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Entrepreneurial Intentions of Female Students: Exploring Entrepreneurial Feasibility and Desirability through Personality Traits

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Abstract

Women's entrepreneurship drives economic growth and social transformation. This study integrates personality traits into the entrepreneurial event model to assess entrepreneurial intentions, identifying specific personality traits as antecedents of perceived desirability and feasibility, two core components of the entrepreneurial event model. Data from 382 final-year commerce and management students were analysed using partial least squares structural equation modelling. The results show traits like innovativeness, entrepreneurial alertness, and the need for achievement shape perceived desirability. Further, perceived feasibility is influenced by risk-taking motives, proactiveness, and an internal locus of control. Finally, positive relationships were identified between perceived desirability and feasibility with entrepreneurial intentions. This research underscores the importance of personality traits as antecedents of perceived desirability, providing insights for promoting entrepreneurship among female commerce and management students. It has implications for policy and educational initiatives to provide targeted support to students with these personality traits to foster female entrepreneurship.

Keywords: Female Entrepreneurial Intention, Perceived Desirability, Perceived Feasibility, Personality Traits

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Introduction

Entrepreneurship, a transformative force, propels worldwide economic growth, job creation, and social advancement (Alferaih, 2022). Its essence is seizing opportunities and transforming ideas into tangible products or services. Women's entrepreneurship, in particular, holds unique transformative potential. It can drive economic growth and address these concerns more inclusively and sustainably (Munir et al., 2019; Neneh, 2019). Governments worldwide are actively developing entrepreneurial mindsets, particularly among youth, recognising their role as future economic designers (Alshebami & Seraj, 2022). Entrepreneurship is a dynamic process that influences economies and cultures. It is recognised for promoting sustainable development and elevating nations to growth (Soomro et al., 2020). Women's entrepreneurship, a potential catalyst for global economic progress (Jan et al., 2023), remains a largely untapped resource, particularly in the dynamic landscape of India (Chatterjee & Ramu, 2018; Agarwal & Lenka, 2018). Despite equal training opportunities, women's entrepreneurial pursuits are less pronounced than men's, reflecting complex socio-cultural factors rather than a lack of preparedness (Shabsough et al., 2021). This trend is not unique to India but is observed globally, where women perceive numerous entrepreneurial opportunities yet demonstrate less intention to pursue them (Jan et al., 2023). Increasing female entrepreneurship can help close the gender wage gap and promote inclusive economic growth in India, where most new start-ups in the past decade have been initiated by men (Ali et al., 2021). To unlock this potential, India must address religious, political, and cultural constraints, lack of mentorship, and limited access to capital (Jan et al., 2023). Overcoming these barriers is crucial for women entrepreneurs' economic and innovative contributions, requiring immediate policy changes to boost women's postsecondary education, financial access and supportive measures like singlewindow clearances and tax breaks (Chhabra et al., 2020).

Personality traits play a crucial role in understanding entrepreneurial intentions and are critical indicators of an individual's inclination toward entrepreneurial ventures (Biswas & Verma, 2021). They influence a person's attitude, decisionmaking processes, and desire to engage in entrepreneurial activities (Biswas & Verma, 2021). An individual's success as an entrepreneur is significantly influenced by personality traits, which determine behaviour and decision-making, thereby influencing success (Awwad & Al-Aseer, 2021). However, studying a direct relationship between personality traits and entrepreneurial aspirations involves limitations. It has been proposed that no consistent relationship exists between personality traits and entrepreneurial intention (Awwad & Al-Aseer, 2021) since previous studies have indicated mixed results (Zhao et al., 2010). While some research links personality traits to entrepreneurial inclinations, the relationship is generally weak and inconsistent. Studies have shown mixed results: some find personality traits important indicators (Crant, 1996; Zhao & Seibert, 2006), while others find only limited predictive validity (Krueger et al., 2000). This inconsistency suggests that relying solely on personality traits to predict entrepreneurial intentions is ineffective, as it overlooks the complex nature of entrepreneurial decision-making.

The present study aims to establish the role of personality traits in shaping the entrepreneurial intentions of female students by utilising the Entrepreneurial Event Model (EEM). In past research, personality traits and perceptual and motivational factors in determining entrepreneurial intentions have often been studied independently (Farrukh et al., 2018). The studies provide valuable insights, but they lack a comprehensive framework that integrates these elements into a unified framework. Studies that incorporate personality factors into a comprehensive social cognitive framework like the EEM are limited (Farrukh et al., 2018); this is crucial for a more holistic understanding of entrepreneurial intentions. This study seeks to bridge this knowledge gap by examining the influence of personality factors on the two crucial components of the entrepreneurial event model: perceived desirability and perceived feasibility. Integrating personality traits into the EEM is important because it allows for a deeper understanding of the antecedents that shape these perceptions, ultimately providing a more detailed understanding of entrepreneurial intentions. This approach enhances the model's predictive power and offers more profound insights into the complex interplay between personality, perception, and motivation in entrepreneurial decision-making. Although numerous studies have investigated the direct relationship between personality traits and entrepreneurial intentions, results have often been inconsistent and inconclusive. To overcome these limitations, this study explores the effects of personality traits by using them as antecedents of perceived feasibility and perceived desirability within the EEM. This provides a more nuanced understanding of how personality traits such as innovativeness, risk-taking propensity, need for achievement, proactiveness, entrepreneurial alertness, and locus of control shape individuals' perceptions of entrepreneurship.

This study examines the entrepreneurial intentions of female commerce and management students, focusing on how personality traits influence their perceived desirability and feasibility of entrepreneurship. This group is ideal due to their business education and exposure to entrepreneurial concepts, making them potential entrepreneurs (Fuller et al., 2018; Neneh, 2019). Understanding their traits and motivations can guide the development of targeted training programs to enhance entrepreneurial aspirations, ultimately contributing more potential entrepreneurs to the economy. The paper proceeds from the introduction to the theoretical foundation and hypothesis development. Then follows an explanation of the methodology used for this study, including details about the sample selection and the measures used. Following that, the data analysis is presented in depth. The following section includes a presentation and discussion of the study's findings and implications. Finally, the paper concludes by addressing the limitations of the present study and outlining potential avenues for future research.

Review of Literature and Hypotheses Development

Women's Entrepreneurial Intention (WEI) – Theoretical Background

Entrepreneurial intention, a person's aspiration and commitment to initiate a business in the future, is a key concept in the study of women's entrepreneurial intention (Alferaih, 2022). For women, it represents their ambition, drive, and willingness to engage in entrepreneurial activities, serving as a mindset that accelerates focus and action toward generating and implementing new business ideas (Ahmad et al., 2019; Astiana et al., 2022). The EEM and Theory of Planned Behaviour (TPB), two well-known theories, play a crucial role in understanding entrepreneurial intention. These models, among others, elucidate how individual beliefs, social pressures, perceived control, and attitudes toward behaviour influence one's intention to engage in that activity (Dabic et al., 2012). The TPB underscores three major factors of behavioural intention: attitude toward the behaviour, subjective norms and perceived behavioural control (Ahmad et al., 2019; Ajzen, 1991). According to the EEM, the decision to engage in entrepreneurial activity necessitates a prior attitude toward the feasibility and desirability of the activity, as well as the propensity to act on an opportunity (Moghavvemi & Akma Mohd Salleh, 2014). This model emphasises that simply having favourable attitudes may not be sufficient to motivate action; an individual needs to perceive a possibility of action to intend to engage in behaviour (Shapero & Sokol, 1982). EEM is implicitly an intention model specific to the domain of entrepreneurship that captures the dynamic nature of entrepreneurship by considering contextual and situational factors that motivate entrepreneurial action, providing a more detailed and context-sensitive framework than TPB (Krueger et al., 2000).

The current study focuses on the two key components of the EEM, Perceived Desirability (PD) and Perceived Feasibility (PF), and excludes the propensity to act.

This is because the study concentrates on students, for whom perceived desirability and feasibility are more important than their propensity to act as they are in the early stages of developing entrepreneurial intention. The propensity to act may be more relevant in later stages of the entrepreneurial process, such as actual venture creation (Khoi et al., 2021). These students may not have the immediate opportunity, resources, or readiness to take concrete entrepreneurial actions. PD and PF, as highlighted by Shapero and Sokol (1982), are fundamental elements of entrepreneurial intention, making them core factors for anyone interested in fostering and promoting entrepreneurial aspirations. Further, Khoi et al. (2021) and Lara-Bocanegra et al. (2020) also used PD and PF to measure entrepreneurial intentions, underscoring the validity and relevance of focusing on these factors in entrepreneurial research.

Developing advanced theoretical frameworks for entrepreneurial studies can be done by exploring the antecedents of PD and PF. Understanding these factors can lead to more comprehensive models that explain how individual perceptions are shaped and how entrepreneurial intentions and behaviours are influenced. Several important antecedents have been identified, including entrepreneurial education that enhances theoretical knowledge and confidence (Le et al., 2023) and institutional environments in which value systems and shared knowledge are embedded (Aloulou, 2021). Role models and prior experiences provide relatable examples and experiential learning (O'Gorman, 2019), while psychological factors such as self-efficacy and internal locus of control influence personal beliefs about entrepreneurial capabilities (Barton et al., 2018). Social and cultural factors, including family support and work experience, further shape these perceptions by providing supportive environments and practical insights (Solesvik et al., 2012). Including these antecedents in theoretical models enhances our understanding of how various factors affect entrepreneurial behaviour.

Several past studies have utilised personality traits to understand and explain the complex process of entrepreneurial decision-making and intentions. The Big Five personality traits have been widely studied for a long time since they influence career choices and work performance (Murugesan & Jayavelu, 2017). For example, one study shows that entrepreneurs tend to be more open to experience and conscientious but less agreeable and neurotic, consistent with the Big Five traits identified by Zhao and Seibert (2006). Despite this, the Big Five framework has limitations, mainly when predicting entrepreneur behaviour. There is criticism that this model is overly general, which means it is less effective at predicting the behaviour of entrepreneurs

in different situations (Kerr et al., 2018). Considering these limitations, the present study focuses on six characteristics directly associated with entrepreneurial activities and performance. Barrick (2005) states that traits explicitly describing entrepreneurial activities can be more helpful in predicting entrepreneurial performance than the Big Five. Rauch and Frese (2007) identified traits like the need for achievement, innovativeness, proactive personality, locus of control, and risk-taking as significantly correlated with business success. Chell et al. (2008) identified the need for achievement, risk-taking ability and the locus of control as the 'Big Three', which are essential for a comprehensive understanding of entrepreneurs who initiate new enterprises.

Student personality characteristics significantly influence their perceptions and beliefs, thereby affecting their entrepreneurial intentions. Rather than being incidental factors, these traits are considered key antecedents of PD and PF (Al-Ghazali et al., 2022). Several traits actively shape students' attitudes and confidence towards entrepreneurship, such as the need for accomplishment, innovation, and entrepreneurial alertness. By reshaping views regarding entrepreneurship, these traits play an essential role in forming entrepreneurial intentions (Mahmood et al., 2020). Particularly, students with these entrepreneurial characteristics aspire to become entrepreneurs more than their peers (Al-Ghazali et al., 2022). These characteristics enhance perceived desirability by making starting and operating a business more appealing and fulfilling for the individual (Tan et al., 2021). Similarly, internal locus of control, proactive behaviour, and the tendency to take risks can significantly boost perceived feasibility (Tan et al., 2021) by enhancing confidence in overcoming entrepreneurial challenges and managing a business effectively.

The Entrepreneurial Event Model (EEM) and Women's Entrepreneurial Intention (WEI)

The entrepreneurship literature widely agrees that PD and PF are essential in explaining the formation of entrepreneurial intention (Saeed et al., 2014). Numerous studies confirm that PD and PF are key factors explaining entrepreneurial intention (Kedmenec et al., 2015; Saeed et al., 2014; Tan et al., 2021). Accordingly, these factors are proposed in this study as the influences that shape the intention to display entrepreneurial behaviours.

PD in entrepreneurship represents an individual's subjective attraction and enthusiasm for starting a business (Alferaih, 2022; Shapero & Sokol, 1982). It mirrors the personal allure and favourable feelings towards entrepreneurship (Solesvik et al.,

2012). This attraction is generated by assessing the potential positive outcomes of entrepreneurial behaviour, such as financial rewards, personal fulfilment, and social recognition. Additionally, the level of support from the environment, including social circles, friends, and family, enhances this desirability by reflecting the positive sentiments of those around them towards entrepreneurship (Tan et al., 2021). These supportive and attractive factors heighten an individual's intention to start a business (Liñán, 2008; Liñán & Chen, 2009). Hence, we propose the following:

H₁: Perceived desirability has a positive impact on entrepreneurial intention.

PF in entrepreneurship refers to an individual's belief in their ability to establish and manage a business venture successfully, encompassing an evaluation of abilities, resource accessibility, and confidence in dealing with entrepreneurial challenges (Alferaih, 2022; Basaffar et al., 2018; Shapero & Sokol, 1982). This perception of feasibility arises from the individual's assessment of their skills, knowledge, and resources necessary for business creation and management. It includes investigating potential obstacles and evaluating one's ability to overcome them, thus serving as a motivational factor for starting a business (Kedmenec et al., 2015; Tan et al., 2021). The availability of resources, self-assurance, and perceived level of control over entrepreneurial tasks further bolster this perception, making the individual more confident in their entrepreneurial capabilities (Solesvik et al., 2012). Based on the literature, we propose the following hypothesis.

H₂: Perceived feasibility has a positive impact on entrepreneurial intention.

Personality Traits as Antecedents of Perceived Desirability and Feasibility

As mentioned earlier, we identify three antecedents for perceived desirability: entrepreneurial alertness, innovativeness, and the need for achievement. Innovativeness enhances the desirability of entrepreneurship because it makes the process of starting a business more appealing. Despite this, it may not have a significant impact on feasibility due to the difficulty of implementing innovative ideas (Barba-Sánchez & Atienza-Sahuquillo, 2018). Entrepreneurial alertness helps recognise opportunities but is not strongly associated with practical skills needed for execution (Tang et al., 2012). The need for achievement drives entrepreneurship, as high achievers are drawn to pursue moderately challenging tasks. However, high achievers might avoid high-risk ventures since this trait is not linked to feasibility (Farrukh et al., 2018). Perceived feasibility also has three antecedents: risk-taking propensity, proactiveness, and internal locus of control. Risk-taking propensity is

linked to the capability to handle challenges, aligning more with feasibility. However, it is less associated with the attractiveness of entrepreneurship itself (Zhao et al., 2010; Farrukh et al., 2018). A strong locus of control leads to a stronger sense of capability and confidence in executing entrepreneurial tasks (Farrukh et al., 2018). Still, it does not significantly improve desirability, which is influenced primarily by intrinsic motivations. Finally, proactiveness increases feasibility by ensuring readiness and responsiveness to opportunities but has a weaker direct influence on entrepreneurship's attractiveness (Kickul & Gundry, 2002).

Personality Traits and Perceived Desirability

Entrepreneurial alertness (EA), need for achievement (NA), and innovativeness (INNOV) are crucial personality traits that can significantly influence the PD of entrepreneurship. These traits not only shape individuals' attitudes and motivations towards starting a business but also offer a pathway for personal growth and achievement.

EA drives entrepreneurial intention by enabling individuals to identify and seize opportunities and resources, especially in dynamic economic conditions (McMullen & Shepherd, 2006; Neneh, 2019). EA is characterised by recognising emerging markets, anticipating profitable opportunities, and locating production factors or products at favourable prices (Karabulut, 2016). Women with high EA have a keen eye for market gaps and potential innovations, making entrepreneurship an attractive path for their aspirations (Araujo et al., 2023; Hu et al., 2023). This proactive trait boosts their confidence and preparedness, making the entrepreneurial landscape appear more navigable and desirable (Li et al., 2020; McMullen & Shepherd, 2006). Thus, EA significantly enhances women's PD of entrepreneurship by allowing them to leverage their abilities and achieve their goals (Biswas & Verma, 2021; Urban, 2019). Hence, we propose the following:

H₃: Entrepreneurial alertness has a positive impact on perceived desirability.

NA represents an individual's inner drive for success and excellence (Tan et al., 2021; Zeffane, 2013). For women with high NA, entrepreneurship is fuelled by their strong motivation to succeed and accomplish challenging tasks (Dzomonda & Neneh, 2023). This ambition makes entrepreneurship appealing for achieving their goals and finding personal fulfilment. Their tendency for calculated risk-taking aligns well with the uncertainties inherent in entrepreneurship, fostering a positive outlook towards starting a business despite potential obstacles (Maheshwari et al., 2023). Persistence

and focus further enhance their perception of entrepreneurship as an appealing and feasible option, reinforcing their belief in its attractiveness (Panda & Arumugam, 2023). Consequently, NA increases the desirability of entrepreneurship as a means to attain aspirational goals and personal success (Akhtar et al., 2020). Hence, we propose the following:

H₄: The need for achievement has a positive impact on perceived desirability.

INNOV is a pivotal trait that drives entrepreneurial success by enabling individuals to generate innovative ideas and solutions (Roy et al., 2017). At the outset of entrepreneurial ventures, INNOV is essential for developing new concepts and capitalising on opportunities (Staniewski et al., 2016). This trait significantly impacts entrepreneurial behaviour, particularly for students entering entrepreneurship, as it allows them to create novel products and services (Chye, 1996; Weerawardena & Mort, 2006). Entrepreneurs who exhibit high INNOV can develop cutting-edge solutions, increase efficiency, and explore untapped market areas (Wathanakom et al., 2020). INNOV in women drives entrepreneurial endeavours by fostering creativity and problem-solving, shaping PD (Anwar & Saleem, 2019). By viewing entrepreneurship as a platform to innovate and address market needs with fresh solutions, INNOV makes business ownership more appealing (Al-Mamary & Alshallaqi, 2022). The emphasis on novelty, originality, and adaptability strongly resonates with women, ultimately influencing their perception of entrepreneurship (Mahmood et al., 2020). As an integral part of entrepreneurship's creative and aspirational aspects, INNOV makes entrepreneurship inherently more attractive and desirable due to its alignment with personal fulfilment and significant impact on society (Mahmood et al., 2020). As much as it can contribute to a sense of capability, its main effect is to make the entrepreneurial journey seem worthwhile and exciting, relating more to PD than PF. Therefore, based on the discussion, the following hypothesis is developed.

H₅: Innovativeness has a positive impact on perceived desirability.

Personality Traits and Perceived Feasibility

Risk-taking propensity (RTP), proactiveness (PRO), and internal locus of control (ILC) can be critical factors in perceptions of entrepreneurial feasibility.

RTP captures an individual's tendency and willingness to tackle uncertainty and engage in risky situations (Karabulut, 2016; Marton et al., 2023), reflecting a person's desire to make decisions in the face of uncertainty. Entrepreneurs are risk-takers in

cash, career, reputation, and personal relationships (Alshebami & Seraj, 2022; Arru, 2020; Meertens & Lion, 2008). RTP is strongly associated with entrepreneurial activities due to their inherent uncertainties (Alshebami & Seraj, 2022; Panda & Arumugam, 2023). Women with higher RTP tend to perceive entrepreneurship as more feasible and attainable (Zhao, 2006), with confidence in navigating uncertainties (Antoncic et al., 2018; Tan et al., 2021) and viewing setbacks as opportunities (Arru, 2020), thus emphasising potential gains over perceived risks (Zhuang et al., 2022). Hence, we propose the following:

H₆: Risk-taking propensity has a positive impact on perceived feasibility.

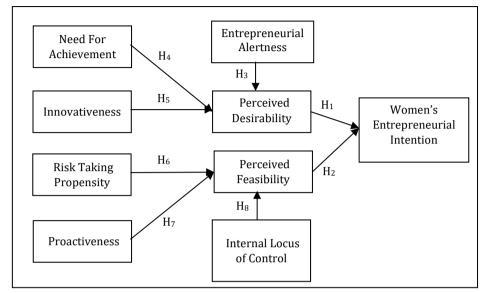
PRO, defined as positive efforts to begin change and take action, significantly impacts PF (Al-Mamary & Alshallaqi, 2022; Kreiser & Davis, 2010). Proactive individuals are more likely to see entrepreneurship as feasible and achievable (Tan et al., 2021; Vallerand, 2008), with confidence and initiative in navigating the entrepreneurial landscape (Chipeta & Surujlal, 2017; Tan et al., 2021). Proactive women approach problems with determination, actively developing the necessary skills for entrepreneurial success (Al-Mamary & Alshallaqi, 2022), thus reinforcing their belief in the viability of entrepreneurial initiatives (Grant et al., 2011; Hu et al., 2023; Kedmenec et al., 2015). Hence, we propose the following:

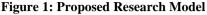
H₇: Proactiveness has a positive impact on perceived feasibility.

ILC refers to an individual's perception of their ability to control or influence life events (Panda & Arumugam, 2023; Presenza et al., 2020). Those with an ILC believe in their ability to impact outcomes through their efforts (Arkorful & Hilton, 2022; Zhuang et al., 2022), seeing themselves as active agents in their destiny (Zhuang et al., 2022). Empirical evidence suggests that entrepreneurs with an ILC perform better and exhibit greater resilience than those with an external locus of control (Mohamed et al., 2023). Women with an ILC are likelier to perceive entrepreneurship as feasible and attainable (Roy et al., 2017), with confidence in influencing outcomes aligning with entrepreneurial challenges (Karimi et al., 2017; Panda & Arumugam, 2023). This sense of empowerment and capability to overcome hurdles positively influences women's perceptions of entrepreneurial feasibility (Alshebami & Seraj, 2022; Arkorful & Hilton, 2022). Based on the above discussion, we propose the following hypothesis:

H₈: Internal locus of control has a positive impact on perceived feasibility.

The hypotheses proposed above are depicted in Figure 1.





Methods

The study assessed various aspects related to entrepreneurship presented in the hypotheses using established scales. The measurement instrument comprised a total of 36 statements, which were adapted from existing literature. All the items in the instrument are presented in the appendix. EA was measured using a set of four items adapted from Biswas and Verma (2021). PRO is captured through four items from Hu et al. (2023). RTP was measured by four items adapted from Maheshwari et al. (2023). NA was explored using four statements from Kristiansen and Indarti (2004). ILC was assessed with four items adapted from Hamzah and Othman (2023). PF, measured using five items, and PD, with three items, were adapted from Krueger (1993) and Nguyen and Nguyen (2024). Finally, the WEI scale utilised four items from Liñán (2008). Consistency in measurement was maintained through a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).

Ensuring the completeness and accuracy of the measurement instrument, two academics and one entrepreneur meticulously analysed the final questionnaire. Their expertise was instrumental in refining questions, identifying ambiguity, and assuring completeness. Based on their insightful comments, several minor changes were made to improve clarity and overall quality: The sequence of questions was reorganised to ensure a logical flow, making it easier for respondents to follow and answer comprehensively; reverse-coded items, which can sometimes confuse respondents which can result in inconsistent responses and reduced internal consistency of the scale (Woods, 2006), were removed to maintain clarity in the responses, and certain questions in the demographic section that were deemed irrelevant to the study's objectives were eliminated, helping to reduce the questionnaire length and focus on the most pertinent information. Before collecting data, a pre-test with 30 students was conducted. This was done to clear out potential wording issues and ensure the responder's understanding and intended interpretation of the questionnaire.

Sample

The target population for this study comprised female commerce and management students from universities in South India, specifically focusing on Kerala and Tamil Nadu. This group was chosen because previous research (Roy et al., 2017) shows that university students, especially those with the necessary education to start businesses, are interested in entrepreneurship. Fuller et al. (2018) and Neneh (2019) suggest that the university years are when many people start thinking about careers, and starting businesses is a desirable option for them. This focus on female students in their final year studying commerce and management is important as there is a growing interest in understanding how students think about and pursue entrepreneurship. Data were collected using a convenience sampling method through an online survey distributed via Google Forms. In entrepreneurship research, convenience sampling is a popular technique (Jan et al., 2023; Neneh, 2019) due to its practicality and ability to efficiently access specific target groups. To enhance the response rate and ensure the relevance of the data, faculty members from various universities in Kerala and Tamil Nadu assisted in disseminating the survey link to their students. According to Hair (2010), the minimum sample size required for the study is at least five times the number of observed variables in the model. With a model comprising 36 observed variables, the minimum sample size needed for this study is 180 participants. Moreover, the minimum required sample size was determined using the G*Power software (Faul et al., 2007; Kang, 2021). Based on the power of 0.95 with an effect size of 0.15, this study needed a sample size of 160 to test the model with 8 predictors. Between September 2023 and November 2023, 382 responses were received, meeting the minimum sample requirements.

The participants were aged 20 to 23 years, predominantly from families with an annual income below US \$ 3000. Among the respondents, 51% hailed from rural areas, while 49% came from urban regions. Regarding family occupations, 31% were

involved in agriculture, while the remaining were employed in private or government sectors. Additionally, 22% had prior business experience. Academic levels were divided between 56% undergraduates and 44% postgraduates.

Data Analysis and Results

The data collected from respondents was analysed using partial least squares structural equation modelling (PLS-SEM) using Smart-PLS 4.0. PLS-SEM is a multivariate exploratory tool for analysing path models with latent constructs and composites (Hair et al., 2019). PLS does not make any assumptions regarding the normality of the data, which makes it suitable for smaller data sets (Aguirre-Urreta & Marakas, 2010). PLS-SEM has been used extensively in prior studies on entrepreneurship (Ali et al., 2019). The analysis involved two steps. The first step was to examine the measurement model, and here, the reliability and validity of the constructs were being examined. (Hair et al., 2019). The structural model was then analysed in its second stage, which involved analysing the various relationships proposed in the model.

Common Method Bias

The procedures ensured respondent confidentiality and anonymity to counter common method bias. The study employed the Harman single-factor test to pinpoint common method biases (Fuller et al., 2016). The findings revealed that a single factor could explain only 37.07% of the overall variance, falling well below the 50% benchmark (Podsakoff et al., 2012). This suggests that the study was not significantly impacted by common method bias. Moreover, a full collinearity test was performed and ensured Variance Inflation Factors (VIF) values were all below the 3.3 (Kock, 2015). These results affirm that the collected data remains unaffected by common method bias.

Measurement Model

The measurement model was examined by assessing discriminant validity, convergent validity, and internal consistency reliability. First, the indicator loadings were evaluated. The loading values are recommended to be 0.70 or above (Hair et al., 2019). Table 1 shows that all the indicator loadings exceed the recommended value. Internal consistency reliability was evaluated using Cronbach alpha and composite reliability (CR). CR and Cronbach alpha values must both be greater than 0.7 (Hair et al., 2021), and convergent validity is supported if the average variance estimator (AVE) for every construct is greater than or equal to 0.50 (Fornell & Larcker, 1981;

Hair et al., 2021). As shown in Table 1, the reliability values for all of the constructs were greater than 0.7 (Hair et al., 2019). All of the constructs had AVE values greater than 0.5, demonstrating acceptable internal consistency reliability and convergent validity (Hair et al., 2021).

	Items	Loadings	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	The average variance extracted (AVE)
EA	EA1 EA2 EA3 EA4	0.870 0.905 0.873 0.809	0.887	0.888	0.922	0.748
INNOV	INNOV1 INNOV2 INNOV3 INNOV4	0.841 0.879 0.834 0.744	0.843	0.846	0.895	0.682
ILC	ILC1 ILC2 ILC3 ILC4	0.897 0.901 0.892 0.724	0.877	0.889	0.917	0.734
NA	NA1 NA2 NA3 NA4	0.801 0.894 0.892 0.724	0.881	0.886	0.918	0.737
PD	PD1 PD2 PD3	0.834 0.904 0.896	0.852	0.856	0.910	0.772
PF	PF1 PF2 PF3 PF4 PF5	0.829 0.869 0.835 0.850 0.739	0.882	0.885	0.914	0.682
PRO	PRO1 PRO2 PRO3 PRO4	0.845 0.911 0.884 0.881	0.903	0.907	0.932	0.775
RTP	RTP1	0.854	0.902	0.905	0.932	0.774

Table 1: Reliability and Convergent Validity

	Items	Loadings	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	The average variance extracted (AVE)
	RTP2	0.899				
	RTP3	0.878				
	RTP4	0.887				
WEI	WEI1	0.863	0.905	0.907	0.934	0.779
	WEI2	0.909				
	WEI3	0.900				
	WEI4	0.858				

Discriminant Validity

Discriminant validity was assessed using the heterotrait-monotrait ratio (HTMT) criteria. Discriminant validity is achieved when the HTMT value is below 0.9 or 0.85 when taking a more conservative position (Verkijika & De Wet, 2018). Table 2 shows that the HTMT values for all the constructs are below the conservative value of 0.85. As such, all the constructs meet the criteria for discriminant validity.

	EA	INNOV	LOC	NA	PD	PF	PRO	RP	WEI
EA	0.865	0.849	0.837	0.790	0.822	0.824	0.746	0.756	0.752
INNOV	0.735	0.826	0.842	0.794	0.848	0.812	0.704	0.828	0.740
LOC	0.737	0.735	0.857	0.849	0.848	0.841	0.753	0.842	0.811
NA	0.697	0.684	0.772	0.859	0.841	0.846	0.763	0.815	0.791
PD	0.715	0.720	0.735	0.729	0.879	0.841	0.640	0.820	0.764
PF	0.727	0.698	0.775	0.753	0.752	0.826	0.813	0.847	0.837
PRO	0.669	0.614	0.671	0.682	0.564	0.730	0.880	0.700	0.739
RP	0.676	0.720	0.749	0.728	0.720	0.756	0.637	0.880	0.818
WEI	0.674	0.646	0.723	0.708	0.673	0.767	0.670	0.739	0.883

Table 2: Discriminant Validity

Note: Diagonal values in bold represent square root AVE. Values below the bold diagonal values are inter-construct correlations, and above the diagonal values are the HTMT ratios

Further, we used the Fornell and Larcker criterion, with discriminant validity supported when the square root of AVE estimates of each pair of constructs surpassed

the inter-construct correlation (Hair et al., 2016). Table 2 confirms that all constructs achieved discriminant validity per the Fornell Larcker criterion.

Structural Model

Once the measurement model had been evaluated, the next step was to assess the structural model. However, the collinearity issue had to be addressed before the structural relationships could be examined. The variance inflation factor (VIF) was employed here to examine collinearity. If the VIF were greater than 3, this would indicate a collinearity issue in the study constructs (Sarstedt et al., 2021). With recorded values falling within the range of 1.472 to 2.923. These VIF values comfortably met the established threshold of 3. The R² values for WEI and PD were 0.610 and 0.649, respectively, which can be considered moderate to substantial (Chin et al., 1997; Hair et al., 2021). The R² value for PF was 0.720, which is substantial. The model can explain 61% of the variance in WEI.

 Q^2 for the WEI was 0.627. The results from Table 3 showed Q^2 values for SEI and its indicators greater than zero, indicating that the research model had significant predictive relevance (Hair et al., 2016). Furthermore, the PLS-SEM model's prediction errors (RMSE) for the SEI are identified and compared with a Linear model (LM). The model demonstrated that three out of four structural model RMSE values are smaller than the linear model with a medium predictive power.

	Q ² predict	PLS-SEM_RMSE	LM_RMSE
WEI1	0.473	0.792	0.791
WEI2	0.521	0.742	0.755
WEI3	0.501	0.763	0.790
WEI4	0.455	0.797	0.629
EI	0.627		

Table	3:	Predictive	Validity
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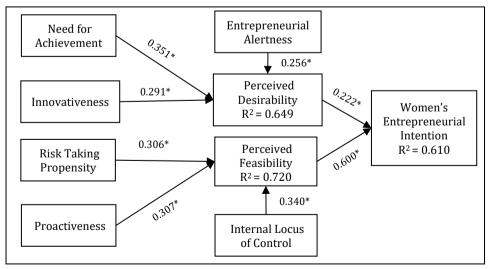
Table 4 and Figure 2 show the results of the path coefficients for the hypothesised relationships of the study. Both immediate antecedents PF ($\beta = 0.600$, p < 0.001) and PD ($\beta = 0.222$, p < 0.01) show significant associations with WEI. PF becomes the significant predictor of the WEI. EA ($\beta = 0.256$, p < 0.001), INNOV ($\beta = 0.291$, p < 0.001), and NA ($\beta = 0.351$, p < 0.001) exert significant and positive relations with PD. Among the three antecedents, INNOV exerts a strong relationship with PD. In the case of PF, all three antecedents show significant association with it, and ILC ($\beta = 0.340$, p < 0.001) becomes the significant predictor. Both PRO ($\beta = 0.307$, p < 0.001)

0.001) and RTP (β = 0.306, p < 0.001) also positively related to WEI. Accordingly, all eight hypotheses were supported.

Path	Path coefficient	Standard deviation	<i>t-</i> statistic	p value
Perceived Desirability \rightarrow Women's Entrepreneurial Intention	0.222*	0.065	3.431	0.001
Perceived Feasibility → Women's Entrepreneurial Intention	0.600*	0.061	9.884	0.000
Entrepreneurial Alertness \rightarrow Perceived Desirability	0.256*	0.063	4.039	0.000
Need For Achievement \rightarrow Perceived Desirability	0.351*	0.062	5.670	0.000
Innovativeness \rightarrow Perceived Desirability	0.291*	0.062	4.707	0.000
Risk Taking Propensity → Perceived Feasibility	0.306*	0.052	5.912	0.000
Proactiveness \rightarrow Perceived Feasibility	0.307*	0.047	6.527	0.000
Internal Locus of Control → Perceived Feasibility	0.340*	0.055	6.145	0.000

Table 4: Path Analysis and Hypotheses Testing

Figure 2: Path Analysis and Hypotheses Testing



Note: **p* < 0.01

Discussion

The present study explores the entrepreneurial intention of female commerce and management students by integrating personality traits with the entrepreneurial event model. It was discovered that both PD for entrepreneurship and PF positively impact WEI. Alferaih (2022) and Forster and Grichnik (2013) confirmed the relationship between PD and PF with entrepreneurial intention. The intentions of female students to pursue entrepreneurial careers are significantly influenced when they perceive entrepreneurship as desirable and believe that they have the ability, resources, and support to succeed. This connection acts as a dual catalyst: desirability inspires entrepreneurial goals, while feasibility assures bringing these aspirations to reality (Soomro et al., 2020). Together, they provide a foundation for students to pursue entrepreneurial endeavours. As female students gain confidence in their ability to navigate the challenges of entrepreneurship, their perception of risks becomes more manageable, boosting their desire to start and lead their firms.

The NA has a significant and favourable influence on PD, which is consistent with earlier research (Dzomonda & Neneh, 2023; Zhuang et al., 2022). Female students with a strong NA are attracted to challenging, goal-oriented pursuits. Along with its difficulties, growth potential, and desire for success, entrepreneurship fits perfectly with these goals (Mahmood et al., 2020). Entrepreneurship provides a way for female students to harness their passion for success, provide opportunities for personal accomplishment, achieve ambitious business goals, and enjoy autonomy. This perception links their ambition to entrepreneurial opportunities, which fuels their desire to pursue entrepreneurial careers. EA has a strong and positive influence on PD, which has already been observed and confirmed by Hussain and Hashim (2015) and Urban (2019). Students with high levels of EA can detect and recognise the attractiveness of entrepreneurial ventures. This awareness enables them to identify prospective business chances, forming a favourable impression of entrepreneurship as a means of benefiting from these opportunities (Langowitz & Minniti, 2007). Female students with higher EA align their keen observations with the attractiveness of entrepreneurial endeavours, considering it as a foundation for success. Their ability to recognise opportunities increases their perception of the benefits of entrepreneurship, such as personal and professional advancement, thus increasing the attractiveness of entrepreneurial pursuits. Prior research has demonstrated INNOV's significant and positive influence on PD (Mahmood et al., 2020; Tan et al., 2021), and the current study validates this. Innovative students find entrepreneurship interesting because it aligns with their creative thinking. They see entrepreneurship as a rich environment for innovation, identifying it as a way to turn their creative ideas into successful business ventures (Tan et al., 2021). Entrepreneurship becomes

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a path for female students competent at innovation to show their creativity, bring unique ideas, and potentially alter markets. This impression increases the attractiveness of entrepreneurship among these students, who believe it provides an environment conducive to fostering and implementing innovative ideas.

The positive relationship between PRO and PF among female commerce and management students identified in previous literature (Alferaih, 2022; Tan et al., 2021) is also validated in this study. Students with a proactive mindset perceive entrepreneurship as a viable option since their proactive nature allows them to anticipate and overcome obstacles. This fits the entrepreneurial environment, where proactive problem-solving is essential. Their proactive approach equips them to negotiate uncertainties and risks efficiently, instilling confidence in their capacity to overcome obstacles and seize opportunities in entrepreneurship (Zhuang et al., 2022). There is also a positive relationship between ILC and PF, as established by Zhuang et al. (2022) and Alferaih (2022). Female students with a strong ILC view entrepreneurship as a feasible choice because they are confident in their abilities to shape outcomes and tackle challenges through their efforts. Entrepreneurship requires a sense of control over one's business path, and female commerce and management students who have this ILC believe they can influence the success of their ventures (Zhuang et al., 2022). This favourable association originates from their belief that they can overcome challenges and direct the outcomes of their entrepreneurial endeavours, boosting their confidence in their ability to navigate uncertainty and exert control in the business.

Finally, the study confirmed the positive relationship between RTP and PF among female students established by Martínez et al. (2017) and Tan et al. (2021). Female commerce and management students with a higher RTP consider entrepreneurship more feasible due to their tolerance of uncertainty and willingness to embrace the inherent risks of starting and maintaining a firm (Zhuang et al., 2022). This connection between their RTP and the unpredictable nature of entrepreneurship allows them to navigate uncertainty confidently, generating a feeling of viability in pursuing entrepreneurial initiatives.

Theoretical, Practical and Further Research Implications

The study bridges the gap between personality traits and entrepreneurial intentions by incorporating personality factors into the entrepreneurial event model, specific to female management students. Researchers have traditionally focused on the relationship between personality traits and entrepreneurial intentions or the relationship between cognitive perceptions such as perceived feasibility and desirability with entrepreneurial intention. An overview of these two perspectives is presented in this study in order to provide a more cohesive framework that captures the multifaceted nature of entrepreneurial intentions. The model becomes more holistic by incorporating personal characteristics such as innovativeness, need for achievement, entrepreneurial alertness, risk-taking propensity, internal locus of control and proactiveness reflect the inherent complexity of entrepreneurial decisionmaking among female management students. The study contributes to the literature by differentiating how specific personality traits influence perceived feasibility and desirability within the entrepreneurial event model. This nuanced understanding allows researchers to see how different traits operate through different perceptual pathways, thereby refining theoretical models of entrepreneurial intention formation. By integrating personality traits as antecedents of perceived feasibility and desirability, the study significantly enhances the predictive capability of the entrepreneurial event model (Tan et al., 2021). Traditional models that do not account for personality factors may miss critical elements that drive entrepreneurial intentions. Including traits that influence key perceptual constructs makes the model more robust and capable of providing more accurate predictions of entrepreneurial behaviour. This improvement in predictive power is essential for developing more effective interventions and educational programs to foster entrepreneurship among female management students.

Tailoring entrepreneurship programs to promote characteristics such as the Need for achievement, entrepreneurial alertness, and innovativeness can significantly enhance women's passion and confidence in pursuing entrepreneurial paths. By integrating elements that nurture these traits into educational curricula, institutions can cultivate an entrepreneurial mindset from a young age (Farrukh et al., 2018). Recognising the impact of traits such as internal locus of control, proactiveness, and risk-taking propensity highlights the necessity for mentorship and support networks within educational settings. Encouraging female students to develop these characteristics can strengthen their belief in overcoming obstacles and succeeding in entrepreneurial ventures. The insights from this study are particularly relevant for policy frameworks targeting female students in commerce and management disciplines. Tailored policies that foster these traits and perceptions can create a more supportive and conducive environment for aspiring female entrepreneurs. This approach ensures that educational institutions and policymakers work together.

The study's use of convenience sampling may limit the findings' generalizability outside the sampled group of female commerce and management students, potentially missing diverse perspectives. Additionally, the limited exploration of personality traits could prevent a comprehensive understanding of the full range of characteristics influencing perceived desirability and feasibility, crucial antecedents of entrepreneurial intention. Future research could focus on expanding the sampling methodology to include a more diverse and representative sample of women across various demographics and regions. Furthermore, identifying and exploring a broader range of personality traits beyond those examined in this study could provide a more comprehensive understanding of how these characteristics influence perceived desirability, perceived feasibility, and, ultimately, entrepreneurial intentions among female commerce and management students.

Conclusion

This paper investigated how personal traits and perceptions influence the entrepreneurial intentions of female commerce and management students. Findings reveal that perceived desirability and feasibility strongly impact these intentions. Traits like NA, EA, and INNOV are positively related to perceived desirability, while traits such as ILC, PRO, and RTP affect perceived feasibility. Integrating personality traits into the entrepreneurial model offers a comprehensive understanding of these interactions. Practical implications recommend that targeted programs, education initiatives, mentorship, and policies be implemented to cultivate these attributes, creating a favourable environment for female commerce and management students in entrepreneurship. Overall, this study provides insight into the various aspects that motivate these students' entrepreneurial goals, allowing for more focused support and empowerment.

Data Availability

Data will be made available by the authors on request.

Declaration of Conflicting Interests

The authors declared no potential conflict of interest with respect to the research, authorship, and publication of this article.

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Appendix:	Measurement Items
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Construct	Measurement items	Source
	I am ready to do anything to be an entrepreneur.	
Women's entrepreneurial	My professional goal is to become an entrepreneur.	Liñán (2008)
intention (WEI)	I will make every effort to start and run my own firm.	
	I am determined to create a business venture in the future.	

Construct	Measurement items	Source	
Density	I enjoy the idea of starting and running a business.	Krueger (1993) and	
Perceived Desirability (PD)	I do not feel anxious when I think about starting a business.	Nguyen and Nguyen (2024)	
	I feel enthusiastic about starting a business.		
	Starting a business could be easy.		
	I am confident in my ability to start and run a business successfully.		
Perceived Feasibility	Starting a business may not require a significant amount of additional work.	Krueger (1993) and Nguyen and Nguyen	
(PF)	I am very confident about starting and running a business.	(2024)	
	I have sufficient knowledge and skills to start a business.		
Entrepreneurial alertness (EA)	I read news magazines and trade-related publications regularly to expand my knowledge.		
	I think about giving lectures and practical sessions in my free time and even during my vacation to capitalise on market opportunities.	Biswas and Verma (2021	
	I have seen good opportunities for starting up a business.		
	I think about new business ideas to start my own venture during my free time.		
	I will do very well in fairly complex tasks relating to my studies and work.		
Need for achievement (NA)	I will try hard to improve on past work performance.	Kristiansen and Indarti	
	I will seek added responsibilities in jobs assigned to me.	(2004)	
	I will try to perform better than my friends.		
Innovativanasa	I am creative when asked to work with limited resources.		
Innovativeness (INNOV)	I often make novel connections and perceive new relationships between various pieces of information	Bandera et al. (2018)	

Construct	Measurement items	Source	
	I can produce a large number of ideas.		
	I can produce new and unusual ideas.		
	I will make decisions under uncertainty and risk.		
Risk Taking Propensity (RTP)	I enjoy the excitement of uncertainty and risk.	Maheshwari et al. (2023	
	I am willing to take significant risks if the possible rewards are high enough.		
	I will continue to work under pressure and conflict.		
	Nothing is more exciting than seeing my ideas turn into reality.		
Proactiveness	If I see something I don't like, I fix it.	Hu et al. (2023)	
(PRO)	I am always looking for better ways to do things.		
	If I believe in an idea, no obstacle will prevent me from making it happen.		
	My own actions determine my life.		
Internal Locus of control (ILC)	I can pretty much determine what will happen in my life.		
	When I make plans, I am almost sure to make them work.	Hamzah and Othman (2023)	
	When I get what I want, it's usually because I worked hard for it.		