

Research Article

A STUDY ON THE RELATIONSHIP BETWEEN PERSONALITY TRAITS, SELF-EFFICACY, AND ENTREPRENEURIAL INTENTIONS AMONG UNIVERSITY STUDENTS IN HO CHI MINH CITY – VIETNAM

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ABSTRACT

This study examines the relationship between personality traits, self-efficacy, and entrepreneurial intentions among university students in Ho Chi Minh City, Vietnam. It explores how extraversion, agreeableness, and openness influence entrepreneurial intentions, with self-efficacy acting as a mediator. A sample of 268 students from various disciplines was surveyed using a structured questionnaire. The findings reveal that extraversion and openness significantly influence entrepreneurial intentions, with self-efficacy playing a crucial mediating role. However, agreeableness has a weaker impact on entrepreneurial intentions. The study highlights that self-efficacy significantly influences entrepreneurial intentions ($\beta = 0.308$), while extraversion ($\beta = 0.211$) and openness ($\beta = 0.339$) have moderate effects. The results emphasize the importance of self-efficacy in fostering entrepreneurial aspirations. To enhance students' self-efficacy, schools should provide practical entrepreneurship programs, mentorship, and support services, while policymakers can develop supportive ecosystems, fund initiatives, and recognize achievements to encourage entrepreneurial confidence.

Keywords: Personality Traits, Self-Efficacy, Entrepreneurial Intentions, Extraversion, Openness to Experience, Agreeableness.

INTRODUCTION

Research background

The entrepreneurial process is regarded as a crucial pillar of national development and a generator of economic growth, innovation, and social inclusion (Bakar *et al.*, 2017; Sutter, Bruton, & Chen, 2018). For a transitional economy like Vietnam's, entrepreneurship is also a way of self-employment that may contribute to innovation, young unemployment reduction, and national competitiveness enhancement (Nguyen & Pham, 2022). Thus, authorities have concentrated on supporting a healthy startup environment with significant efforts like the "Đề Án 844" and "Đề án 1665" that seek to help at least 10,000 creative firms by 2025 (National Agency for Technology Entrepreneurship and Commercialization Development (NATEC), 2023; Tạp chí Giáo dục, 2023).

Despite such efforts, the entrepreneurial intention (EI) of Vietnamese university students remains very low. Although entrepreneurship is often perceived as an attractive career path - especially among educated youth - actual entrepreneurial intention frequently lags behind, suggesting the presence of an "intention-behavior gap". This discrepancy underscores the importance of understanding deeper psychological and internal factors that drive entrepreneurial action (Ajzen, 1991).

As Martinez-Canas *et al.*, (2023) mentioned entrepreneurship is a three-stage process: (1) Forming entrepreneurial intention; (2) Allocating resources; (3) Engaging in entrepreneurial conducts. With these people, entrepreneurial purpose is the psychological prerequisite for all subsequent activity (Abbassi & Sta, 2019; Hueso Arrabal *et al.*, 2021). Expanding entrepreneurial intention (EI) among students is not simply about expanding commercial activity but about fostering an attitude towards innovation and societal value creation.

Rationales and Limitations

Extensive research has proven that external supports - policy, funding, and education - are required but not sufficient to drive entrepreneurial action. More crucially, personality qualities and entrepreneurial self-efficacy are essential internal elements (Zhao *et al.*, 2005; Su *et al.*, 2021). Extraversion, agreeableness, and openness to experience are personality qualities reported to impact how people recognize entrepreneurial possibilities, deal with uncertainty, and make decisions (Karimi, 2020). Nonetheless, such features are frequently not investigated in most Vietnamese research or studied independently.

Earlier research has underlined those individual variables - notably personality qualities - drive entrepreneurial intentions (Al-Ghazali *et al.*, 2022). Extraversion, openness, and agreeableness are attributes that contribute to decision-making, taking chances, and interpersonal conduct that are crucial for entrepreneurship. Yet little study is undertaken on how these qualities work in the Vietnamese setting. Moreover, self-efficacy - defined as "the feeling that someone can succeed on their own" - is a mediator between personality and entrepreneurial ambition (Schmutzler *et al.*, 2018) but is understudied in local research.

As youth-led innovation and economic engagement become increasingly crucial post-COVID, it is vital to understand the psychological variables that inspire students to become entrepreneurs. It addresses this gap by exploring how individual personality factors and self-efficacy impact entrepreneurial intention among university students in Ho Chi Minh City. Findings can guide education methods and policy development in order to build an entrepreneurially inclined generation.

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Significance and Implications

It is crucial as it adds to a better understanding of personality factors and self-efficacy that determine entrepreneurial goals of university students in Ho Chi Minh City, Vietnam, by using Theory of Planned Behavior (Ajzen, 1991). It expands prior research by introducing a psychological lens to entrepreneurship in a developing economy where young entrepreneurship is vital. Findings reveal that extraversion and openness may boost entrepreneurial desire, but self-efficacy - students' belief in their capacity to achieve - is key to translating purpose into action. These are lessons that educators and policymakers may utilize to develop entrepreneurial attitudes. Building students' confidence via practical training, mentoring, and supportive settings may help universities generate a more vibrant and confident generation of future entrepreneurs.

Research Objectives

The objective of this study is to better understand the psychological and personality-related factors that influence entrepreneurial intention among university students in Ho Chi Minh City, Vietnam. With the growing emphasis on entrepreneurship as a driver of innovation and economic growth, especially in developing countries, it is essential to examine how students' individual traits and self-beliefs contribute to their entrepreneurial mindset. This research aims to explore both direct and indirect relationships between personality traits and entrepreneurial intention, with particular focus on the mediating role of self-efficacy. The findings are expected to provide valuable insights for educational institutions and policymakers seeking to foster entrepreneurial spirit among the youth.

Specific objectives of the study include:

- To examine the influence of individual personality traits, including extraversion, agreeableness, openness to experience, and self-efficacy, on the entrepreneurial intention of Vietnamese university students.
- To explore the mediating role of self-efficacy in the relationship between personality traits and entrepreneurial intention.
- To identify the key factors that contribute to the low entrepreneurial intention among university students in Vietnam.

Research questions

The study seeks to answer the following research questions:

1. How do individual personality traits, such as extraversion, agreeableness, openness to experience, and self-efficacy, influence the entrepreneurial intention of Vietnamese university students?
2. What is the mediating role of self-efficacy in the relationship between personality traits and entrepreneurial intention?
3. What are the primary reasons behind the low entrepreneurial intention among university students in Vietnam?

Scope and Limitations of the Study

The research will occur over three months, from March 2025 to May 2025. Due to time and human resource limitations, the research would primarily survey business students in Ho Chi Minh City using online platforms. Its contribution is not without restrictions. Firstly, the sample is confined to university students in Ho Chi Minh City but may not adequately reflect the broader Vietnamese youth population, particularly those in rural or less developed areas. Secondly, the cross-sectional design limits causal conclusions or observation of

changes in entrepreneurial intention over time. Lastly, relying on self-reported data might add bias owing to social desirability or faulty self-assessment. Lateral approaches, more diversified sampling, and mixed methods are needed for generalizability and depth.

LITERATURE REVIEW

Theoretical background of the study

Theory of Planned Behavior

The Theory of Planned Behavior (TPB) by Ajzen (1991) argues that intention is the primary predictor of behavior, influenced by three components: attitudes towards behaviors, personal norms, and perceived behavioral control. In entrepreneurship, this theory posits that the decision to begin a firm is influenced by individual self-efficacy, perceived social pressure, and a favorable evaluation of the endeavor as a career (Ajzen 1991; Martinez-Canas *et al.*, 2023).

This study applies the Theory of Planned Behavior (TPB) to represent entrepreneurial intention as a planned behavior among students in developing countries like Vietnam, where psychological and social circumstances impact entrepreneurial activities.

Big Five Personality Traits

The concept of the Big Five Personality Traits is well recognized in psychology and entrepreneurial literature. It separates individual personality into five domains: extraversion, agreeableness, conscientiousness, neuroticism, and openness to experience. Among those, this study evaluates three traits: extraversion, agreeableness, and openness.

Extraversion relates to sociability and confidence that encourage networking and leadership in business activities (Tang *et al.*, 2012). Agreeableness incorporates empathy and collaboration but may impede decision-making in uncertain or competitive contexts (Zhao & Seibert, 2006). Openness is associated with creativity and willingness to new ideas and hence positively related to innovation and opportunity recognition (McCrae & Costa, 1987; Rauch & Frese, 2007).

These traits describe students' psychological preparation to start a business and are predicted to impact self-efficacy and entrepreneurial intention.

Social cognitive theories (SCT)

Bandura (1986) presented self-efficacy as a term in Social Cognitive Theory (SCT). Self-efficacy is an essential concept in entrepreneurship research since it determines how individuals recognize possibilities, deal with problems, and endure in uncertain situations (Newman *et al.*, 2019). High entrepreneurial self-efficacy promotes confidence in handling business-related tasks and consequently boosts entrepreneurial intention (Boyd & Vozikis, 1994). This study models self-efficacy as a mediator between personality factors and entrepreneurial intention. It posits that extraversion, agreeableness, and openness impact entrepreneurial intentions through modifications in self-efficacy (Schmutzler *et al.*, 2018).

Shapero's Entrepreneurial Event Model

Shapero & Sokol's (1982) Entrepreneurial Event Model complements the Theory of Planned Behavior (TPB) by focusing on perceived desirability, feasibility, and propensity to act as major determinants

influencing entrepreneurial behavior. According to Shapero & Sokol's (1982) Entrepreneurial Event Model, people establish entrepreneurial intent more quickly if they believe the concept is acceptable and practicable and feel psychologically equipped to take action on it.

Here, Shapero & Sokol's (1982) Entrepreneurial Event Model is incorporated in the TPB framework to study how students' personal assessments of entrepreneurship and confidence in their talents relate to the desire to begin a firm.

2.2 Hypothesis Development and Proposed Model

2.2.1 Extraversion and Entrepreneurial Intention

Extraversion is one of the fundamental traits of the Big Five and encompasses assertiveness, enthusiasm, energy, and sociability. It is connected with proactive behavior and leadership, two attributes that are crucial to entrepreneurship, respectively (Caliendo *et al.*, 2014). According to Zhao *et al.*, (2010), extraversion and risk tolerance make highly extraverted people more likely to notice entrepreneurial possibilities and take action.

Also, extraverted individuals demonstrate more accurate entrepreneurial self-efficacy because they feel more competent in networking, selling ideas, and directing teams (Mei *et al.*, 2017). This improves their belief that they can succeed as entrepreneurs and supports their entrepreneurial goals. Hence, we propose our initial hypothesis.

H1 (a): Extraversion positively influences self-efficacy.

H1 (b): Extraversion positively influences entrepreneurial intention.

Agreeableness and Entrepreneurial Intention

Agreeableness comprises kindness, collaboration, and empathy. Generally beneficial in interpersonal circumstances, but uncertain in entrepreneurship. On the one hand, pleasant people could perform effectively in teams and with stakeholders, thereby increasing entrepreneurial processes (Caprara *et al.*, 2010). Alternatively, the tendency for harmony and avoidance of conflict could generate indecisiveness and risk aversion, which could negatively impact entrepreneurial activities (Zhao & Seibert, 2006).

In collective or socially collaborative situations, agreeableness has been connected with self-efficacy (Bandura, 1986). Thus, agreeableness does not necessarily boost entrepreneurial intention directly but indirectly through greater self-efficacy. From these considerations, hypotheses are developed:

H2 (a): Agreeableness positively influences self-efficacy.

H2 (b): Agreeableness does not positively influence entrepreneurial intention.

Openness and Entrepreneurial Intention

Openness to experience includes creativity, intellectual curiosity, and openness to new ideas and unexpected solutions (McCrae & Costa, 1987). Individuals with high openness are likely to seek innovation and opportunity awareness, two essential entrepreneurial activities (Rauch & Frese, 2007).

Openness positively increases entrepreneurial self-efficacy and EI in empirical research. Open individuals tend to develop flexible thinking

and embrace uncertainty and risk - traits that foster entrepreneurial mindsets (Karwowski & coll., 2013). Peterson & Whiteman (2007) also discovered that openness improves motivation to learn and explore in the entrepreneurial section. From these empirical insights, the following hypotheses are proposed:

H3 (a): Openness to experience positively influences self-efficacy.

H3 (b): Openness to experience positively influences entrepreneurial intention.

Self-efficacy and Entrepreneurial Intention

Self-efficacy, a core term in Bandura's Social Cognitive Theory (1986), refers to an individual's conviction in their capacity to successfully execute actions necessary to create desired results. In the context of entrepreneurship, entrepreneurial self-efficacy is described as the confidence individuals have in their competence to start, manage, and succeed in a new enterprise (Chen, Greene, & Crick, 1998).

Extensive empirical studies have proven self-efficacy as a robust and consistent predictor of entrepreneurial ambition (Boyd & Vozikis, 1994; Newman *et al.*, 2019). High self-efficacy suggests that problems are surmountable; they embrace failure positively and continue to reach business goals. Furthermore, greater self-efficacy enhances opportunity detection. Proactivity and risk tolerance are traits linked with entrepreneurial behavior, according to Zhao *et al.* (2005).

Self-efficacy also mediates between personality attributes and entrepreneurial motivation. Personality qualities like extraversion, agreeableness, and willingness to explore are not necessarily entrepreneurial but determine how individuals view themselves. For instance:

- Extraverted people who are forceful and energetic have stronger social confidence and leadership abilities, therefore improving their conviction that they can manage entrepreneurial activities (Nauta, 2004).
- Agreeable people, although typically prosocial, may acquire self-efficacy from supportive or team-oriented entrepreneurial environments (Caprara & coll., 2010).
- Open people are interested and intellectually adaptable, and hence more able to learn, adapt, and feel confident about entrepreneurship uncertainties (Karwowski *et al.*, 2013)

Thus, self-efficacy is a psychological bridge that turns individual inclinations into practical goals. As shown above, Schmutzler *et al.*, (2018) and Bello *et al.*, (2018) found that personality factors may not significantly impact entrepreneurial inclinations without self-efficacy. What defines an entrepreneur's trajectory is not so much that the individual is as much as what they think they are able to achieve.

H4: Self-efficacy positively influences entrepreneurial intention.

H5 (a): Self-efficacy mediates the relationship between extraversion and entrepreneurial intention.

H5 (b): Self-efficacy mediates the relationship between agreeableness and entrepreneurial intention.

H5(c): Self-efficacy mediates the relationship between openness to experience and entrepreneurial intention.

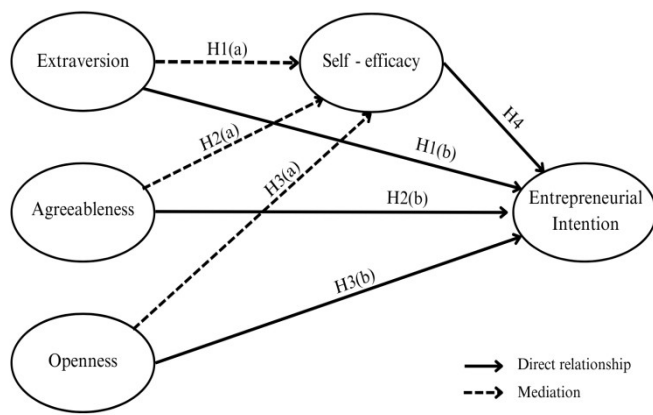


Fig. 1: Proposed research model

METHODOLOGY

Sampling and data collection

It covers undergraduate students of economics and business-related fields at universities in Ho Chi Minh City, Vietnam. Such students are suitable subjects for examining entrepreneurial intentions as they are frequently in the process of creating long-term professional objectives and have completed entrepreneurship courses. Data was obtained via an online questionnaire sent across academic mailing lists, university-affiliated student networks, and social media groups from March through early May 2025.

A first set of responses was collected, and 268 valid responses were preserved after filtering for incomplete and invalid forms based on knowledge of entrepreneurship and attention to response consistency. Screening questions indicated that participants at least had some understanding of entrepreneurship and were making career decisions. Voluntary and anonymous participation was done, and respondents were informed of the academic goal and confidentiality of the study to prevent social desirability bias.

To collect a representative sample of students by academic year and gender while guaranteeing that all participants were full-time students in Ho Chi Minh City, purposive sampling was utilized. This sample size is bigger than necessary for Structural Equation Modeling (SEM) based on the suggested ratio of 10:1. Suitable statistical power was obtained by Goodhue *et al.*, (2012).

Research Instrument

This questionnaire comprised three components. The first obtained demographic information comprises gender, family background, and previous entrepreneurial experience. The second component examined extraversion (EX), agreeableness (AG), and openness to experience (OP) using 15 items adapted from John and Srivastava (1999) on a 5-point Likert scale from 1 (strongly disagree) to 5 (strongly agree). The final component included scales to measure self-efficacy (SE) and entrepreneurial intention (EI), adapted respectively from Chen *et al.*, (2001) and Linan and Chen (2006), also on a 5-point Likert scale. It was pre-tested with a small sample of students to adjust item wording and verify contextual appropriateness for Vietnamese participants.

Data analysis technique

This study uses Partial Least Squares Structural Equation Modeling (PLS-SEM) utilizing SmartPLS 4.0 to examine Structural links among

personality factors, self-efficacy, and entrepreneurial intention. Among the options, PLS-SEM was chosen because it was suited for predictive modeling, theory construction, and tolerance of non-normal data and lower sample sizes (Hair, Hult, Ringle, & Sarstedt, 2021).

Table 1 Demographic attributes of the participants (N = 268)

Attribute	Category	Count	Percentage (%)
Gender	Male	122	46
	Female	146	54
Family Business Background	Yes	128	48
	No	140	52
Previous Entrepreneurial Experience	Yes	128	48
	No	140	52

Source: Author(s) calculation.

Following the two-step analytical technique of Hair and colleagues, the measuring methodology was initially validated for reliability and validity in 2021. Cronbach's Alpha (α) and Composite Reliability (CR) were all over 0.70 to establish internal consistency. Across components, convergent validity was tested using Average Variance Extraction (AVE), and most constructs reached or near the 0.50 suggested criterions. Outer loadings were investigated; elements ranging from 0.40 to 0.70 were maintained because of excellent theoretical justification and contribute to construct content validity.

The discriminant validity of the two variables was tested using the Heterotrait-Monotrait Ratio of Correlations (HTMT). HTMT values frequently remained under the cautious criterion of 0.85, and those slightly above still came within the acceptable margin of 0.90, showing appropriate discriminant validity (Henseler, Ringle, & Sarstedt, 2015).

The structural model was then analyzed for hypothesized links among components. Standardized path coefficients, R^2 values, and model fit indices were examined. The model explained 58.8% of self-efficacy and 66.8% of entrepreneurial intention variation, respectively, demonstrating moderate to substantial explanatory power.

Multicollinearity was examined using Variance Inflation Factor (VIF) values that were all below the permissible level of 3.3 (Diamantopoulos & Siguaw, 2006). Model fit was tested against the Standardized Root Mean Square Residual (SRMR), which produced 0.078, meeting the 0.08 cut-off and demonstrating good model fit (Henseler, Hubona, & Ray, 2016).

Tests of indirect effects and the mediating impact of self-efficacy were done by bootstrapping with 5,000 resamples and a 95% confidence interval (Preacher & Hayes, 2008) to estimate mediation pathways in the model.

Model Fit and Construct Validity

Confirmatory Factor Analysis (CFA) using SmartPLS 4.0 demonstrated that all constructs exhibited satisfactory unidimensionality with outer loadings larger than 0.6 and significant at $p < 0.001$. Cronbach's Alpha and CR values were 0.773 to 0.912 and 0.8917 to 0.9226, above the 0.70 indicated by Nunnally and Bernstein in reliability analysis (Nunnally & Bernstein, 1994).

The Average Variance Extraction (AVE) values for Entrepreneurial Intention (EI = 0.479) and Openness (OP = 0.495) were somewhat below 0.50 but were preserved since they are of high CR and theoretical importance, in agreement with Fornell and Larcker (1981) and Hair *et al.*, (2021). In general, the measurement and structural

models satisfy the criteria essential for their application in hypothesis testing.

DATA RESULT

Structure Model Result

The measuring model was first evaluated for reliability and validity illustrated in **Table 2**. All constructs demonstrated strong internal consistency with Cronbach's alpha (α), Composite Reliability (CR) values above the acceptable 0.70 (Nunnally & Bernstein, 1994), α from 0.773 to 0.912, and CR values ranging from 0.817 to 0.926. Convergent validity proved to be largely supported, as three of five components, agreeableness, extraversion, and self-efficacy, with AVE values were over the suggested 0.50 level, showing that the latent structures explained most of the Variance in the indicators (Fornell & Larcker, 1981). Entrepreneurial Intention (EI = 0.479) and Openness (OP = 0.495) had AVE values over the 0.50 limit, but their CR values were larger than 0.70, which, according to Fornell & Larcker (1981) and Hair *et al.*, (2021), still allows for adequate convergent validity in these situations. Indicator reliability was examined by outer loadings, and while most indicators exhibited loadings over the required level of 0.70, several items were preserved despite lower values because of strong theoretical justification and contribution to construct content validity, shown in **Table 3**. However, the CR value overall and AVE for constructs were within acceptable ranges, enabling the inclusion of those metrics. Indicators with loadings ranging from 0.40 to 0.70 are preserved if the CR value and AVE indicate appropriate construct dependability and convergent validity, as stated by Hair *et al.*, (2021). Discriminant validity was tested using the Heterotrait-Monotrait ratio (HTMT), and most HTMT values were below the conservative threshold of 0.85 (Henseler, Ringle, & Sarstedt, 2015). However, two values, EI-OP (0.903) and EI-SE (0.872), slightly exceeded this threshold; they remain within the more lenient cut-off of 0.90. Because these categories are logically related, discriminant validity is permitted for the current research. Multicollinearity was nonexistent, as all Variance Inflation Factor (VIF) values were below the permitted level of 3.3 (Diamantopoulos & Siguaw, 2006), illustrated in **Table 3**. Explanatory power of the model was examined by R² values: self-efficacy 0.588, entrepreneurial intention 0.668, which equated to moderate to large explanatory capacity based on Cohen's (1988) recommendations. Evaluation of model fit was conducted using the Standardized Root Mean Square Residual (SRMR) of 0.078 below 0.08 as an acceptable model fit criterion (Henseler, Hubona, & Ray, 2016). The data show that the measurement and structural models are adequate for future hypothesis testing.

Table 2 Model fit and validity measures

Construct	AG	EI	EX	OP	SE	Cronbach's alpha	Composite Reliability	AVE
AG	0.708					0.756	0.832	0.501
EI	0.517	0.692				0.912	0.926	0.479
EX	0.477	0.697	0.809			0.868	0.905	0.655
OP	0.506	0.744	0.697	0.703		0.721	0.817	0.495
SE	0.528	0.733	0.683	0.702	0.771	0.773	0.854	0.595

The diagonal values, highlighted in bold, represent the square root of the Average Variance Extracted (AVE), while non-diagonal values indicate correlation coefficients among constructs.

Source: Researcher(s) calculation.

Table 3 Standard factor loading

	AG	EI	EX	OP	SE
AG1	0.786				
AG2	0.643				
AG3	0.580				
AG4	0.802				
AG5	0.704				
EI1		0.606			
EI2		0.727			
EI3		0.595			
EI4		0.615			
EI5		0.654			
EI6		0.498			
EI7		0.397			
EI8		0.695			
EI9		0.748			
EI10		0.793			
EI11		0.815			
EI12		0.801			
EI13		0.814			
EI14		0.779			
EX1			0.818		
EX2			0.800		
EX3			0.833		
EX4			0.792		
EX5			0.801		
OP1				0.790	
OP2				0.814	
OP3				0.717	
OP4				0.267	
OP5				0.776	
SE1					0.731
SE2					0.801
SE3					0.774
SE4					0.777

Source: Researcher(s) calculation.

Structural Path Analysis and Hypothesis Testing

Direct Effects

The hypothesized model was tested using standardized path coefficients via SEM analysis. Multiple direct pathways were statistically significant, as seen in **Fig. 2**, and **Table 4** provides comprehensive information regarding the mediation analysis.

Specifically, extraversion (EX) was positively linked with self-efficacy and entrepreneurial intention (EI); standardized regression coefficients were (EX → SE = β = 0.334, p < 0.001) and (EX → EI = β = 0.21, p = 0.001), respectively. These data support hypotheses H1(a) and H1(b). This conclusion is consistent with past research demonstrating that extraverted individuals, since they are forceful and social, regard themselves as ready in business environments and demonstrate high entrepreneurial ambition.

In addition to these findings, openness (OP) demonstrated a substantial and statistically significant positive connection with self-efficacy (OP → SE = β = 0.379, p < 0.001) and entrepreneurial intention (OP → EI = β = 0.339, p < 0.001), confirming hypotheses H3(a) and H3(b). This shows that open-minded, innovative, and curious persons have greater self-confidence and tend to be more likely to become entrepreneurs (Leutner *et al.*, 2014).

For agreeableness (AG), the study gave a more nuanced conclusion. The variable revealed a statistically significant positive influence on self-efficacy (SE) (β = 0.177, p < 0.05), thus confirming hypothesis H2(a), which anticipated that those high in agreeableness would have more confidence in their own talents. This finding is consistent with

the idea that agreeable individuals - often characterized by traits such as cooperativeness, empathy, and trustworthiness - are more likely to experience positive social interactions that bolster their belief in personal capabilities (Zhao *et al.*, 2010; Sun & Zhang, 2014). However, the straight path from agreeableness (AG) to entrepreneurial intention (EI) was not statistically significant ($\beta = 0.082, p > 0.05$), resulting in a rejection of hypothesis H2 (b). This implies that while agreeableness (AG) may build internal psychological resources like self-efficacy (SE), it does not, on its own, function as a direct motivational push for entrepreneurship. These findings show that the nurturing and conflict-averse nature of pleasant people may make them less motivated to follow the intrinsically uncertain and risk-prone path of entrepreneurship (Rauch & Frese, 2007; Leutner *et al.*, 2014).

Finally, self-efficacy (SE) itself was robust, statistically significant, and positively linked with entrepreneurial Intention ($SE \rightarrow EI = \beta = 0.308, p < 0.001$), confirming Hypothesis H4. People with stronger self-efficacy (SE) are more likely to be entrepreneurs based on the motivational pathways indicated in Bandura's (1986) social cognitive theory. The intensity and relevance of this path also conform to past empirical investigations in established and emerging economies (Zhao *et al.*, 2005). In a society like Vietnam, where entrepreneurial activity is more and more considered as a method for upward mobility and creativity, our results show that enhancing people's confidence in their entrepreneurial ability might be a crucial step to increase entrepreneurial participation.

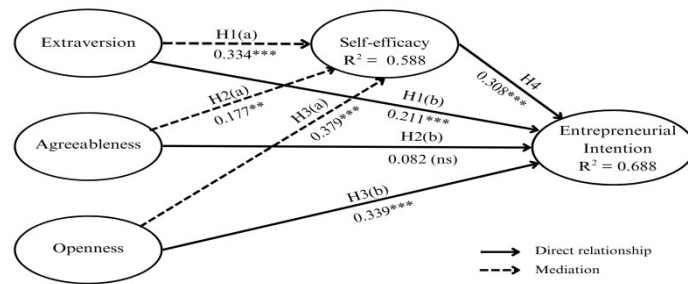


Fig. 2: Hypothesized model

Table 4 Hypothesized relationships

Construct Path	Standardized Regression Coefficient (p-values)	p-value	Hypothesis Result
EX-SE	0.334***	<0.001	H1a: Accepted
EX-EI	0.211**	<0.01	H1b: Accepted
AG-SE	0.177**	<0.01	H2a: Accepted
AG-EI	0.082 (ns)	>0.05	H2b: Rejected
OP-SE	0.379***	<0.001	H3a: Accepted
OP-EI	0.339***	<0.001	H3b: Accepted
SE-EI	0.308***	<0.001	H4: Accepted

*** (significant at the level of 0.001), ** (significant at the level of 0.01), * (significant at the level of 0.05), ns (not significant).

Source: Researcher(s) calculation.

Mediation Analysis

In analyzing the mediating influence of personality characteristics on entrepreneurial intention, we employed the bootstrapping approach of Preacher and Hayes (2008) with 5,000 resamples and a 95% confidence interval. This delivers better estimates of indirect effects and eliminates constraints of Sobel tests. This study assesses the total, direct, and indirect consequences of each hypothesis according to Baron and Kenny's (1986) recommendations. To determine significance, researchers analyzed the bias-corrected lower and upper bounds of the confidence interval (LLCI, ULCI, respectively) for the presence of zero. Table 5 provides comprehensive information regarding the mediation analysis.

Table 5 Mediation estimation (Bootstrap sample size = 5,000).

Construct Path	Standard Total Effect	Standard Indirect Effect (Lower Limit of Confidence Interval, Upper Limit of Confidence Interval)	Standard Direct Effect (Lower Limit of Confidence Interval, Upper Limit of Confidence Interval)	Hypothesis Result
EX-SE-EI	0.314*** (0.201, 0.426)	0.103** (0.040, 0.184)	0.211*** (0.090, 0.329)	H5a: Partial mediation
AG-SE-EI	0.316** (0.042, 0.242)	0.055* (0.017, 0.103)	0.082 (ns) (-0.016, 0.192)	H5b: Full mediation
OP-SE-EI	0.456*** (0.317, 0.591)	0.117*** (0.054, 0.180)	0.339*** (0.191, 0.495)	H5c: Partial mediation

*** (significant at the level of 0.001), ** (significant at the level of 0.01), * (significant at the level of 0.05), ns (not significant).

Source: Researcher(s) calculation.

The mediation study found that self-efficacy partially mediated the link between extraversion and entrepreneurial elevation. The indirect impact of EX on EI via SE was statistically significant ($\beta = 0.103$, 95% $p > 0.006$), whereas the direct effect of EX on EI was significant as well ($\beta = 0.211$, $p = 0.001$), showing partial mediation. Such results corroborate Hypothesis H5a and imply that extraverted persons generate entrepreneurial aspirations directly and indirectly through greater entrepreneurial self-efficacy.

In contrast, the mediation analysis found that self-efficacy mediated the association between agreeableness and entrepreneurial intention. The indirect effect of AG on EI via SE was statistically significant ($\beta = 0.055$, $p < 0.05$), confirming Hypothesis H5. It indicates that agreeableness contributes to entrepreneurial intention only through higher self-efficacy. Agreeable individuals may not directly encourage entrepreneurship, but their cooperative and empathic attitude may boost their confidence in their talents and hence their entrepreneurial objective.

In terms of openness to experience, results were again in agreement with a partial mediation model (H5c). The indirect and direct effects were statistically significant, with SE accounting for a large part of the influence of OP on EI ($\beta = 0.117$, $p < 0.001$), and the direct effect of OP on EI also remained significant ($\beta = 0.339$, $p < 0.001$). That trend concurs with international studies characterizing openness as a primary psychological resource enabling entrepreneurial cognition through greater self-efficacy (Sahin *et al.*, 2019; Liu, Lin, Zhao, & Zhao, 2019).

DISCUSSION

In this study, extraversion, openness to experience, and agreeableness are personality qualities that clearly impact entrepreneurial intention (EI) among university students in Vietnam. The mediating impact of SE also reveals that individual psychological beliefs alter personality-driven inclinations into tangible entrepreneurial motivation. These findings confirm fundamental assumptions of the Theory of Planned Behavior (Ajzen, 1991) and Social Cognitive Theory (Bandura, 1986), in which intention and perceived behavior control (self-efficacy) are important to action.

Extraversion was positively connected with self-efficacy and entrepreneurial intention. Extroverts tend to be more forceful, gregarious, and proactive - attributes that create confidence in managing uncertainty, networking and taking initiative (Zhao *et al.*, 2010; Caliendo *et al.*, 2014). This study indicates the advantage of social orientation and emotional expressiveness in entrepreneurial decision-making in an emerging entrepreneurial environment such as Vietnam's.

Openness to experience also predicts self-efficacy and entrepreneurial intention. Individuals high in openness are innovative, adaptable, and open to new ideas - traits essential for opportunity recognition and creativity (McCrae & Costa, 1987; Rauch & Frese, 2007). In Vietnam's dynamic economy, where adaptation and creativity are increasingly expected, openness is possibly a particularly significant entrepreneurial quality.

More indirectly, agreeableness is altered. Although not directly associated with entrepreneurial intention, it predicted self-efficacy, which in turn boosted entrepreneurial intention. That is, cooperative, sympathetic, and team-oriented people may nevertheless acquire entrepreneurial desire in supportive situations that improve their confidence (Caprara *et al.*, 2010; Sun & Zhang, 2014). This approach

conforms to the collectivist cultural environment of Vietnam, which values societal harmony and relationship trust.

These data demonstrate that self-efficacy drives entrepreneurial intention. People, who feel they can manage entrepreneurial responsibilities, take measured risks, and overcome problems are significantly inclined to follow entrepreneurial pathways (Newman *et al.*, 2019). And the mediation impact of self-efficacy across all three personality qualities implies that growing confidence is just as crucial as possessing the proper attributes.

CONCLUSIONS AND IMPLICATIONS

This study explains the psychological determinants of entrepreneurial intention among university students in Ho Chi Minh City, Vietnam. The results clearly demonstrate that self-efficacy plays a key role in shaping students' entrepreneurial intentions. Specifically, extraversion and openness to experience as personality qualities have both direct and indirect influences on entrepreneurial intention mediated by self-efficacy. Extraverted individuals, marked by social initiative, exhibit more confidence in entrepreneurial task execution, hence enhancing their entrepreneurial intents. Similarly, individuals with high levels of openness are often more imaginative and adaptable, increasing their propensity to see possibilities and participate in entrepreneurial activities.

Unexpectedly, agreeableness appears not to directly influence entrepreneurial intentions. But it does contribute to self-efficacy, which works towards enhancing the chances of entrepreneurial intention. Although agreeable individuals may not inherently want the risks associated with entrepreneurship, their cooperative and empathic disposition cultivates an internal conviction to engage in entrepreneurial endeavors. The research demonstrates that self-efficacy is a significant predictor of entrepreneurial intention and a crucial mediator transforming personality into tangible entrepreneurial ambition. The structural model, which explains 66.8% of the variance in entrepreneurial intention, corroborates the theoretical frameworks of the Theory of Planned Behavior and Social Cognitive Theory, both of which emphasize the importance of self-efficacy as a precursor to behavioral intents.

Practically, the findings of this study have substantial consequences for training instructors and institutions of higher education. Effectively cultivating entrepreneurial attitudes in students requires more than just theoretical instruction or broad motivational encouragement. Rather, education systems must focus on growing students' self-efficacy via active and participatory learning processes. Courses on entrepreneurship must incorporate hands-on activities, business simulations, and the chance for students to work in real companies. Students' exposure to mentoring programs, chances for peer cooperation, and engagement with successful entrepreneurs can greatly enhance students' confidence in their entrepreneurial ability. Furthermore, by establishing a learning culture that emphasizes creativity, resilience, and deliberate risk-taking, institutions can cultivate not just the essential skills but also the psychological preparation for entrepreneurship.

Policymakers have a crucial role to play in the facilitation of entrepreneurial self-efficacy developing among young people. National policies and programs should extend beyond only giving financial support or regulatory support; they should also examine activities that build confidence and motivating factors. Recognition and praise of student-initiated entrepreneurial activity, offering financial aid connected to the success of entrepreneurial ventures,

and guaranteeing fair access to entrepreneurial education are all crucial measures.

Additionally, the incorporation of entrepreneurial mentality throughout the broader educational curriculum - starting from early childhood all the way to university - can generate a more entrepreneurial generation cohort to contribute to driving innovation and economic success.

Lastly, the report identifies possibilities for future research that are intriguing. As the sample was confined to urban students in Ho Chi Minh City, follow-up study may extend to rural areas or other parts of Vietnam in an attempt to examine potential variances in personality characteristics and entrepreneurial self-efficacy. Long-term research may also explore how entrepreneurial ambitions grow over time, particularly as student's transition into the labor force. Moreover, an examination of other psychological variables - such as conscientiousness or locus of control - and how they interact with environmental and cultural factors can contribute to our knowledge of the true reasons why young people launch their own economic operations. In conclusion, this study emphasizes the significance of fostering not just entrepreneurial talent but also the psychological self-belief that motivates people to take action. Building a generation of resilient, skilled, and confident entrepreneurs involves purposeful work across education, policy, and community support systems.

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