Understanding Entrepreneurial Aspirations Among Female Undergraduates in Bangladesh

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ABSTRACT

Manuscript type: Research paper

Research aims: The study explores the factors impacting Bangladeshi female undergraduate students' interest in entrepreneurship as a career path. The study examines the relationship between self-efficacy, risk-taking, subjective norms, attitude, and perceived behavioural control and female students' interest in entrepreneurship.

Design/Methodology/Approach: The research employs a quantitative research design and relies on data collected using a Likert Five-point scale through a structured questionnaire. Survey data have been collected from 204 students enrolled in non-business courses in different universities of Bangladesh. Data were analysed using SPSS and Structural Equation Modeling (PLS-SEM) with Smart-PLS software version 4.0 to examine the effects of five dimensions of affiliation motivation on entrepreneurial aspirations.

Research findings: The findings indicated a strong relationship between attitude, perceived behavioural control, and entrepreneurial intention. On the other hand, risk-taking, self-efficacy, and subjective norms are not strongly related to entrepreneurial intention.

Implications: In addition to helping female undergraduate students better grasp the entrepreneurial decision-making process, the study's findings may also aid entrepreneurs, academics, policymakers, and practitioners create an entrepreneurial ecosystem.

Keywords: Entrepreneurship, Entrepreneurial Intention, Female Undergraduate Students, Risk-Taking, Subjective Norms, Attitude, Self-Efficacy, Bangladesh

JEL Classification: L26, J16, I23

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1. Introduction

Bangladesh is a densely populated country with an unemployment rate of 5.06 per cent in 2023 (Statista, 2024). The female unemployment rate aged between 15-24 was 7.5 per cent in 2023 (World Bank, 2024). The Labor Force Survey (LFS) 2022 revealed a grim picture, with the unemployment rate among persons with tertiary-level education rising to 22.2 percent (LFS, 2022). Eight hundred thousand university students nationwide graduate each year, which accounts for this considerable increase in unemployment (*The Business Standard*, 2022). In addition, 40 per cent of youths between the ages of 15 and 29 are not employed, enrolled in school, or undergoing training, including about 61 per cent of women compared to only 19 per cent of the counterpart (BBS, 2023) which is a huge waste of the country's demographic dividend potential (Rahman, 2024).

This rising unemployment problem, particularly among university graduates, shows several challenges for the younger generation. So, there must be a decrease in Bangladesh's high rate of educated unemployment. Encouraging communities and educated graduates to become entrepreneurs can help lower unemployment. Youth are recognised as essential drivers of positive change in Bangladesh, significantly contributing to both social and economic transformation (UNSDCF, 2022-2026). Most students aim for jobs after graduation, but many new graduates struggle with unemployment due to limited opportunities in competitive markets (Shamsudin et al., 2016), and the size of the labor force varies inversely with the number of available jobs (Setyaningrum et al., 2023). Therefore, encouraging entrepreneurial attitudes in students is essential (Răulea et al., 2016), as it increases the likelihood that they will establish their businesses (Bosma et al., 2021).

Entrepreneurship is increasingly seen as a strategy for tackling unemployment (Shamsudin et al., 2019), as entrepreneurial activities contribute to job creation and innovation for a particular country (Akbari et al., 2024). In developing countries, entrepreneurship drives economic growth by generating jobs, thereby helping to reduce poverty (Agide & Dada, 2023). Entrepreneurship is considered the driving force behind economic growth, innovation, and job creation, particularly in areas where traditional employment opportunities are often limited (Guerrero et al., 2021) and entrepreneurs are making a highly significant contribution to local economic development (Thurik et al., 2002). However, starting new businesses is challenging due to their voluntary nature and intentional process (Hunt & Lerner,

2018). Besides, entrepreneurial activity does not occur spontaneously (Zamrudi & Yulianti, 2020). It involves the interaction of cognitive processes and individuals' behavioral attitudes, shaped by social, economic, and cultural influences. Research shows that individuals with a strong Entrepreneurial Intention are more likely to succeed in entrepreneurship (Amofah & Saladrigues, 2022). Therefore, entrepreneurship in Bangladesh is considered crucial for socio-economic, political, and national transformation. Thus, Bangladesh needs to have more entrepreneurs across diverse business sectors to address this issue. Encouraging students' interest in business can help grow the number of entrepreneurs.

Kelley et al. (2016) emphasise that women entrepreneurs, as an emerging economic force, are fostering the growth and advancement of the economy. Almost half of the Bangladeshi population is women (Hossain et al., 2009), and Bangladesh is encouraging female participation in the workforce, and the growing female workforce may add 1.8 percentage points to the country's GDP (Akter, 2018) in a decade. Therefore, there is a need to increase the number of women entrepreneurs, and they should be encouraged to start new ventures.

The number of female entrepreneurs has been increasing worldwide for the last decade in the male-dominated entrepreneurial domain (Dileo and Pereiro, 2018). Currently, 274 million women globally are involved in business start-ups; 139 million women are business owners/managers of established businesses, and 144 million women are informal investors (GEM, 2021). The highest number of women entrepreneurs are in Ghana (46 per cent) followed by Russia (35 per cent), Uganda (24 per cent), New Zealand (33 per cent), and Australia at 32 per cent (MIWE, 2019). Despite the global push for increasing entrepreneurship, women's involvement remains disproportionately low worldwide, including Bangladesh, which ranked 57th out of 58 economies in the Mastercard Index of Women Entrepreneurs (MIWE) (MIWE, 2019). According to the 2022 census, for the first time, women outnumbered men in the country (Census, 2022), but women are still lagging in the labor market. In Bangladesh, 39.88 per cent of youths are not participating in education, work, or training, with 60.85 per cent being women; only 25.6 per cent of women with higher education have formal jobs compared to 43.9 per cent of men, and women's unemployment rate at this level (18.88 per cent) is twice that of men (BSVS, 2023). Hossain et al. (2023) emphasise that the Government of Bangladesh is concentrating on new venture creation and women's entrepreneurship to foster economic growth.

Entrepreneurship is considered a valuable strategy for university graduates to reduce their reliance on seeking traditional employment. Encouraging entrepreneurial intention among undergraduate students is important because it raises their academic performance, helps them build skills, and significantly affects their personal growth, mindset, and abilities (Jwara & Hoque, 2018). In this context, the interest in students' desire to start businesses in higher educational institutions (HEIs) is important because they represent a potential pool of future entrepreneurs who could help boost the economic growth of their countries (Ibidunni et al., 2021). Thus, understanding what influences female undergraduate students' interest in entrepreneurship is essential for creating gender-inclusive entrepreneurship environments and supporting women's economic empowerment.

This study attempts to explore what makes female university students in Bangladesh start their businesses. By understanding these factors, we can help policymakers encourage and support young women in entrepreneurship, which is crucial for a country's economic growth (Ismail et al., 2015), and governments can develop better strategies to address challenges that stop people from starting their businesses (Al-Mamary et al., 2020).

Several studies in various countries have examined the factors that influence people to become entrepreneurs (Campo-Ternera et al., 2022; Ndofirepi, 2020), including in Bangladesh (Hossain et al., 2023; Chowdhury, 2017). However, research on this topic remains limited, especially from the perspective of female undergraduate students whose field of study is not business, who are a key source of emerging entrepreneurship (Ambad & Damit, 2016). For these reasons, we believe it is valuable to study the factors that influence entrepreneurial intentions among female university undergraduate students whose field of study is not business and to provide ideas and suggestions for future development. Therefore, this research attempts to explore how attitude, perceived behavioural control, risk-taking, self-efficacy, and subjective norms affect the career goals of female undergraduate students in entrepreneurship. This will help us better understand their ambitions.

To the best of our knowledge, limited studies address how societal norms, family expectations, and cultural values uniquely influence female undergraduates' entrepreneurial aspirations. Moreover, there is a gap in the existing literature to explore the access to resources insufficient exploration of gender-specific challenges related to accessing financial support, mentorship, and

entrepreneurial education among undergraduate women. Very little attention has been given to how universities in Bangladesh facilitate or hinder female students' entrepreneurial ambitions through policies, incubation centers, or dedicated programs in Bangladesh. This study may contribute to address the gap in examining how undergraduate female students' perceptions of entrepreneurship align with the actual challenges faced in the Bangladeshi entrepreneurial ecosystem. Moreover, specifically the contributions of the present paper is as follows: This study contributes to the literature in three ways: (1) It uniquely examines non-business female undergraduates in Bangladesh – a demographic overlooked in existing entrepreneurial intention research; (2) It empirically tests how gender-specific barriers (e.g., cultural norms, resource access) moderate TPB variables in a developing economy; and (3) It provides actionable insights for policy makers to design inclusive entrepreneurship ecosystems targeting educated women, addressing Bangladesh's high youth unemployment.

The paper is organised as follows: Section two reviews literature on entrepreneurial intention and its variables, and presents the conceptual framework. Section three explains the research design and methodology. Section four presents and interprets results. The practical implications section shows real-life relevance. The conclusion addresses study limitations and offers recommendations for future research.

2. Literature Review and Hypothesis Development

In recent years, researchers and policymakers have focused more on entrepreneurship. This is because more entrepreneurs are needed to help the economy grow by coming up with new ideas and turning them into successful businesses. Besides encouraging new ideas, entrepreneurs create jobs and help make businesses more competitive (Zahra, 1999). To foster economic growth, the Government of Bangladesh is focusing on promoting new venture creation and encouraging women's entrepreneurship (Hossain et al., 2023). Hence, it is crucial to understand why some individuals opt to pursue an entrepreneurial career while others do not. The study examines the factors that drive university students, particularly female students whose field of study is not business, to pursue an entrepreneurial career.

Theoretical Perspectives

This study uses Ajzen's Theory of Planned Behavior (TPB), introduced in 1991 as its framework, as it is commonly recognised that TPB helps in evaluating entrepreneurial intentions. TPB can predict a person's likelihood of choosing entrepreneurship as a career by examining how their attitudes, subjective norms, and perceived behavioral control shape their intention to pursue entrepreneurial activities. This theory helps examine the reasons why a person might want to choose entrepreneurship as a career. It looks at factors like their personal views on entrepreneurship, the influence of family and friends, and their confidence in being able to face challenges and achieve success in a business venture. Additionally, this study applies Bandura's Social Cognitive Theory, especially focusing on the idea of self-efficacy. This theory posits that self-efficacy significantly impacts behavior. Self-efficacy is the belief that a person has in their own ability to complete a certain task or reach an objective. In the context of entrepreneurship, it pertains to a person's confidence in their ability to successfully establish and manage a business. This research explains how self-efficacy affects entrepreneurial behavior and intentions, suggesting that it is an individual's perception of self-efficacy, rather than their objective ability, that motivates them to engage in entrepreneurial activities. Self-efficacy (Bandura, 1986) and risk-taking were integrated into TPB because: (1) Entrepreneurial success in resource-constrained contexts like Bangladesh requires strong self-belief to overcome gender-specific barriers (Elnadi & Gheith, 2021); (2) Risk-propensity is critical in developing economies where institutional voids amplify venture uncertainty (Scafarto et al., 2019). This extends TPB's predictive power for gender-inclusive contexts.

Entrepreneurial Intention (EI)

Entrepreneurial intention (EI), which is the deliberate focus on starting a new venture, serves as a crucial precursor to entrepreneurial behavior (Cui & Bell, 2022). According to Barba-Sánchez et al. (2022), EI refers to an individual's determination to perform a particular task or achieve a specific goal. EI is the first step in starting a business and means a person's clear decision to take actions that will lead to creating a new business (Anwar et al., 2022). EI is a mindset where individuals concentrate on business goals to achieve innovative business outcomes, indicating their ability to either launch new ventures or enhance existing ones

(Kong et al., 2020). Owee Kowang et al. (2021) described intention as an individual's assessment of their future actions, which also encompasses the desire to engage in behaviors. Entrepreneurial intent can be seen as a person's strong drive or fervent aspiration to carry out a successful entrepreneurial endeavor. It remains a crucial element of the startup process and warrants careful consideration. Entrepreneurial interest refers to the motivation to start a business that meets desires or needs, whether driven by conscious motivation or simple curiosity. Satisfaction comes from an interest developed by someone who believes that something will be beneficial. Interest is not permanent; it can change over time (Tyra & Sarjono, 2020).

According to Ajzen's Theory of Planned Behavior, interest involves a person's effort to attempt something (Kardiana & Melati, 2019). Not all individuals or students feel drawn to entrepreneurship. Entrepreneurial interest does not appear on its own; instead, it is influenced by several external and internal factors (Oktiena, 2021). EI refers to the desire of individuals or groups to engage in specific behaviors, driving them toward entrepreneurship (Al-Nashmi, 2017). It represents their wish to start entrepreneurial activities. Given the high unemployment rate and the abundance of university graduates, having an entrepreneurial mindset means being willing to engage in entrepreneurial activities and start one's own projects rather than waiting for employment in the public or private sectors. Entrepreneurial intention (EI) is the psychological state that motivates individuals to achieve their goals. It reflects a person's clear decision to take specific actions, with a stronger willingness increasing the likelihood of success. EI is a commitment to future actions, such as starting a new business, and is crucial for entrepreneurship's growth, progress, and long-term sustainability. It also helps in making the right choices necessary for launching a new enterprise.

According to (Bird, 1988), a person's entrepreneurial intention is their mindset that directs their focus, experiences, and choices regarding the launch of a new venture. Scholars suggest that entrepreneurial intention significantly predicts entrepreneurial behavior (Haddoud et al., 2024). Entrepreneurship is intentional behavior, and studying entrepreneurial intent helps predict it. Given its importance for social and economic development, researchers focus on understanding the factors and motivations that drive people to become entrepreneurs. A key concept is gaining a better understanding of how and where to encourage entrepreneurship and innovation (Al-Mamary & Alshallaqi, 2022). The desire to become an entrepreneur is crucial because entrepreneurship is closely linked to

deliberate actions and planned behavior (Otache et al., 2024).

Attitude (ATT)

According to Ajzen (1991), attitude toward behavior reflects a person's opinions, judgments, and self-assessments regarding that behavior. Personal attitudes toward entrepreneurship refer to the "extent to which an individual has a positive or negative evaluation" of entrepreneurial behavior (Tkachev & Kolvereid, 1999). This belief is shaped by personal experiences, information sources, and the influence of others. For example, a person might have a positive view of entrepreneurship because their parents run a business. This attitude can lead to both positive and negative feelings and results. The intrinsic desire of an individual to create something unique, especially in a relevant field, has been recognized as a key factor (Chowdhury, 2017).

Attitude includes entrepreneurial motivation, efficiency, and capability, along with the essential elements of passion and a commitment to drive, and personal attributes are key to entrepreneurial success or failure. According to Ajzen (2002), this attitude can be assessed through its value (valuable vs. worthless) and experiential quality (pleasant vs. unpleasant). Ince et al. (2023) noted that the attitude significantly impacts the entrepreneurial intention. Nowiński et al. (2020) stated that attitudes affect behavior by influencing intentions, which are also shaped by the situation and a person's character. Previous research confirms a strong, positive link between an individual's attitude and their entrepreneurial intentions (Tchokoté et al., 2025). Thus, we put forth following hypothesis:

Hypothesis 01*: There exists a positive correlation between attitude (ATT) and entrepreneurial intention (EI).*

Perceived Behavioral Control (PBC)

Perceived behavioral control (PBC) indicates an entrepreneur's confidence in their capacity to carry out specific behaviors (Brouwer et al., 2009). According to Chen et al. (1998), PBC describes "cognitive evaluations of personal capabilities about specific entrepreneurial tasks," playing a crucial role in identifying the skills needed during new venture creation (Kickul et al., 2009) and influencing an individual's decision-making and the effort they are willing to invest (Shepherd & Krueger, 2002). It has been noted that individuals with strong perceived behavioural control are more likely to have

confidence in their ability to successfully launch a new business venture (Martínez Campo, 2011).

Previous research has shown that PBC positively impacts entrepreneurial interest (Maheshwari & Linh, 2022; Villanueva-Flores et al., 2023). Moreover, perceived behavioural control has proven to be the strongest factor influencing students' intentions toward entrepreneurship, especially in developing countries (Nguyen, 2020), while Tchokoté et al. (2025) found that this relationship was insignificant. Therefore, the study posits the following hypothesis:

Hypothesis 02*: There is a positive and significant relationship between perceived behavioral control (PBC) and entrepreneurial intention (EI).*

Risk-Taking (RT)

Risk-taking propensity reflects a person's risk-taking propensity in business decisions (Al-Mamary & Alshallaqui, 2022), and it plays a key role in risk awareness, where risk-averse individuals are more inclined to anticipate challenges, exaggerate fears, and proactively address constructive issues (Shahzad et al., 2021). Risk tolerance and an entrepreneurial mindset are closely connected. Risk refers to the chance of failure, loss, or any negative event that could happen while doing a task or job. As a personality trait, risk influences attitudes towards entrepreneurship.

According to Ahmed et al. (2022), risk-taking propensity is influenced by several elements, including personal experiences, situational factors, and an individual's traits. These personal, situational, and experiential characteristics are also positively linked to entrepreneurship (Scafarto et al., 2019). According to Shukla & Kumar (2024), a person's tendency to take risks is a strong indicator of their future entrepreneurial behavior, and Berger et al. (2023) showed that students who are willing to take calculated risks tend to display higher entrepreneurial intentions and behavior. Previous studies show a favourable connection between risk-taking behavior and the desire to become an entrepreneur (Al-Mamary & Alshallaqui, 2022; Murad et al., 2024; Nguyen & Nguyen, 2024). Based on the above discussions the study proposes the following hypothesis.

Hypothesis 03*: There is a positive relationship between Risk-Taking (RT) and entrepreneurial intention (EI).*

Self-Efficacy (SE)

Alfred Bandura's Social Cognitive Theory defines self-efficacy as a person's confidence in their skills and their belief in how likely they are to succeed (Bandura, 1986). This confidence impacts their excitement, determination, and perseverance in undertaking new tasks and new business projects (Elnadi & Gheith, 2021). In career decision-making, it is seen as the psychological motivation essential for choosing a career path (Schunk & Usher, 2019). In entrepreneurship, self-efficacy reflects a person's confidence in their ability to succeed, which is especially important for high-risk career paths, such as becoming an entrepreneur. It is the perception of self-efficacy, rather than objective ability, that drives individuals to engage in entrepreneurial behaviour (Markham et al., 2002). Self-efficacy affects a person's intention to start their own business (Douglas et al., 2021; Zhao et al., 2005) and it can impact the performance of the firm (Newman et al., 2019). Taylor and Pompa (1990) concluded that the ability to explore careers is influenced by the level of general self-efficacy. It affects the undergraduate students' choice of career decisions as well (Atta et al., 2013). Therefore, self-efficacy is considered a cognitive resource and a fundamental prerequisite for entrepreneurial intention (McGee et al., 2009; Zhao et al., 2005). Social cognitive theory suggests that individuals with higher self-efficacy are more likely to engage in and succeed at entrepreneurial activities (Bandura & Cervone, 1986).

The relationship between self-efficacy and the intention to start a new business has been a central focus in entrepreneurship research, exploring how psychological factors impact an individual's motivation to become an entrepreneur. Women who want to start their businesses do so because they want to be independent and self-sufficient (Cho et al., 2020), and compared to men, women entrepreneurs are observed to be more inventive (Zapalska, 1997). Several studies documented a strong positive relationship between self-efficacy and entrepreneurial intentions (Maheshwari & Linh, 2022; Bachmann et al., 2024; Nguyen & Nguyen, 2024; Chadha et al., 2025). Given the above-mentioned empirical evidences, we postulate the following hypothesis:

Hypothesis 04*: There is a positive and significant relationship between self-efficacy (SE) and entrepreneurial intention (EI).*

Subjective Norms (SUBN)

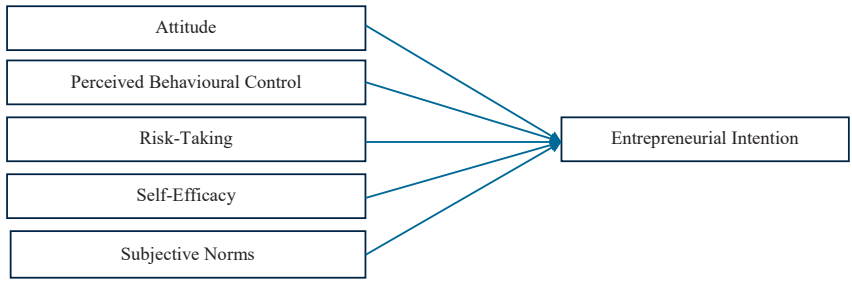
Subjective norms influence an individual's entrepreneurial choices by reflecting social expectations (Neneh, 2022) and shaping the decisions to pursue or avoid entrepreneurship based on social group influence (Krueger et al., 2000; Francis et al., 2004). Subjective norms are called the normative beliefs of entrepreneurs. The beliefs of a person are shaped by the views of others, such as family, friends, relatives, and professionals, which significantly influence and pressure them to engage in specific behaviors (Yean et al., 2015). Therefore, subjective norms have been acknowledged as significant determinants of entrepreneurial intention (Karimi, 2020; Thelken & de Jong, 2020). Prior studies have utilised the TPB theory to highlight a positive connection between subjective norms and the intention to pursue entrepreneurship (Farooq et al., 2018).

Earlier research presents inconsistent findings on the connection between subjective norms and entrepreneurial intentions. Nguyen et al. (2019) and Tchokoté et al. (2025) did not find a positive link between subjective norms and entrepreneurial intentions. However, some of the studies discovered that subjective norms influenced the interest in entrepreneurship (Mirjana et al., 2018; Villanueva-Flores et al., 2023; Nguyen & Nguyen, 2024). This led us to hypothesise that:

Hypothesis 05*: There exists a positive relationship between subjective norms (SUBNs) and entrepreneurial intention (EI).*

Conceptual Framework

The conceptual framework illustrated in Fig. 1 is based on TPB, adapted from Ajzen's (1991) and Self-Efficacy theory and the literature review. This framework illustrates the hypothesised model, integrating TPB (Attitude, Subjective Norms, Perceived Behavioral Control) with additional constructs (Risk-Taking, Self-Efficacy) to predict Entrepreneurial Intention.



3. Methodology

3.1 Data Collection and Sample Size

An online survey questionnaire and a non-probability purposive sampling technique were employed in this study. The survey was one in two rounds between July 2024 and March 2025 to explore the link between different factors. It was shared on social media with female undergraduate students from various universities in Bangladesh, except those studying business. Due to their higher likelihood of starting their own firms (Nguyen & Nguyen, 2023) and the fact that previous studies primarily used university students (Otache et al., 2024), we concentrated on female university students. Only 204 of the 338 responses we received were used, eliminating 124 of the male responses.

The reason behind choosing the purposive sampling in this study is the purposive sampling targeted non-business female undergraduates across multiple Bangladeshi universities – a group historically excluded from entrepreneurship studies. While this limits broad generalizability, it ensures focused insights into a high-potential demographic underrepresented in formal entrepreneurship pipelines. Random sampling was impractical given the niche population and cultural barriers to female participation.

3.2 Questionnaire Description

A thorough questionnaire was created for quantitative analysis in order to evaluate the suggested model. It has two sections and was written in English. Name, age, gender, education, employment, phone number, and email were among the demographic questions in the first section. A five-point Likert scale was used in the second section to gauge the students' entrepreneurial goals. There were 50 items in this part, ranging from 1 (strongly disagree) to 5 (strongly agree), and there were five constructions. In order to facilitate collaboration and reduce errors, the survey was initially made in Microsoft Word before being transferred to Google Forms. After the form was finalised, a pre-test was conducted, and a specialist examined it to ensure that it was understandable and unambiguous (Akram et al., 2020; Kavota et al., 2020; Mombeuil, 2020).

3.3 Measurement Scales

This study assessed attitude, perceived behavioral control, risk-taking, self-efficacy, subjective norms, and entrepreneurial intention

using a 5-point Likert scale, where 1 indicated strong disagreement and 5 indicated strong agreement. To assess entrepreneurial intention, we adopted ten measurement items from the studies by Rahman et al. (2024), Linan and Chen (2009), and Bux and Van Vuuren (2019). A sample item is "I would do anything to be an entrepreneur." To assess perceived behavioural control, adopted six items from the study by Rahman et al. (2024); Linan and Chen (2009). A sample item is "I am ready to build a successful business." Additionally, to assess attitude, we adopted ten items from the studies conducted by Rahman et al. (2024); Linan and Chen (2009); Mensah et al. (2021); Sharahiley (2020); Ajzen (1991) ; Lüthje & Franke (2003). A sample item is "I see more pros than cons to being an entrepreneur." Furthermore, for evaluating subjective norms, nine items were taken from the study by Rahman et al. (2024); Linan and Chen, (2009); Heuer and Kolvereid (2014); Lihua (2022); Sharahiley (2020). A sample item is "I would have family support to start the business." Additionally, to measure risk-taking, we adopted seven items from the study by Moraes et al. (2018); Schmidt & Bohnenberger (2009); Rocha and Freitas (2014); Lüthje & Franke (2003). A sample item is "I would assume a long-term debt, believing in the advantages that a business opportunity would bring me." Besides, in order to measure self-efficacy, we employed nine items from the study by Moraes et al. (2018); Rocha & Freitas (2014); Rocha & Freitas (2014); Uddin et al. (2023); Hossain & Uddin (2008); Hyde et al. (2002). "I think I have skills to detect business opportunities in the market" is an example item.

3.4 Data Analytics Tools

In this research, the researchers used the Smart-PLS software version 4 (Hair et al., 2019a) to explore the connection between attitude, perceived behavioural control, risk-taking, self-efficacy, subjective norms, and entrepreneurial intention. Previous studies also employed this software to test the hypothesis relationships (Saoula et al., 2023; Lopes et al., 2023). Two phases are used to analyse the structural equation model (SEM): (i) the measurement model and (ii) the structural model using Smart-PLS (Hair et al., 2019a).

4. Results

Demographic Profile of the Respondents

The most respondents (97 per cent) of the 204 female undergraduate students who participated in the poll were between the ages of 18

and 25, reflecting typical undergraduate cohorts. They are mainly studying in a variety of subjects, including Disaster Management and Resilience, Public administration, Sociology, English, Development studies, Peace, Conflict and Human Rights, Economics, Law, Microbiology, Computer Science & Engineering, Electrical and Electronic Engineering, ICT, Mass Communication & Journalism etc. Students from Social Sciences (47.5 per cent), Engineering/ICT (33.3 per cent), and Sciences (19.1 per cent) dominated in the study. Only 26.9 per cent of respondents had entrepreneurial parents, suggesting limited exposure to venture creation.

Table 1: Demographic Profile of Respondents (n=204)

Variable	Category	Frequency	Percentage
Age	18-21 years	110	54%
	22-25 years	88	43%
	>25 years	6	3%
Field of Study	Engineering/ICT	68	33.3%
	Social Sciences/Humanities	97	47.5%
	Sciences	39	19.1%
Parental Entrepreneurship	Yes	55	26.9%
	No	149	73.1%

4.1 Findings of the Reflective Measurement Model

Before assessing the path coefficients in the structural model, it is essential to assess the measurement model's construct quality requirements (Hair et al., 2022). To assess the construct's quality criteria, according to Wong (2019), it is vital for the research study to verify the indicator reliability (outer loadings), internals consistency reliability (composite reliability), convergent validity, and discriminant validity of the reflective measurement model. The reflective measurement model was evaluated using Smart-PLS 4.

4.1.2 Robustness Checks

The linearity assumption is analysed using the quadratic effect in the first of two procedures that make up the robustness checks. This analysis requires checking whether the relationship between the variables is linear (Sarstedt et al., 2020). The bootstrapping approach was used to analyse the quadratic effect to test the linearity assumption. As advised by Ali et al. (2018) and Sarstedt et al. (2020), there was no linearity in the correlations between the variables. We

addressed the endogeneity in the second stage, which is a crucial issue when employing regression-based techniques like PLS-SEM. We used the Gaussian copula methodology described by Park & Gupta, (2012) to identify and address endogeneity, as suggested by Huit et al. (2018). The findings demonstrated that there is no endogeneity problem with the structured model, as none of the Gaussian copulas were significant ($p > 0.05$).

4.1.3 Construct Reliability and Validity

We assessed internal consistency reliability using Cronbach's alpha and composite reliability. All constructs demonstrated strong reliability, with Cronbach's alpha and composite reliability values exceeding the threshold of 0.70 (Shmueli et al., 2019). To assess convergent validity, we evaluated the indicator reliability by examining the outer loadings and the average variance extracted (AVE). The AVE values, shown in Table 1 and Fig. 2, were all above 0.50, confirming the proposed model's convergent reliability (Hair et al., 2019b; Henseler et al., 2014). Table 1 presents the outer loading values, which are essential for supporting this analysis.

4.1.4 Discriminant Validity

We assessed discriminant validity through the analysis of cross-loadings, as presented in Table 2, which exceeded the minimum threshold, ensuring distinctiveness. Additionally, we used the Fornell-Larcker criterion and the Heterotrait-Monotrait (HTMT) ratio. According to Fornell & Larcker (1981), Fornell-Larcker compares the correlations between latent variables and the square root of their AVE values. For discriminant validity, each construct's AVE square root must exceed its highest correlation with any other construct (Hair et al., 2019b). The findings presented in Table 3 support this conclusion. Lastly, by Henseler et al. (2014), we examined the HTMT ratio, which must remain below 0.85. The analysis presented in Table 4 indicated values below the specified threshold, thereby confirming discriminant validity.

4.2 Assessment of structural model

The structural model was evaluated to test the proposed relationships between the independent variables (attitude, perceived behavioural control, risk-taking, self-efficacy, subjective norms) and the dependent variable (entrepreneurial intention) after the measurement model had been validated. The analysis evaluated the structural model by

examining the structural paths and their significance through the PLS algorithm and bootstrapping method (Sarstedt et al., 2020). The proposed model was evaluated through the examination of direct effects.

4.2.1 Model fit and predictive relevance

The model fit was evaluated by using the standardised root mean square residual (SRMR) and coefficient of determination (R^2) values. Sarstedt and Cheah (2019) suggest that SRMR should be below 0.080, and R^2 should be greater than 0.10. This study's SRMR value of 0.73 indicated a very good fit (Hair et al., 2019b). With a coefficient of determination (R^2) of 0.667 for entrepreneurial intention, the independent variables accounted for 67 per cent of the variance. Blindfolding was used to evaluate the model's predictive relevance (Q^2), which came out to be 0.32, indicating that the model was predictive. The threshold values for different levels have been met, showing that the PLS-SEM model is suitable for further bootstrapping tests.

4.3 Direct Effects

Bootstrapping with 5000 subsamples was applied in PLS-SEM to assess the significance of the coefficients, with the results presented in Table 5. H_1 is accepted since the results show that attitude has a favourable impact on entrepreneurial intention ($\beta = 0.572$; $t = 6.724$; $p = 0.000$). Additionally, perceived behavioural control also positively impacts entrepreneurial intention ($\beta = 0.160$; $t = 2.722$; $p = 0.007$). So, H_2 is supported. However, hypotheses H_3, H_4 and H_5 did not affect the entrepreneurial intention positively. The results show that risk-taking ($\beta = 0.061$; $t = 0.856$; $p = 0.392$) affects entrepreneurial intention negatively. Hence, H_3 is not accepted. Moreover, self-efficacy ($\beta = 0.040$; $t = 0.707$; $p = 0.479$) affects entrepreneurial intention negatively. So, H_4 is not accepted. Besides, subjective norms did not affect the entrepreneurial intention positively ($\beta = 0.068$; $t = 0.845$; $p = 0.398$). Therefore, H_5 is not supported as well.

Figure 2: Measurement model

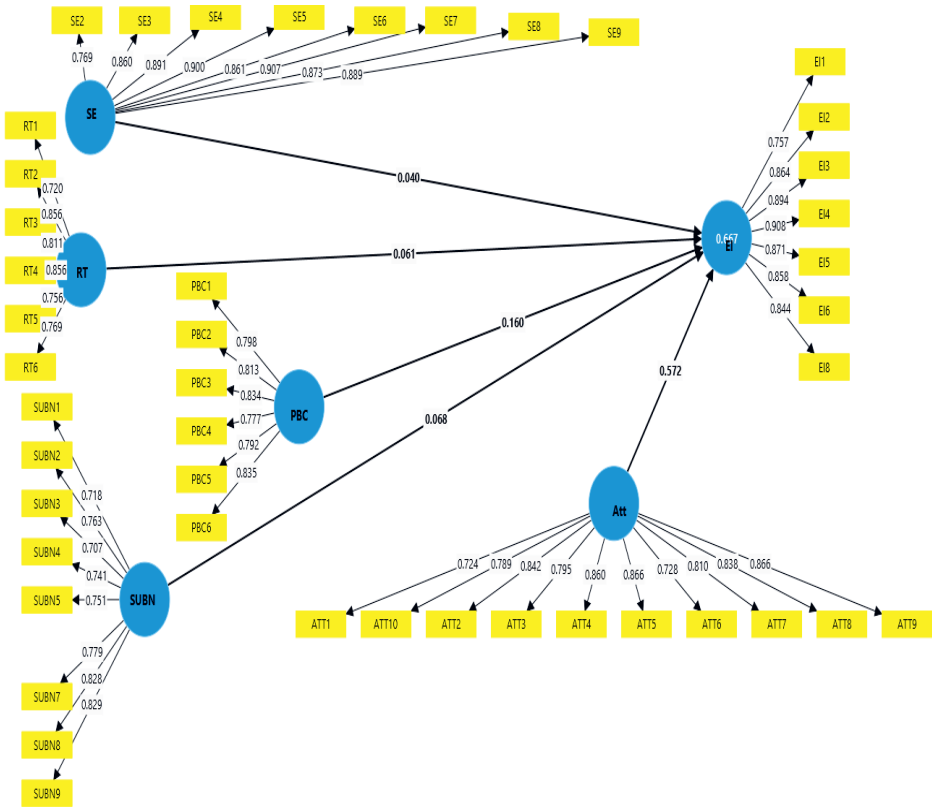


Table 2: Factor loadings, reliability and validity.

Constructs	Loadings	Cronbach's Alpha	Composite Reliability (rho_a)	Composite Reliability (rho_c)	Average Variance Extracted (AVE)	VIF
Entrepreneurial Intention		0.940	0.942	0.951	0.736	
EI1	0.757					2.134
EI2	0.864					3.145
EI3	0.894					3.621
EI4	0.908					4.861
EI5	0.871					3.881
EI6	0.858					3.875
EI8	0.844					3.358

Constructs	Loadings	Cronbach's Alpha	Composite Reliability (rho_a)	Composite Reliability (rho_c)	Average Variance Extracted (AVE)	VIF
Attitude		0.943	0.947	0.951	0.662	
ATT1	0.724					2.080
ATT2	0.842					2.986
ATT3	0.795					3.025
ATT4	0.860					4.305
ATT5	0.866					4.048
ATT6	0.728					2.199
ATT7	0.810					2.734
ATT8	0.838					3.564
ATT9	0.866					4.395
ATT10	0.789					3.148
Perceived Behavioral Control		0.894	0.902	0.919	0.654	
PBC1	0.798					2.083
PBC2	0.813					2.322
PBC3	0.834					2.487
PBC4	0.777					1.991
PBC5	0.792					2.114
PBC6	0.835					2.193
Risk Taking		0.883	0.887	0.912	0.634	
RT1	0.720					1.800
RT2	0.856					2.776
RT3	0.811					2.166
RT4	0.856					2.600
RT5	0.756					1.914
RT6	0.769					2.213
Self-Efficacy		0.954	0.958	0.961	0.756	
SE2	0.769					2.547
SE3	0.860					3.611
SE4	0.891					4.138
SE5	0.900					4.383
SE6	0.861					3.420
SE7	0.907					4.312
SE8	0.873					3.523
SE9	0.889					4.208

Constructs	Loadings	Cronbach's Alpha	Composite Reliability (rho_a)	Composite Reliability (rho_c)	Average Variance Extracted (AVE)	VIF
Subjective Norms		0.899	0.906	0.919	0.586	
SUBN1	0.718					2.009
SUBN2	0.763					3.020
SUBN3	0.707					2.570
SUBN4	0.741					2.195
SUBN5	0.751					1.914
SUBN7	0.779					2.773
SUBN8	0.828					4.001
SUBN9	0.829					3.737

Note: EE = Entrepreneurial Intention; ATT = Attitude; PBC = Perceived Behavioral Control; RT = Risk Taking; SE = Self-Efficacy; SUBN = Subjective Norms.

Table 3: Fornell-Larcker criterion

Variables	ATT	EI	PBC	RT	SE	SUBN
ATT	**0.813**					
EI	0.797	**0.858**				
PBC	0.666	0.648	**0.809**			
RT	0.761	0.671	0.618	**0.796**		
SE	0.561	0.517	0.490	0.678	**0.870**	
SUBN	0.722	0.663	0.731	0.697	0.529	**0.766**

Note: EE = Entrepreneurial Intention; ATT = Attitude; PBC = Perceived Behavioral Control; RT = Risk Taking; SE = Self-Efficacy; SUBN = Subjective Norms.

Table 4: Heterotrait-Monotrait ratio (HTMT)

Variables	ATT	EI	PBC	RT	SE	SUBN
Att						
EI	**0.842**					
PBC	0.714	**0.697**				
RT	0.833	0.733	**0.683**			
SE	0.589	0.539	0.524	**0.740**		
SUBN	0.775	0.709	0.808	0.772	**0.569**	

Note: EE = Entrepreneurial Intention; ATT = Attitude; PBC = Perceived Behavioral Control; RT = Risk Taking; SE = Self-Efficacy; SUBN = Subjective Norms.

Table 5: Hypothesis testing

Hypothesis	Relationships	Original sample (O)	T-statistics	P-values	Confidence Intervals [2.5% LLCI; 97.5% ULCI]
H1	Att -> EI	0.572	6.724	0.000	[0.401; 0.728]
H2	PBC -> EI	0.160	2.722	0.007	[0.041; 0.273]
H3	RT -> EI	0.061	0.856	0.392	[-0.076; 0.201]
H4	SE -> EI	0.040	0.707	0.479	[-0.067; 0.155]
H5	SUBN -> EI	0.068	0.845	0.398	[-0.088; 0.228]

Note: EE = Entrepreneurial Intention; ATT = Attitude; PBC = Perceived Behavioral Control; RT = Risk Taking; SE = Self-Efficacy; SUBN = Subjective Norms.

5. Discussions

This study examined how attitude, perceived behavioural control, risk-taking, self-efficacy, and subjective norms influence the entrepreneurial intentions of undergraduate female university students in Bangladesh whose field of study is not business. Based on the TPB, which links attitudes and beliefs to intentions, the study aimed to identify factors affecting students' entrepreneurial aspirations. The results showed that only two of the five hypotheses significantly impacted entrepreneurial intention.

The study confirms that attitude positively influences entrepreneurial intention among university students, aligning with (Murad et al., 2024; Mirjana et al., 2018). Despite female entrepreneurship being underestimated in Bangladesh, this research suggests that female students are inclined to start businesses. Laudano et al. (2019) observe that higher education enhances women's entrepreneurial attitudes, which is crucial for fostering their entrepreneurial intentions, as highlighted by Asmae (2020) and the 2020 Global Entrepreneurship Monitor report. While the effect may take time, academic background, and entrepreneurial skills, as noted by Abualbasal & Badran, (2019), significantly influence students' entrepreneurial mindsets.

H_2 is supported by this study, showing that perceived behavioural control increases entrepreneurial intention (EI). This

agrees with Ajzen (1987) and Kolvereid (1997), who discovered that it has a pivotal role in influencing intentions. Female students who see entrepreneurship as easy are more motivated to pursue it, like the results of prior investigations (Mirjana et al., 2018; Souitaris et al., 2007).

Previous studies, such as (Al-Mamary et al., 2020a; Moraes et al., 2018), highlight a positive link between risk-taking and entrepreneurial intention (EI). Al-Mamary et al. (2020a) found that successful entrepreneurs take calculated risks, embrace ambiguity, and innovate to maximise returns. Al-Nashmi (2017) noted that entrepreneurs thrive in unpredictable conditions, with risk-taking driven by the desire for success and quick decision-making in challenging environments. However, this study rejects H_3, finding no impact of risk-taking on EI. This result contrasts with earlier studies (Murad et al., 2024; Al-Mamary et al., 2020a; Moraes et al., 2018) and may stem from students' lack of competitiveness or preference for stable jobs over the risks of starting a business, particularly among female undergraduates.

Entrepreneurial self-efficacy denotes the confidence in one's capacity to initiate and manage a prosperous enterprise. Individuals possessing higher self-efficacy are more inclined to participate in entrepreneurship, confidently tackle challenges, and drive growth. However, this study finds no positive impact of self-efficacy on entrepreneurial intention (EI), rejecting H_4 and contradicting earlier research (Saadat et al., 2021; Maresch et al.,2016). This may be due to female students' lack of confidence, as many come from non-business backgrounds without exposure to entrepreneurship or management courses.

This study rejects H_5, indicating that subjective norms do not influence entrepreneurial intention (EI). These findings contradict earlier research, such as Mirjana et al. (2018). This study offers a fresh outlook on the entrepreneurial intention of female undergraduate non-business students and reveals that subjective norms do not influence their entrepreneurial intentions, aligning with prior research (Alessa, 2019).

Cultural and structural factors explain non-significant results. Self-efficacy: Non-business students lack exposure to entrepreneurial role models/skills training, dampening confidence (Hossain et al., 2023). Risk-taking: Patriarchal norms prioritise job stability for women; 73.1 per cent had no entrepreneurial family exposure (Table 1). Subjective norms: Female autonomy is often suppressed in Bangladeshi families, reducing social pressure's influence (BBS, 2023).

6. Conclusion and Implications

This study examined entrepreneurial intention among female undergraduate students from non-business majors. Of five variables, only ATT and PBC positively influenced entrepreneurial intention, while RT, SE and SBN showed no effect. Promoting enterprise culture in Bangladesh, especially in universities, is vital to fostering entrepreneurial intention and encouraging business creation. Management education plays a key role in equipping students with the skills needed for entrepreneurial careers. While RT, SE, and SBN did not impact intention, contingent factors must be considered. This study achieved its objective of identifying factors driving entrepreneurial intention (EI) among non-business female undergraduates in Bangladesh. Results confirm that only Attitude (H_1) and Perceived Behavioral Control (H_2) significantly predict EI, addressing Research Aim 1. Conversely, Risk-Taking (H_3), Self-Efficacy (H_4), and Subjective Norms (H_5) show no significant effects – highlighting that cultural or institutional factors may override individual traits in this context.

The main contribution of this research is providing empirical evidence on the factors influencing students' entrepreneurial intentions, as undergraduates are a key source of future entrepreneurs. Since personal attitude had the most impact, it implies that institutions should do more than just offer courses to encourage entrepreneurship. Therefore, universities should focus on strategies to highlight the benefits of entrepreneurship. The university under study offers entrepreneurship courses across all faculties, ensuring that students from various disciplines can engage with entrepreneurial concepts and skills, regardless of their major.

6.1 Implications

This research provides novel insights into the setting of Bangladesh, where women are lagging in entrepreneurship and start-up initiatives. It suggests that encouraging female undergraduate students to start businesses can help reduce youth unemployment. The study emphasises the need to enhance entrepreneurial knowledge and the changes of mentality for non-business students and calls on policymakers to foster entrepreneurial attitudes of female students and take concrete measures to promote inclusive social development.

This study shows that female non-business students' entrepreneurial inclination is unaffected by subjective norms, risk-

taking, or self-efficacy. In order to increase intentions, it recommends enhancing entrepreneurial knowledge through education. Educating students about entrepreneurship helps foster confidence and idea exploration. Entrepreneurship majors are more likely to have entrepreneurial goals, according to Kolvereid and Moen (1997).

Theoretical Contributions: Challenges universal applicability of TPB by revealing that Subjective Norms (H_5) and Self-Efficacy (H_4) lack significance in Bangladesh's female entrepreneurial context—suggesting socio-cultural forces (e.g., patriarchal norms) may suppress these variables.

Extends the Risk-Taking paradox: Female students prioritise job stability over venture creation, contradicting Global North findings (Murad et al., 2024).

Practical Implications include the following.

For Universities: Universities should embed entrepreneurship modules in non-business curricula (e.g., "Entrepreneurship for Engineers") and establish gender-inclusive incubators (e.g., mentorship from women founders).

For Policymakers: Policymakers should launch targeted grants (e.g., Bangladesh Bank's Women Entrepreneur Fund) and reduce regulatory barriers for student startups (e.g., fast-tracked business registration). Moreover, they may do the partnership with NGOs for mentorship (e.g., BRAC's Prothom Alo initiatives).

For Practitioners: Design community programs normalising female entrepreneurship (e.g., "She-Entrepreneur" workshops linking students to local role models).

6.2 Limitations and Future Research

This study has several limitations. First, the sample size is small, consisting of only a few universities in Bangladesh, so the findings may not represent all female undergraduate students in the country. Future research should increase the number of participants from different universities. It would also be useful to compare entrepreneurial intentions between undergraduate and master's students. Additionally, this study was focused on Dhaka division, so the results may differ in other cities. The findings may not apply to older age groups, as most respondents were between 18-29 years old. Since the study was conducted in a developing country, the results may differ from those in developed countries. Moreover, the research only focused on non-business students, so it may not reflect the entrepreneurial intentions of students in business fields. In addition, the study did not account for external factors, such as cultural

influences, which might affect entrepreneurial intentions. Cultural biases could have affected the accuracy of self-reported intentions, such as social desirability in participant responses. Conclusions on the causal relationship between entrepreneurial intentions and actual behavior are precluded by the cross-sectional methodology. Furthermore, because 67 per cent of universities in the capital are in Dhaka, the sample may not accurately represent the experiences of students in rural areas, thus omitting significant regional differences. Additionally, the statistical power to identify smaller effects, like the modest correlation between intention and risk-taking (β = 0.061), is limited by the relatively small sample size (204 answers). In order to effectively capture the shift from intention to action, future research should use longitudinal designs. Additionally, qualitative approaches should be used to delve deeper into potentially taboo variables, such as cultural limits or family pressure.

Appendix I

Construct	Items	Sample Item	Source(s)
Entrepreneurial Inten-tion	10	"I would do anything to be an entrepreneur."	Linan & Chen (2009); Bux & Van Vuuren (2019)
Attitude	10	"I see more pros than cons to being an entrepreneur."	Ajzen (1991); Lüthje & Franke (2003)
Perceived Behaviour-al Control	6	"I am ready to build a suc-cessful business."	Linan & Chen (2009)
Subjective Norms	9	"I would have family sup-port to start the business."	Heuer & Kolvereid (2014)
Risk-Taking	7	"I would assume a long-term debt, believing in the ad-vantages that a business op-portunity would bring me."	Schmidt & Bohnenberger (2009)
Self-Efficacy	9	"I think I have skills to de-tect business opportunities in the market."	Uddin et al. (2023)

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