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FARMERS' ATTITUDE TOWARDS SELF-ENTREPRENEURSHIP IN PANCHAGARH DISTRICT

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ABSTRACT
This study aimed to determine farmers' attitudes towards self-entrepreneurship and identify the contributing variables. One hundred thirty-three (133) farmers from Sadar Upazila in the Panchagarh district of Bangladesh were selected for data collection using a multi-stage random sampling procedure through a structured interview method. Data were collected from November 2023 to February 2024. To assess the attitude of the farmers, Likert scale was used. The findings revealed that a significant proportion (69.2 percent) of the respondents held a favourable to highly favourable attitude towards self-entrepreneurship. Among the eight selected variables, seven, namely, age, educational qualification, farm size, annual income, organisational participation, extension media contact, and entrepreneurial behaviour, had significant relationships with their attitude towards self-entrepreneurship both in correlation and regression analysis. In regression analysis, age, educational qualification, organisational participation, and extension media contact had a positive contribution, while the other three variables, namely, farm size, annual income, and entrepreneurial behaviour, revealed a negative contribution to farmers' attitudes towards self-entrepreneurship. Therefore, to build a favourable attitude towards self-entrepreneurship, it is essential to create a comprehensive approach that integrates educational initiatives, capacity-building programs, active engagement in agricultural organisations, acknowledges the experience and wisdom of aged farmers, and encourage them to share their knowledge and success stories with younger farmers.

Keywords: Attitude, empowerment entrepreneurial behaviour, self-entrepreneurship

INTRODUCTION
Entrepreneurship is a dynamic and vital part of the global economy, driving innovation, creating jobs, and fostering economic development. Self-entrepreneurship is an appealing path for individuals who value independence, have a clear vision for their business, and possess the drive to manage all aspects of their enterprise. Entrepreneurship for farmers is a complicated process (Rogoza *et al*. 2018). It is a way for individuals to meet their survival needs. The entrepreneurial guidance affects entrepreneurial intention through optimism and self-efficacy, and it plays a

mediating role between entrepreneurial guidance and entrepreneurial intention (Akilimali *et al*. 2021).

Attitude is the views of an individual that evaluates something or someone, a predisposition or a tendency to respond positively or negatively toward a certain idea, object, person, or situation. Psychologists define attitudes as a learned tendency to view and judge things in a certain way. This can include evaluating people, issues, objects, policies, or events. It is an umbrella term that consists of opinions, emotions, perceptions, beliefs, expectations, values, and intentions (Bagozi 1994).

Self-entrepreneurship encourages innovation development, adoption and dissemination. Farmers who adopt entrepreneurial approaches often seek out new technologies and methods to improve efficiency and productivity. Entrepreneurial farmers are often better equipped to adapt to changes and uncertainties, such as climate change, market volatility, and policy shifts. Thus, exploring farmers' attitudes towards self-entrepreneurship is an emerging field that addresses critical components of rural development and agricultural sustainability. Much of the existing research on agricultural entrepreneurship tends to focus on broader regions or more economically developed areas. Studies by Alsos *et al*. (2011) and McElwee (2006) predominantly examine Western contexts or highly developed agricultural sectors. While there is considerable research on the determinants of entrepreneurial behaviour among farmers (Vesala and Vesala 2010 and Barbieri and Mahoney 2009), few studies delve deeply into the specific attitudes that drive or hinder self-entrepreneurship among farmers. In light of these gaps, this study aims to provide a comprehensive analysis of the attitudes of farmers in Panchagarh district towards self-entrepreneurship.

Farmers who pursue entrepreneurship often gain expertise in areas like business management, marketing, and technology use, which can benefit all aspects of their farming operations. The entrepreneurial mindset of the farmer, when combined with other production elements, produces commodities and services that yield sufficient output (Dzansi 2014). Therefore, the study was undertaken to examine the attitude of farmers in Panchagarh district with the specific objectives: i) to determine farmers' attitude towards self-entrepreneurship in Panchagarh district; and ii) to identify and analyze the contribution of demographic and socio-economic variables to farmers' attitude towards self-entrepreneurship.

MATERIALS AND METHODS

Cross-sectional study design is followed in the study as the investigator simultaneously measures the outcome and the participants' exposures (Hasan *et al*. 2018) at one point in time. The detailed methodology adopted for this study is presented in the following subsections:

Study area

The study was conducted in the Panchagarh district of Bangladesh. This district was purposively chosen as the study site because the livelihood of its residents is distinct from other districts in the country since they rely on both subsistence and commercial forms of agriculture. Farmers of the district grow tea, orange, betel nut and other cash crops along with subsistence farming in the district. Out of five Upazilas of Panchagarh district, the Sadar Upazila was selected randomly for this study. This Upazila is situated between 26°17' and 26°29' north latitudes and 88°31' and 88°46' east longitudes and covers an area of about 347.09 square kilometres. The maps of the study area have been presented in Figure 1.

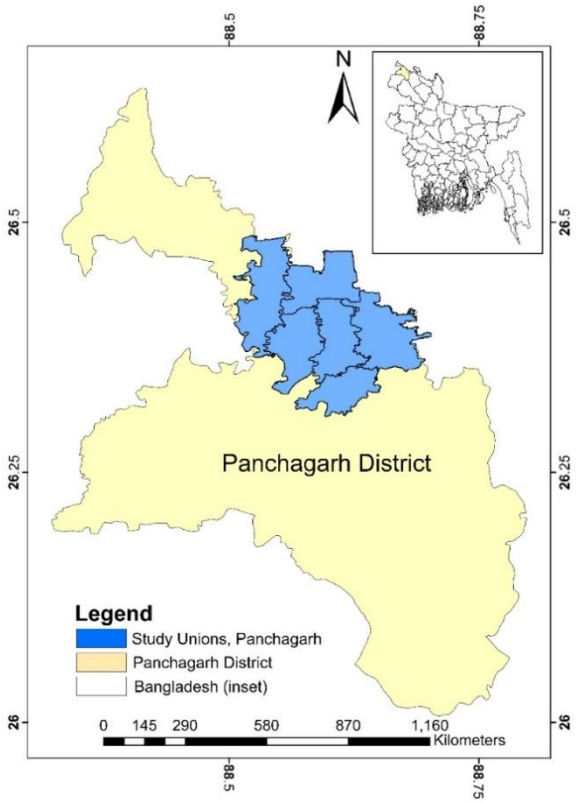

Figure 1. Map showing the selected unions of Sadar Upazila of Panchagarh district (Bangladesh inset) (Source: Authors estimation using ArcMap 10.8)

Sampling design

A multi-stage random sampling technique was used to select the population and sample. In the first stage, out of five Upazilas of Panchagarh district, Sadar Upazila was selected randomly. In the

second stage, six unions from the ten unions of Sadar Upazila were selected randomly. The total number of farmers in these six unions was 3159, constituting the population. An updated list of these farmers (sample frame) was collected from the Upazila Agriculture Office. Then, the sample size was determined using Cochran's (1977) formula. The Cochran formula is:

$$n_0 = \frac{Z^2 pq}{e^2}$$

Where, n_0 is Cochran's sample size recommendation.

For this study, Confidence level = 95%, e (the margin of error) = 5%, p (proportion of the population) = 10%, q = (1 - p) = (1 - 0.1) = 0.9, the Z-value for 95% confidence level is 1.96.

Thus,

$$n_0 = \frac{Z^2 pq}{e^2} = \frac{1.96^2 \times 0.1 \times 0.9}{0.05^2} = 138.3$$

Thus, the sample size for this study is

$$n = \frac{n_0}{1 + \frac{(n_0 - 1)}{N}}$$

Here, n is the new adjusted sample size, and N is the population size, and here it is 3159.

$$n = \frac{n_0}{1+\frac{(n_0-1)}{N}} = \frac{138.3}{1+0.0435} \cong 133$$

Therefore, the sample size is 133. In addition, a reserve list of 15 farmers was made to use in case the original sampled farmers were unavailable for interview. The detailed population and sample distribution are shown in Table 1.

Table 1. Distribution of the population and sample

Unions	Population	Sample farmers	Reserve list
Satmara	633	27	3
Haribhasa	603	25	3
Hafizabad	442	18	2
Amarkhana	515	22	2
Kamat Kajal Dighi	375	16	2
Panchagarh Sadar	591	25	3
Total=	3159	133	15

Research instrument and data collection

For collecting data, an interview schedule was prepared using both open-form and closed-form questions and appropriate scales where needed. The interview schedule was pretested with 12 farmers in the study area. Prior to completing the interview schedule, required adjustments and amendments were made based on the pre-test. The interviews were individually conducted at their respective residences of the respondents from November 2023 to February 2024.

Measurement of independent variables

Eight personal and socio-economic variables of the respondents, namely age, educational qualification, family size, farm size, annual income, organisational participation, extension media contact, and entrepreneurial behaviour, were selected based on an extensive literature review to determine the factors contributing to farmers' attitude towards self-entrepreneurship. Standard and conventional procedures were maintained to measure these explanatory variables.

Measurement of the dependent variable

The dependent variable of the study was farmers' attitude toward self-entrepreneurship. The variable was measured using a Likert scale (Likert 1932). Twelve possible statements, both positive and negative, concerning self-entrepreneurship were collected based on a review of the literature. A statement was considered positive only when it reflected the idea of favourableness towards self-entrepreneurship and vice-versa. The respondents were asked to express their opinions in the form of strongly agree, agree, undecided, disagree, and strongly disagree with scores of 5, 4, 3, 2, and 1 were assigned, respectively for a positive statement and reverse scoring was followed for the negative statements. Hence, a respondent's attitude towards self-entrepreneurship was determined by summing up the scores obtained by him/her for all statements in the scale. The possible attitude scores of the respondents could range from 12 to 60, where 12 indicates a highly unfavourable attitude, and 60 indicates a highly favourable attitude.

Data analysis

Different descriptive statistics like frequency, percentage, mean, standard deviation, and inferential statistics such as correlation, multiple linear regression, were employed. The Statistical Packages for the Social Sciences (SPSS) (version 25) was used to analyse the data.

RESULTS AND DISCUSSION

Farmers' attitude towards self-entrepreneurship

Farmers' attitude towards self-entrepreneurship was the dependent variable of the study. The attitude score varied from 20 to 59, against a possible range of 12 to 60. The mean score of farmers' attitude towards self-entrepreneurship was 41.45 with a standard deviation of 8.52. The respondents were divided into five categories, as shown in Table 2, using equal distributions of the possible range of the attitude score from the neutral category.

Table 2. Distribution of the farmers according to their attitude score (n=133)

Categories	Respondents		Mean	SD
	Frequency	Percentage		
Highly unfavourable (12-23)	2	1.5		
Unfavourable (24-35)	25	18.8		
Neutral (36)	14	10.5	41.45	8.52
Favourable (37-48)	67	50.4		
Highly favourable (49-60)	25	18.8		
Total	133	100.0		

SD= Standard Deviation

The findings implied that around three-quarters (69.2 percent) of the respondents were clustered around the favourable to highly favourable category regarding attitude towards self-entrepreneurship. This indicates that the attitude towards self-entrepreneurship was at a satisfactory level. The favourable attitude of most farmers towards entrepreneurship is driven by the potential for improved economic stability, enhanced control over their livelihoods, community development, and the adoption of sustainable practices. Support from government, NGOs, and technological advancements further encourages this positive outlook, providing the necessary resources and frameworks to make self-entrepreneurial ventures more attractive and viable for farmers. It allows farmers to exercise greater control over their operations and decision-making processes. This independence appeals to those who prefer managing their own business rather than being dependent on market prices and external factors (Shahin *et al*. 2024 and Kabir *et al*. 2012). All of these might have resulted in a favourable attitude among the farmers towards self-entrepreneurship. However, to bring the full inclination of the farmers towards self-entrepreneurship, different motivational campaigns and educational programs could be arranged. This can be done by supporting farmers with demand-led service or by providing information on self-entrepreneurship.

Socio-economic demographics of the farmers

The findings of the eight (8) selected variables of the farmers are presented in Table 3. The respondents were classified into suitable categories for describing their selected characteristics. The findings implied that the overwhelming majority of the farmers in the study area were young to middle-aged (91.0 percent), and the majority of the respondents (64.0 percent) had an education of primary to secondary level. The majority of the farmers had medium to large-sized families (85.0 percent), and the overwhelming majority (92.5 percent) of the farmers possessed medium to large-sized farms. The majority of the farmers (84.2 percent) had up to two lacs (both up to 1.00 lac to 1.01 -2.00 lac) annual income. Most of the farmers (82.7 percent) had no to low organisational participation. The majority of the farmers (89.4 percent) had low to medium extension media contact. The findings also implied that most (85.7 percent) of the respondents were clustered under the repressive to optimistic entrepreneurial behaviour category.

Table 3. Distribution of the farmers based on their selected variables scores (n=133)

Variables	Scoring method	Range	Categories	Respon-dents (%)	Mean (SD)
		Possible (Observed)			
Age	No. of year	Unknown (23-60)	Young (18- 35)	30.1	41.44 (10.54)
			Middle (36-55)	60.9	
			Old (Above 55)	9.0	
Educational qualification	Year of schooling	Unknown (0.0-16)	Cannot read and write (0.00)	17.3	8.74 (4.94)
			Can sign name only (0.5)	4.5	
			Primary (1-5)	41.4	
			Secondary (6-10)	22.6	

			Above secondary (Above 10)	14.3	
Family size	No. of members	Unknown (2-14)	Small (1-4)	15.0	5.24 (2.08)
			Medium (5-6)	53.4	
			Large (Above 6)	31.6	
Farm size	Acre	Unknown (0.20-36.30)	Small (0.05-2.49)	7.5	5.74 (7.67)
			Medium (2.50-7.49)	45.9	
			Large (7.50 and above)	46.6	
Annual income	('000' BDT)	Unknown (180-471)	Up to 1.00 lac	62.4	103.18 (87.50)
			1.01 to 2.00 lac	21.8	
			Above 2.00 lac	15.8	
Organisational participation	Score	Unknown (0-9)	No (0)	42.1	1.42 (2.13)
			Low (1-3)	40.6	
			Medium (4-6)	13.5	
			High (7-9)	3.8	
Extension media contacts	Score	Unknown (1-30)	Low (1-10)	55.6	10.03 (7.39)
			Medium (11-20)	33.8	
			High (21-30)	10.5	
Entrepreneurial behaviour	Score	7-49 (7-49)	Pessimistic (7-21)	14.3	28.33 (8.63)
			Repressive (22-35)	66.2	
			Optimistic (36-49)	19.5	

SD= Standard Deviation

Contributing variables to farmers' attitude towards self-entrepreneurship

Two steps were followed to determine the contribution of different variables on farmers' attitude towards self-entrepreneurship: the correlation analysis and the multiple linear regression analysis. The steps are given in the following subsections:

Correlation analysis

The correlation analysis (Table 4) shows that seven out of eight variables are significantly related to the farmers' attitude towards self-entrepreneurship. Among the seven significant independent variables, six, namely, educational qualification, farm size, annual income organisational participation, extension media contact, and entrepreneurial behaviour had significant positive relationships. In contrast, only age had a significant negative relationship with the dependent variable.

Table 4. Correlation coefficients of the selected variables of the farmers with their attitude towards self-entrepreneurship (n=133)

Selected variables	Correlation coefficients (131 d.f.)
Age	-0.792**
Educational qualification	0.850**
Family size	-0.053
Farm size	0.556**
Annual income	0.215*
Organisational participation	0.801**
Extension media contact	0.857**
Entrepreneurial behavior	0.811**

* = significant at 5% level of significance; ** = significant at 1% level of significance

Multiple linear regression analysis

Multiple regression analysis (enter methods) was run to determine the influence of explanatory variables on farmers' attitude. Out of eight independent variables, seven were included in multiple regression analysis due to their significant values in correlation analysis (Table 4). The coefficient of determination (R^2) indicates that all the independent variables explain 82.6 percent of the variance in farmers' attitude. The adjusted R^2, calculated by only including the significant independent variables, reveals that 81.6 percent of the dependent variable's variation is attributable to these independent variables. The F-test result of 84.703 is significant at $p<0.01$, indicating that the model is a perfect fit to predict the significant contributions of the independent variables.

Table 5. Contributing variables to explain farmers' attitude towards self-entrepreneurship (n =133)

Variables entered	Unstandardized coefficient (B)	Standardized coefficient (β)	t value
Constant	29.957		6.276***
Age (X_1)	0.169	0.209	2.105*
Educational qualification (X_2)	1.145	0.664	5.502***
Farm size (X_3)	-0.018	-0.169	-2.164*
Annual income (X_4)	-1.976E-5	-0.203	-3.484**
Organisational participation (X_5)	2.274	0.570	4.427***
Extension media contact (X_6)	0.632	0.549	2.550*
Entrepreneurial behaviour (X_7)	-0.441	-0.447	-3.117**

R^2 = 0.826; Adjusted R^2 = 0.816; F= 84.703***, * = significant at 5% level of significance; ** = significant at 1% level of significance, *** = significant at 0.1% level of significance

The observed t-value for the regression coefficient was significant for all seven variables (Table 5). It was found that farmers' age has a weak, positive linear relationship with overall entrepreneurial success, but it does exhibit signs of a U-shaped relationship, with the relationship

being negative among younger samples but positive among older respondents (Zhao *et al*. 2021). The positive attitude of many older farmers towards self-entrepreneurship is driven by their extensive experience, established networks, financial stability, and a desire to create a legacy. The educational qualification is also positively significant in tailoring farmers' attitudes towards self-entrepreneurship. It assists farmers in overcoming numerous challenges associated with self-entrepreneurship management and plays a pivotal role in nurturing and equipping aspiring entrepreneurs with the knowledge, skills, and mindset needed to thrive in the competitive world of business (Yashswigroup 2023). Similarly, organisational participation positively contributes to farmers' attitudes towards self-entrepreneurship as different organisations related to agricultural services, cooperatives, farmers groups, agricultural associations, and extension services provide the advantages of access to networks, and supportive resources. The extension media contact also positively contributes to the farmers' attitudes towards self-entrepreneurship as it often includes educational content covering various aspects of farming and entrepreneurship (Kamruzzaman *et al*. 2018). But the farm size negatively contributes to the farmers' attitudes towards self-entrepreneurship as the large farms tend to affect the local communities significantly, and shifts in their farming strategies may have tremendous effects with more risk aversion (Hasan *et al*. 2020). Again, annual income also negatively contributes to the farmers' attitudes towards self-entrepreneurship. Farmers with high incomes may fear that entrepreneurial ventures could fail, negatively impacting their financial stability and reputation. Thus, the fear of failure can be a strong deterrent, mainly when the stakes are high (Kirkwood 2009). The entrepreneurial behaviour also negatively contributes to the formation of their attitudes towards self-entrepreneurship. Farmers may constrained by limited resources, such as land, capital, or labour, making it difficult for them to pursue self-entrepreneurial ventures alongside their primary farming activities (Grivins and Tisenkopfs 2018).

CONCLUSIONS

In conclusion, the analysis of this study reveals that most farmers had favourable to highly favourable attitudes towards self-entrepreneurship. The favourable attitude of farmers towards self-entrepreneurship can be attributed to several factors which were identified through inferential analysis; these were age, educational qualification, organisational participation, extension media contact, farm size, annual family income, and entrepreneurial behaviour. Engaging older farmers in self-entrepreneurship by offering training and education programs specifically designed for older farmers is important in this regard. Engaging educated farmers in self-entrepreneurship involves leveraging their existing knowledge and skills while providing additional resources, support, and opportunities to foster their entrepreneurial spirit. The platforms, forums, or online communities within agricultural organisations where farmer-entrepreneurs can connect, collaborate, and exchange ideas by actively participating can also be developed. Collaboration with extension media and local media outlets to produce and disseminate content needs to be focused on. The motivation of the large farm holders and rich farmers to engage in self-entrepreneurship demonstrating the benefits of entrepreneurial activities, providing targeted

support and incentives, and creating an environment that will encourage the innovation and business development. However, motivating farmers with pessimistic entrepreneurial behaviour to engage in self-entrepreneurship requires addressing their concerns, changing their mindset, and providing the necessary support and resources.

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