\*SD= Standard Deviation Note. Survey data

Table 8 presents respondents' views on the social recognition of rural entrepreneurs across various factors. Overall, perceptions are positive, with all mean scores above 3.40 on a 5-point scale. 'Social Acceptance' (F-I) scored highest at 3.81 (SD = 0.76), indicating strong community respect for entrepreneurs. 'Standard of Living' (F-II) followed with a mean of 3.66 (SD = 0.76), reflecting perceived improvements in economic status. 'Social Safety' (F-III) had a mean of 3.45 (SD = 0.80), showing moderate confidence in security and support systems. Sectorally, all groups scored above 3.40, signaling broad social recognition. The nursery sector led with a mean of 3.89 (SD = 0.74), likely due to the environmental benefits of their work. Poultry and dairy farming reported similar means, 3.63 (SD = 0.70) and 3.62 (SD = 0.57), reflecting equal appreciation for their rural livelihood contributions. The fishery sector scored lowest at 3.44 (SD = 0.94), possibly due to lower visibility or seasonal challenges. These findings suggest rural entrepreneurs enjoy general social esteem, but targeted support—especially for fisheries—could further enhance their standing and

strengthen rural entrepreneurship.

**Table 9.** One-sample t-test for the response on social recognition

Sl. No	Details	Test value = 3.00	
		t	p value
<b>F-I</b>	Social acceptance	9.50	0.00
<b>F-II</b>	Standard of living	7.77	0.00
<b>F-III</b>	Social safety	4.97	0.00

\*SD= Standard Deviation;  $p < 0.05$  Note. Survey data

Table 9 presents the results of a one-sample t-test conducted to evaluate the hypothesis related to the social recognition of rural entrepreneurs. In this analysis, the test value was set at 3.00, representing a neutral position on the Likert scale. The findings reveal that the p-value is less than 0.05 for all measured factors and sectors, indicating statistically significant results. Consequently, the null hypothesis is rejected in each case, confirming that the mean responses differ significantly from the neutral value. This suggests a notable difference in the levels of social recognition perceived across different sectors, highlighting sectoral variation in community acknowledgment and respect toward rural entrepreneurial activities.

## Conclusions

Rural entrepreneurship can be a powerful driver of economic progress in Bangladesh’s rural areas. It has the potential to transform unskilled labour into a skilled workforce, thereby contributing to broader national development. This study reveals that rural entrepreneurs in Cumilla District face key challenges—high interest rates, limited access to loans, inadequate marketing knowledge, and a shortage of technical and managerial skills. These finding barriers, also highlighted by Akter (2024), Afsar & Rahman (2022), and Thakur & Alam (2022), are common across rural Bangladesh. Addressing these issues could significantly boost rural participation in entrepreneurship, leading to increased

employment and contributing to national GDP growth. As Gutterman (2022) notes, enhancing rural entrepreneurship can help achieve a basic standard of living that many developing nations still struggle to provide. Engaging rural populations in income-generating activities not only improve individual livelihoods but also fosters social stability and community development. Coordinated efforts from the government, private sector, NGOs, and international agencies are essential to unlocking the full potential of rural entrepreneurship and uplifting living standards across rural Bangladesh.

## **Recommendations**

Based on the findings of the study, the following recommendations are proposed to create opportunities and mitigate the challenges faced by rural entrepreneurs:

- i. The government, Bangladesh Bank, and financial institutions should revise interest rates, ease loan terms, and expand rural lending to support entrepreneurship. A dedicated financial package for struggling entrepreneurs and startup funding should also be introduced. Additionally, policymakers must prioritize the agro sector—particularly poultry, fishery, nursery, and dairy farming—in Cumilla District, where entrepreneurs face significant challenges in accessing adequate financial support.
- ii. Technical and managerial skills are crucial for entrepreneurial success and can be developed through effective training. This study identifies a significant lack of these skills and training among entrepreneurs in Cumilla District. Policymakers should introduce targeted training programmes, workshops, and vocational courses. Skill-based content should be integrated into academic curricula to enhance graduates' technical and managerial capabilities. Special priority should be given to entrepreneurs in the poultry and fishery sectors, where skill deficiencies are most pronounced, as highlighted by

the study's findings.

- iii. Policymakers should prioritize improving marketing knowledge among rural entrepreneurs in Cumilla District, as the study highlights a clear gap. Strengthening this skill will enhance their profitability and competitiveness. Organizing annual fairs and product exhibitions at upazila, district, or national levels can promote rural products, encourage healthy competition, and expand market access for local entrepreneurs.
- iv. The study findings show that rural entrepreneurs in the district enjoy a certain level of social recognition. To further encourage youth to pursue entrepreneurship, policymakers should regularly update and strengthen entrepreneurial development initiatives. Such efforts will not only inspire the younger generation but also promote job creation, reduce unemployment, and enhance the overall standard of living in rural communities.

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