

The effect of entrepreneurial education on entrepreneurial intention among master students: prior self-employment experience as a moderator

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Abstract

Purpose – This article aims to draw a conceptual model that integrates the view from the entrepreneurial event model with entrepreneurial education and prior self-employment experience. The model tests the role of entrepreneurial education on the formation of intentions to become an entrepreneur and examines whether prior self-employed experiences moderate the route from entrepreneurial education, entrepreneurial perceived feasibility (PF) and perceived desirability (PD) into the entrepreneurial intention (EI).

Design/methodology/approach – The authors operated on a sample of 389 master's students by applying Cronbach's alpha, exploratory factor analysis, confirmatory factor analysis and structural equation modelling to illustrate the links between constructs.

Findings – The study found that entrepreneurial education is positively correlated with PF, PD, and intention to enter entrepreneurial activities. PD is determined as a partial mediator in the entrepreneurial education–intention link and full mediator in PF and EI. Moreover, the study revealed that prior self-employed experiences serve as a positive moderator in the path from entrepreneurial education and PD to EI.

Practical implications – The study offers several recommendations based on research findings so as to nurture and promote entrepreneurial activities among master's students.

Originality/value – The current research provides novel insights about the relationship between entrepreneurial education and intentions to become an entrepreneur over and about the central antecedents in the entrepreneurial event model and moderation effects of prior self-employed experiences.

Keywords Entrepreneurial education, Prior self-employment experience, Perceived feasibility, Perceived desirability, Entrepreneurial intention

Paper type Research paper

1. Introduction

Today, entrepreneurship is broadly acknowledged as a central component for becoming successful in our society because of its numerous contributions to economic growth, maintenance of social stability, jobs creation and innovative and technological advancement (Bach, Ly Dai, Nguyen, & Le, 2022; Cong & Thu, 2021; Hassan, Lashari, & Basit, 2021; Maciejewski & Wach, 2019; Nguyen, 2020; Nowiński, Haddoud, Wach, & Schaefer, 2020;

JEL Classification — L26, L29, M10

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Otache, Umar, Audu, & Onalo, 2019; Wach & Głodowska, 2021; Wach, Maciejewski, & Głodowska, 2022). Many countries have been substantively investing in entrepreneurial education and training to foster entrepreneurial activities (Walter & Block, 2016). Thus, scholars have become increasingly interested in the outcome of such efforts (Duong, 2021). Moreover, entrepreneurial education and training can be used as effective tools to nurture individuals' desirability and intention to become an entrepreneur (Zhang, Duyster, & Cloodt, 2014). However, there is a lack of convincing statistical evidence supporting the significant impact of entrepreneurial education on the intention to enter a business venture, as there are inconsistencies in prior studies (Maheshwari, 2021). Indeed, many scholars argue there is a positive relationship between entrepreneurial education and the intention to become an entrepreneur (e.g. Hasan, Khan, & Nabi, 2017; Hoang, Le, Tran, & Du, 2020; Zhang *et al.*, 2014). However, others claim this association is not statistically significant (e.g. Duong, 2021; Iwu *et al.*, 2020), with several studies finding that entrepreneurial education reduces the intention to become an entrepreneur (e.g. Nabi, Walmsley, Liñán, Akhtar, & Neame, 2018; Oosterbeek, Praag, & Ijsselstein, 2010).

In terms of the impact of entrepreneurial education on the intention to enter a business venture, we do not know how mediate this link is mediated by the underlying mechanisms of two constructs in Shapero and Sokol's (1982) entrepreneurial event model, including perceived feasibility (PF) and PD (Zhang *et al.*, 2014). Moreover, Fayolle and Liñán (2014) emphasize the existing knowledge gap in the exploration of entrepreneurial education's impact on precursors of individuals' intention to become an entrepreneur. This issue warranted future research on explaining how entrepreneurial education indirectly contributes to the formation of entrepreneurial intention (EI) via PD and PF. Furthermore, several recent studies foreground investigating the role of prior self-employment experiences in shaping EI and behaviour (e.g. Miralles, Giones, & Riverola, 2015; Nguyen, 2018). However, almost all these studies only explain the direct effect of prior self-employment experiences and EI. They largely neglect the moderating impacts of prior self-employment experiences on the linkages between antecedents and EI (Zapkau, Schwens, Steinmetz, & Kabst, 2015).

The current study aims to integrate the view from Shapero and Sokol's (1982) entrepreneurial event model with entrepreneurial education literature (Walter & Block, 2016) to draw a conceptual framework investigating how entrepreneurial education can form master's students' PF, PD and EI. Moreover, this study simultaneously explores the catalytic role of prior self-employment experiences in the paths from entrepreneurial education, PF and PD to intention to become an entrepreneur.

Our article conveyed five main parts: Introduction, literature review, methods, results and discussion and conclusions.

2. Literature review

2.1 Shapero and Sokol's entrepreneurial event model

Recently, scholars have highlighted the importance of intention-based frameworks that include perspectives based on theory and the process of investigating precursors of intention to become an entrepreneur (Duong & Le, 2021). These frameworks provide useful insights into explaining how individuals' entrepreneurial decisions are made when they recognize business opportunities and also have high perceptions of feasibility and desirability (Ivanova, Treffers, & Langerak, 2018; Van Trang, Do, & Luong, 2019). Douglas and Shepherd (1997) define EI as the intent to establish a new business venture or the intent to be self-employed, whereas Fayolle and Liñán (2014) define EI as the level of cognitive awareness concerning establishing a new business venture. Intentional approaches have been increasingly considered in recent studies about entrepreneurship, since EI serves as the central factor in the entrepreneurial process (Duong, 2021). Moreover, recent statistical

evidence illustrated that entrepreneurial behaviour is intentional, reasonably planned and most importantly, might be explained by the intention to become an entrepreneur (Calza, Cannavale, & Nadali, 2021; Neneh, 2019). Intentional models – along with the indirect influences of entrepreneurial education – act as conceptual frameworks to explain why individuals have the intention to enter entrepreneurial activities (Gurel, Madanoglu, & Altinay, 2021; Hoang *et al.*, 2020; Otache *et al.*, 2019) and then transform the initial intention to actual entrepreneurial action (Calza *et al.*, 2021; Gieure, Benavides-Espinosa, & Roig-Bobón, 2020). Thus, a variety of competing behavioural intention models have been developed in the entrepreneurship literature to explore individuals' EI and its precursors (Maheshwari & Kha, 2021; Wach & Bilan, 2021). Shapero and Sokol's (1982) entrepreneurial event model is a well-known entrepreneurship theory that has been widely applied to explore EI and behaviour (e.g. Guzmán-Alfonso & Guzmán-Cuevas, 2012; Zhang *et al.*, 2014). Shapero and Sokol's (1982) entrepreneurial event model suggests that the intentions to originate a start-up event – such as the intent and action to establish a new venture – are derived from two central precursors: PD and PF.

First, PD is determined as the level to which a person considers establishing their own firm attractive (Shapero & Sokol, 1982). This means PD can affect entrepreneurial action throughout its impacts on the intention to become an entrepreneur (Duong & Le, 2021). Others define PD as the level of individual attractiveness in forming a new venture (Krueger, Reilly, & Carsrud, 2000; Zhang *et al.*, 2014). Therefore, when individuals perceive entrepreneurship as a desirable and favourable path, their intentions to become an entrepreneur are higher (Miralles *et al.*, 2015; Martínez, Crespo, & Laviada, 2017).

Second, scholars define PF as the level to which a person perceives their personal ability related to establishing a new business venture (Shapero & Sokol, 1982). Moreover, others define PF as a person's perception of abilities to develop entrepreneurial activities (Martínez *et al.*, 2017). Individuals not only perceive entrepreneurship as a desirable career path but they also need to perceive that this career choice is rationally feasible (Duong & Le, 2021). Schlaegel and Koenig (2014) emphasize that individuals with high perceptions of feasibility more likely have greater desirability and higher intention to create their own business ventures. Last, almost all previous research disregards the mediation's nature only to consider direct impacts of PD and PF on EI (Urban & Kujinga, 2017). Thus, besides testing direct relationships between PF, PD and EI, our study examined the mediating roles of PF and PD on the linkage between entrepreneurial education and intention to become an entrepreneur among Vietnamese master's students. Consequently, we posit the following hypotheses:

H1. Entrepreneurial intention is positively affected by (a) PD and (b) PF.

H2. PD is positively affected by PF.

2.2 The role of entrepreneurial education

Entrepreneurial education is identified as any pedagogic program or educational process for start-up attitude and abilities (Hahn, Minola, Gils, & Huybrechts, 2017). Entrepreneurial education is also considered a pedagogical program that imparts essential entrepreneurial skills, knowledge, abilities, and ethics for learners to help prepare them to transform business ideas into EI and actual behaviour (Duong, 2021). Entrepreneurial education is classified into three categories. First, education about new venture creations concentrates on the approaches to theories involved in creating, running, and managing an enterprise, which is linked to traditional educational methods. Theories about entrepreneurship are arranged as tools to impart business knowledge and skills to learners and help them gain awareness about the yield of entrepreneurial practices (Hoang *et al.*, 2020). Second, education for new

venture creation takes practicality into account and applies approaches to establish, operate and control a business firm. Learners are inspired to obtain practical ability and knowledge about entrepreneurship via this approach (Nowiński *et al.*, 2020). Scholars refer to the above as activities-based education methodologies that encourage learners to have a favourable attitude towards entrepreneurship (Duong, 2021). Third, education in new venture creation is related to training for nascent entrepreneurs who have already created their own firms. An education program is often cemented with knowledge about marketing, selling, strategy, or new product and service development, which aim to ensure new ventures can survive and develop (Harmeling & Sarasvathy, 2013; Piperopoulos & Dimov, 2015).

The association between entrepreneurial education and EI has been tested by several prior studies at various educational degrees, including primary and secondary schools (e.g. Ni & Ye, 2018), high schools (Kusumojanto, Wibowo, Kustiandi, & Narmaditya, 2021) and higher education (Duong, 2021; Hoang *et al.*, 2020). Nowiński *et al.* (2020) revealed that entrepreneurial education significantly contributes to fostering intentions to become an entrepreneur, because students are equipped with entrepreneurial knowledge and skills, which nurture their motivation to be involved in entrepreneurial activities. Indeed, several recent studies also report that entrepreneurship could be imparted throughout educational programs (Duong, 2021; Maresch, Harms, Kailer, & Wurm, 2016; Ratten & Usmanij, 2021). However, the findings of previous studies about the relationship between entrepreneurial education and EI are inconsistent (Adelaja, 2021; Biswas & Verma, 2021). Several studies report that entrepreneurial education is positively and dramatically correlated with the intention to enter entrepreneurial activities (e.g. Hoang *et al.*, 2020; Walter & Block, 2016). Others claim this linkage is weak (e.g. Adelaja, 2021) or insignificant (Duong, 2021; Iwu *et al.*, 2020), with some studies reporting that entrepreneurial education can decrease intentions to engage in entrepreneurship (e.g. Oosterbeek *et al.*, 2010). Consequently, current research calls for further explanation of this relationship (Maheshwari, 2021).

Moreover, the inconsistency of previous studies about the entrepreneurial education-intention link can be derived from the interrelations between antecedents and intentions to become an entrepreneur (Duong, 2021). In other words, entrepreneurial education can affect two constructs in Shapero and Sokol's (1982) entrepreneurial event model, including PF and PD. Several previous studies report that entrepreneurial education could increase the desirability of entrepreneurship (e.g. Hattab, 2014; Păunescu, Popescu, & Duennweber, 2018). Prathap and Sreelakshmi (2021) suggest that when individuals receive entrepreneurial education, their perception of feasibility related to entrepreneurship can be higher. Therefore, we posit the following hypothesis to test the associations between entrepreneurial education, PF, PD and EI among Vietnamese master's students:

H3. Entrepreneurial education positively impacts (a) PF, (b) PD and (c) EI.

2.3 The moderating role of prior self-employment experience

Nguyen (2018) reports that individuals' engagement in the formation of different enterprises could provide them with the chance to acquire knowledge and skills about entrepreneurship, along with the awareness of risks and issues related to doing business. A person's prior self-employment experience is determined as the major antecedent that helps predict their entrepreneurial activities (Miralles *et al.*, 2015). These experiences are expected to significantly affect intentions to become an entrepreneur (Bignotti & le Roux, 2020; Wang, Zhao, Wei, & Zhou, 2021). Gird and Bagraim (2008) found that prior self-employment experiences wield a positive impact on EI among final-year university students in South Africa. Moreover, Basu and Virick (2008) report that entrepreneurial behaviour is significantly predicted by education and previous self-employment experiences. Moreover, Shane (2000) highlights that prior experiences related to customers, markets, products,

marketing or management influence individuals' abilities to recognize and capture business opportunities and then affect entrepreneurial behaviour. In other words, profound self-employment experiences can provide easier access to necessary resources, thus dramatically contributing to individuals' perceptions of the desirability and feasibility of forming a new business venture (Nguyen, 2018).

However, almost all previous only explain only the direct link between prior self-employment experience and the intention to become an entrepreneur. They largely neglect that prior self-employment experiences can serve as the moderator in the paths from antecedents to EI (Walter & Heinrichs, 2015). Indeed, regarding moderating effects, prior self-employment experience can increase the impacts of entrepreneurial education, PF and PD on intentions to become an entrepreneur for the following reasons. First, individuals with prior self-employment experiences can understand how to create a novel business venture and how to manage the entrepreneurial process; thus, they can have higher self-efficacy and higher desirability to engage in entrepreneurial activities than others (Basu & Virick, 2008; Bignotti & le Roux, 2020). That is, the impacts of PD and PF on EI among individuals with prior self-employment experiences can be much higher than others without prior self-employment experience. Second, individuals with prior self-employment experiences can obtain knowledge and skills related to entrepreneurship better than those without real business experiences because people with prior self-employment experiences already have a fundamental understanding of real business skills (Nguyen, 2018). Consequently, the impacts of entrepreneurial education on EI among master's students with prior self-employment experience can be higher than among students without prior self-employment experience. Thus, we propose the following hypothesis to test the moderating role of prior self-employment experiences in the paths from entrepreneurial education, PF and PD to EI:

H4. Prior self-employment experience moderates the paths from (a) entrepreneurial education, (b) PF and (c) PD to EI such that when master's students have prior self-employment experiences, the influences of entrepreneurial education, PF, and PD on EI become stronger than for the students without prior self-employment experience.

Figure 1 graphically depicts the conceptual framework.

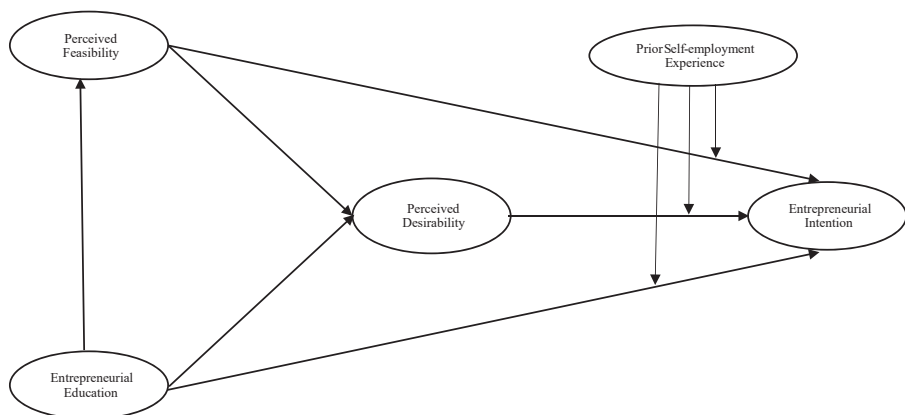


Figure 1.
Conceptual framework

3. Methods

3.1 Data collection and sample

Almost all previous studies about start-up intention surveyed university students rather than nascent entrepreneurs since they are determined as a population with a high inclination towards establishing a new venture after graduation (Duong & Le, 2021; Nowiński *et al.*, 2020). Amofah, Saladrignes, and Akwaa-Sekyi (2020) also highlighted that a master's student sample is appropriate to explore the intention to engage in a business venture because they face a career choice with entrepreneurship seen as a viable path. Moreover, the sample of students helps the current research investigating the role of entrepreneurial education in shaping EI among master's students.

The convenient sampling method with an online-based cross-sectional questionnaire survey was conducted between March 15 and May 15, 2021, at universities in Vietnam. At this time, the Vietnamese government set numerous restrictions to control the spread of the Covid-19 pandemic. Thus, we identified online data collection as the appropriate approach (Nguyen, Pojani, Nguyen, & Ha, 2021). First, an online survey was designed to ensure all personal information of respondents were confidential and circulated through virtual systems such as online communication tools (Facebook, Zalo, Viber) and personal emails. Second, all master's students were clearly informed that their participation was voluntary, they could withdraw any time they wanted, and the survey results were solely used for academic purposes. One thousand online surveys were delivered to the email addresses and Facebook messages of master's students to invite them to partake in the survey with support from lecturers at universities. In total, 411 questionnaire surveys were completed (41.1%); 13 responses were missing values and have been extracted. Finally, the valid dataset of 398 master's students served for further analyses (see Table 1). Although we used the convenience sampling approach to collect the data in our study, we endeavoured to deliver the questionnaire survey to master's students in different universities located across the three main regions in Vietnam – including Northern, Central, and Southern Vietnam – to increase the representative sample.

The sample consisted of 216 female and 182 male students with different age groups: 51.3% aged over 27 years old, 30.7% aged 24–27 and 18.1% aged 20–23. Notably, almost all respondents were economics and business management students, accounting for 82.4%. Nearly half the students had prior self-employment experiences (44.7%), while the number of students whose parents were self-employed or entrepreneurs amounted to 34.4%.

Variables		Frequency	Percentage
Gender	Male	182	45.7
	Female	216	54.3
Age	20–23	72	18.1
	24–27	122	30.7
	Over 27	204	51.3
Fields of study	Economics and business management	328	82.4
	Engineering and others	70	17.6
Prior self-employment experiences	Yes	178	44.7
	No	220	55.3
Family background	Students whose parents are self-employed or entrepreneurs	137	34.4
	Students whose parents are not self-employed or entrepreneurs	261	65.6

Note(s): $N = 389$

Table 1.
Demographic profile of master's students

3.2 Measures and questionnaire development

We used the survey approach to collect the dataset and examine the effects of entrepreneurial education, PD, and PF on the intention to start an own business. All scales used in the current study have been adopted from prior studies. First, the scales of ‘perceived desirability’ (three items) and ‘perceived feasibility’ (three items) were adopted from Krueger *et al.* (2000). Second, the scale of ‘entrepreneurial intention’ (four items) was adopted from Liñán and Chen (2009) and Van Gelderen *et al.* (2008). Third, a five-item scale of “entrepreneurial education” was adapted from Walter and Block (2016). Last, all items were scored on a scale from 1 (strongly disagree) to 5 (strongly agree) as presented in Table 2.

The first section was designed to reflect the respondents’ perceptions of feasibility, desirability and intention to engage in entrepreneurship as well as entrepreneurial education. Demographic characteristics such as age, gender, educational majors, prior self-employed experiences and family background were included in the second section of the questionnaire.

Code	Variables	Pattern matrix (EFA)				Factor loading (CFA)
		EI	PD	PF	EE	
<i>EI</i>	<i>Entrepreneurial intention (Mean = 3.4340; SD = 0.94173; Cronbach's alpha α = 0.916)</i>					
EI1	I have considered becoming an entrepreneur one day	0.860				0.786
EI2	I never see myself becoming an entrepreneur	0.766				0.832
EI3	I have never given the start-up of an enterprise much thought	0.851				0.907
EI4	When the opportunity arises, I will become an entrepreneur	0.932				0.889
<i>PD</i>	<i>Perceived desirability (Mean = 3.2621; SD = 0.82177; Cronbach's alpha α = 0.820)</i>					
PD1	I consider starting my own business very desirable		0.781			0.728
PD2	I consider starting my own business is an attractive idea		0.720			0.768
PD3	I consider an entrepreneurial career to be very desirable		0.785			0.835
<i>PF</i>	<i>Perceived feasibility (Mean = 3.3649; SD = 0.71975; Cronbach's alpha α = 0.776)</i>					
PF1	It would be very practical for me to start my own business			0.758		0.626
PF2	It would be very feasible for me to start my own business			0.806		0.758
PF3	For me it will be simple to create my own business			0.630		0.814
<i>EE</i>	<i>Entrepreneurship education (Mean = 2.5042; SD = 0.75030; Cronbach's alpha α = 0.818)</i>					
EE1	My school education helped me develop my sense of initiative – a sort of entrepreneurial attitude				0.787	0.623
EE2	My school education helped me to better understand the role of entrepreneurs in society				0.807	0.826
EE3	My school education made me interested to become an entrepreneur				0.731	0.765
EE4	My school education gave me skills and know-how that enable me to run a business				0.543	0.706
Note(s): <i>N</i> = 389; SD – standard deviation; EFA – exploratory factor analysis; CFA – confirmatory factor analysis						

Table 2. Cronbach's alpha and descriptive characteristics of variables

3.3 Analytical approach

The SPSS 22.0 (Statistical Package for the Social Sciences) and AMOS (Analysis of A Moment Structures) 22.0 software were used to conduct statistical analyses. First, the normality of variables was tested via several descriptive statistics: mean, standard deviation and skewness-kurtosis values. Second, the reliability and validity of variables were tested through Cronbach's alpha, exploratory factor analysis (EFA) and confirmatory factor analysis (CFA). Third, the relationships among variables in the conceptual framework were tested via structural equation modelling (SEM). Last, mediation coefficients (indirect effects) were tested via regression analyses with the PROCESS macro approach: 5000 bootstrapping samples and 95% confidence interval (Preacher & Hayes, 2004). Scholarship identifies PROCESS macro approach as the norm for mediating, moderating and conditional analyses in social sciences (Hayes, 2017), including entrepreneurship (Duong, 2021). The PROCESS macro approach allows researchers to estimate each indirect relationship independently. Thus, regression parameters in one equation can be estimated but not affect the estimation of the parameters in another equation ascertaining the model (Sarstedt, Hair, Nitzl, Ringle, & Howard, 2020), while some scholars argue that using SEM to test mediation coefficients involved several limitations (e.g. Fan *et al.*, 2016; Sarstedt *et al.*, 2020).

4. Results

4.1 Reliability and validity of scales

In this study, Cronbach's alpha, EFA and CFA were employed to test the reliability and validity of variables in the conceptual framework (see Table 2). First, all constructs showed that their values of Cronbach's alpha were much greater than the cut-off level of 0.7 when the lowest degree of Cronbach's alpha was 0.776 ($\alpha_{PF} = 0.776$). Second, all satisfactory items were used to do the EFA analysis with the principal axis factoring and Promax rotation. Results demonstrated that the Kaiser-Meyer-Olkin measure of sampling adequacy reached 0.887, and the cumulative percentage of initial eigenvalues accounted for 72.657. Moreover, the pattern matrix (EFA) illustrated that all factor loading was higher than 0.5. Thus, all items were used in the CFA (Hair, Howard, & Nitzl, 2020). The results of the CFA are depicted in Figure 2, which demonstrates a great level of model fit when $\chi^2(71) = 117.550$; CMIN/DF (Minimum discrepancy divided by degrees of freedom) = 1.656 < 5; $p < 0.01$; GFI (Goodness of fit index) = 0.958 > 0.9; CFI (Comparative fit index) = 0.984 > 0.9; TLI (Tucker-Lewis coefficient) = 0.979 > 0.9; and RMSEA (Root mean square error of approximation) = 0.041 < 0.5 (Mai, Niemand, & Kraus, 2021). Furthermore, the standardized regression weights of all the observed variables were also greater than 0.5 (Hair *et al.*, 2020).

The convergent and discriminant validity of constructs were tested via the values of average variance extracted (AVE) and composite reliability (CR; Fornell & Larcker, 1981). Table 3 below illustrates that all CR values were higher than 0.6, while all AVE values were over 0.6, while the square roots of the AVE of all variables in Pearson's correlation matrix were also greater than the inter-constructed relations. Therefore, we depicted the convergent and discriminant validity of all scales (Hair *et al.*, 2020).

4.2 Common method variance

Both procedural and statistical approaches were employed to control for common method variance (CMV). First, all observed variables (items) of all constructs were mixed in the process of questionnaire survey design. Second, Harman's one-factor test with an unrotated factor solution was performed to illustrate that an explained variance only reached 41.478%, which was below the cut-off value of 50% (Osborne & Fitzpatrick, 2012). Moreover, Harman's single factor was utilized to perform the CFA. The single factor model reported a very poor fit: $\chi^2(77) = 1025.908$; CMIN/DF = 13.323; GFI = 0.668 > 0.9; AGFI (Adjusted goodness of fit index) = 0.547; CFI = 0.665; TLI = 0.604; and RMSEA = 0.176. This result supported the

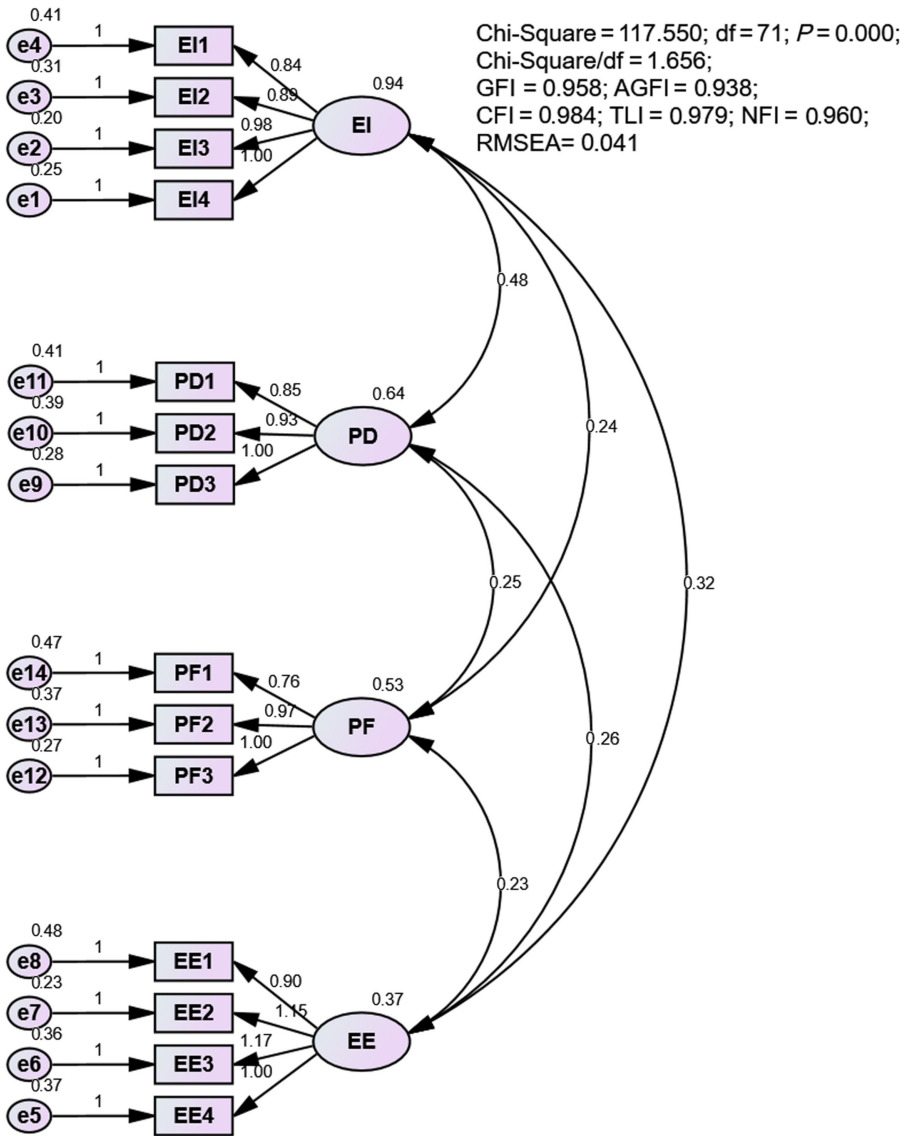


Figure 2.
Measurement model

absence of CMV in our research data (Duong, 2022). Last, the common latent factor test was performed, and then the standardized regression weights of all observed variables for models with and without common latent factor. The results illustrated that the differences in standardized regression weights were lower than 0.2 ($\Delta < 0.2$). Thus, it demonstrated that CMV was not a major issue in our research data.

4.3 Structural model analyses

The analysis results of SEM demonstrated that the model showed an excellent level of fitness (see Figure 3), particularly $\chi^2(70) = 89.553$; CMIN/DF = 1.279 < 5; $p < 0.01$; GFI = 0.969 > 0.9;

CFI = 0.993 > 0.9; TLI = 0.991 > 0.9; and RMSEA = 0.027 < 0.5 (Mai *et al.*, 2021). The squared multiple correlation (R^2) of EI was 0.443, PD was 0.324 and PF was 0.268. These values evidenced that the model represented significant insights regarding predictors of EI with the dataset recruited from among Vietnamese master's students.

The testing results of the hypotheses were summarized in Tables 4 and 5. Specifically, seven hypothesized path coefficients were statistically significant. Therefore, in the suggested directions, hypotheses H1b, H2, H3a, H3b, H3c, H4b and H4c were supported, while two hypothesized relationships were statistically insignificant, thus rejecting hypotheses 1a and H4a.

Regarding the relationships among constructs in Shapero and Sokol's (1982) entrepreneurial event model, our study's results revealed that PF was not directly associated with EI (H1a: $\beta = -0.003$; p -value = 0.973 > 0.05), but it significantly influenced PD (H2: $\beta = 0.254$;

	CR	AVE	MSV	EE	Pearson correlation		PF
					EI	PD	
EE: Entrepreneurial education	0.822	0.539	0.288	<i>0.734</i>			
EI: Entrepreneurial intention	0.916	0.733	0.379	0.537**	<i>0.856</i>		
PD: Perceived desirability	0.821	0.606	0.379	0.531**	0.616**	<i>0.778</i>	
PF: Perceived feasibility	0.779	0.543	0.265	0.515**	0.345**	0.425**	<i>0.737</i>

Note(s): $N = 389$. ** Significance at 0.01 level (two-tailed); AVE – average variance extracted; CR – composite reliability; MSV – maximum shared variance. The diagonal elements (in italic) are the square root of the AVE of each construct

Table 3. Correlation matrix, construct reliability and discriminant validity

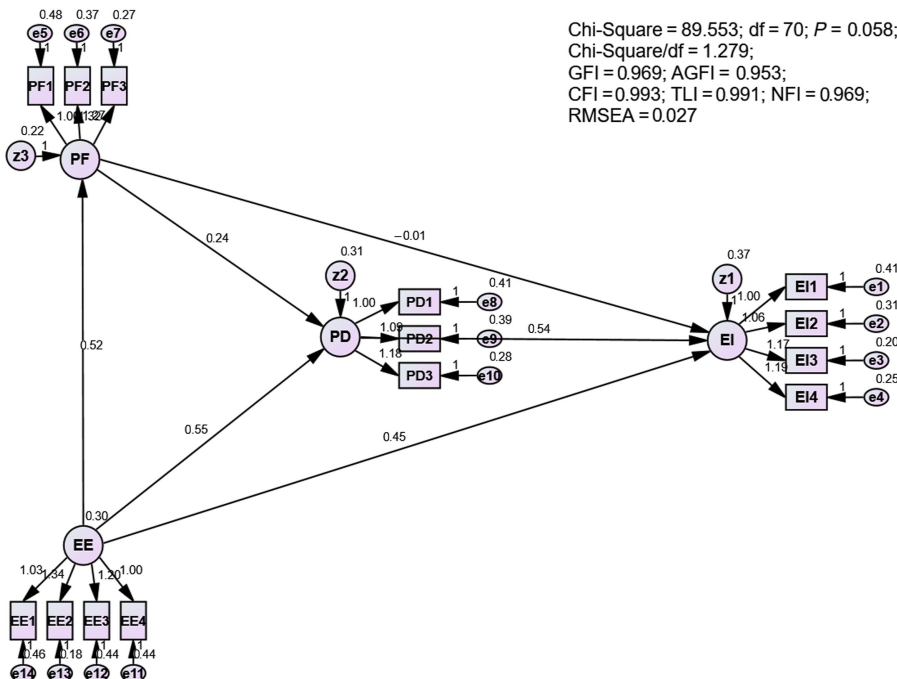


Figure 3. Structural model

Table 4.
Hypotheses testing of
direct associations

Hypotheses	Estimate	SE	CR	<i>p</i> -value	Results
H1a Perceived feasibility → Entrepreneurial intention	-0.003	0.088	-0.034	0.973	Not supported
H1b Perceived desirability → Entrepreneurial intention	0.552	0.079	6.981	***	Supported
H2 Perceived feasibility → Perceived desirability	0.254	0.086	2.963	0.003	Supported
H3a Entrepreneurial education → Perceived feasibility	0.467	0.065	7.235	***	Supported
H3b Entrepreneurial education → Perceived desirability	0.476	0.081	5.850	***	Supported
H3c Entrepreneurial education → Entrepreneurial intention	0.393	0.089	4.402	***	Supported

Note(s): *N* = 389, *** *p* < 0.001

Table 5.
Pearson correlation
coefficient between
prior self-employment
experience and no prior
self-employment
experience groups

Hypotheses	Variables	Entrepreneurial intention		Results
		Prior self-employment experiences	No prior self-employment experiences	
	Intercept	0.452 (0.118)	0.688* (0.019)	
H4a	Entrepreneurial education	0.530*** (0.000)	0.400*** (0.000)	Supported
H4b	Perceived desirability	0.375*** (0.000)	0.367*** (0.000)	Supported
H4c	Perceived feasibility	-0.016 (0.834)	-0.092 (0.260)	Not supported
	<i>N</i> (observations)	178	220	
	ΔF	42.160***	33.275***	
	Adjusted <i>R</i> ²	0.411	0.307	
	ΔR^2	0.421	0.316	

Note(s): *N* = 389, *p*-values are provided in brackets. **p* < 0.05. ***p* < 0.01. ****p* < 0.001

p-value < 0.001). PD was also found to have significant effect on EI (H1b: $\beta = 0.552$; *p*-value < 0.001). Thus, whereas H1b and H2 were supported by our data, H1a was unsupported. The results also revealed that entrepreneurial education had strong and direct impacts on PF (H3a: $\beta = 0.467$; *p*-value < 0.001), PD (H3b: $\beta = 0.476$; *p*-value < 0.001), and EI (H3a: $\beta = 0.393$; *p*-value < 0.001). Therefore, H3a, H3b and H3c were supported by the data.

Table 5 illustrates the results of Pearson's correlation coefficient between two controlled groups of prior self-employment experiences and no prior self-employment experiences. The outcomes showed that the degree of influence of entrepreneurial education and PD on EI among master's students who experienced prior self-employment were much greater than those with no prior self-employed experiences. Significantly, while the degree of influence of entrepreneurial education and PD on EI of master's students who experienced prior self-employment reached 0.530 and 0.375, that of the students without prior self-employed experiences only reached 0.400 and 0.367, respectively. Furthermore, the association between PF and EI was not significant in both groups. Thus, H4a and H4b were supported by the data, while H4c was not supported.

Finally, the PROCESS macro approach with 5000 bootstrapping samples and a 95% confidence interval was employed to examine mediation coefficients (see Table 6). The results showed that entrepreneurial education indirectly affected EI via PD ($\beta_{\text{indirect EE-PD-EI}} = 0.2394$; *p*-value < 0.05), but not via PF ($\beta_{\text{indirect EE-PF-EI}} = 0.0607$; *p*-value > 0.05). Moreover, entrepreneurial

Mediation standardized regression coefficients				Indirect effects	SE	95% confidence interval		
				LLCI	ULCI			
Entrepreneurship education	→	Perceived feasibility	→	Perceived desirability	0.0921*	0.0266	0.0438	0.1487
Entrepreneurship education	→	Perceived feasibility	→	Entrepreneurial intention	0.0607	0.0312	-0.0064	0.1282
Entrepreneurship education	→	Perceived desirability	→	Entrepreneurial intention	0.2394*	0.0431	0.1618	0.3287
Perceived feasibility	→	Perceived desirability	→	Entrepreneurial intention	0.2170*	0.0382	0.1458	0.2949

Note(s): $N = 389$. LLCI – lower level of confidence interval; ULCI – upper level of confidence interval; SE – standard errors. * $p < 0.05$

Table 6.
The mediating tests

education showed to have an indirect effect on PD via PF ($\beta_{\text{indirect EE-PF-PD}} = 0.0921$; p -value < 0.05). Interestingly, PD fully mediated the link between PF and EI ($\beta_{\text{indirect PF-PD-EI}} = 0.2170$; p -value < 0.05).

5. Discussion and conclusions

Recently, scholars have endeavoured to gain more understanding of how entrepreneurial education can contribute to forming the intention to become an entrepreneur (e.g. Duong, 2021; Hahn *et al.*, 2017; Hoang *et al.*, 2020; Maheshwari, 2021; Maheshwari & Kha, 2021; Maresch *et al.*, 2016; Ni & Ye, 2018; Nowiński *et al.*, 2020) as well as how previous self-employment experiences can moderate the way from antecedents to EI (Bignotti & le Roux, 2020). Therefore, we developed a conceptual framework to explore the role of entrepreneurial education and the moderating effects of prior self-employed experiences on the intention to enter entrepreneurial activities among Vietnamese master's students.

Our study results showed that PD was significantly associated with intentions to become an entrepreneur, which aligns with prior research of e.g. Guzmán-Alfonso and Guzmán-Cuevas (2012), Krueger *et al.* (2000), Martínez *et al.* (2017), or Miralles *et al.* (2015). However, we did not find PF to directly affect EI, and this result was not consistent with previous studies with the sample of university students (e.g. Duong & Le, 2021; Esfandiari, Sharifi-Tehrani, Pratt, & Altinay, 2018). This result suggested that although Vietnamese master's students had high perceptions of being capable of establishing a new venture; these perceptions did not directly translate into the intention to become an entrepreneur. Perhaps in emerging countries like Vietnam, even though master's students perceive that they have the capacity to develop a business firm, the poor quality and underdeveloped education system of Vietnam might restrict the transition from this feasible perception to an intention to become an entrepreneur (Hoai An, 2022). Many prior studies affirm that poor educational environments can act as significant barriers to sculpting EI (e.g. Duong, 2021; Tung, Hung, Phuong, Loan, & Chong, 2020). In the current study, the interrelation between PD and PF was also investigated. Results indicate that PD strongly influences PF, which is consistent with recent studies (Duong & Le, 2021). This finding revealed that although PF did not directly contribute to shaping EI, it had an intermediary impact on Vietnamese master's students' intention to become an entrepreneur via PD. In other words, PD acted as a full mediator in the link between PF and EI.

In terms of the role of entrepreneurial education, this study found that entrepreneurial education served as the main predictor of intentions to become an entrepreneur. This result aligns with several recent studies (e.g. Maheshwari, 2021; Otache *et al.*, 2019). The results also

illustrate that entrepreneurial education plays a crucial role in forming PD and PF. These findings demonstrate the important role of entrepreneurial education in encouraging youths' entrepreneurial activities (Hoang *et al.*, 2020; Maheshwari & Kha, 2021), especially for master's students who almost had working experiences. Moreover, this study revealed that PD partially mediated the relation between entrepreneurial education and intentions to engage in entrepreneurial activities among Vietnamese master's students. Importantly, our findings showed that prior self-employment experience acted as an important moderator in the paths from entrepreneurial education and PD to EI. This means that when master's students had prior self-employed experiences, the impacts of entrepreneurial education and PD on intention to become an entrepreneur become stronger than for master's students without prior entrepreneurial experiences.

The current study significantly contributes to a wider understanding of entrepreneurship by filling the research gap between entrepreneurial education and intention to enter entrepreneurial activities. Recent studies have called for further investigation of this relationship (Boubker, Arroud, & Ouajdouni, 2021; Hassan *et al.*, 2021; Maheshwari, 2021). That is, our research sought to address this study gap by explaining the effect of entrepreneurial education on intentions to become an entrepreneur over and above the key antecedents of Shapero and Sokol's (1982) entrepreneurial event model. The findings of this study demonstrate the crucially important role of entrepreneurial education in fostering PF and PD and transferring both into EIs. Furthermore, our findings enrich the scholarship and contribute to entrepreneurship literature by exploring the moderating effects of prior self-employment experiences on paths from entrepreneurial education, PD and PF to the intention to enter entrepreneurial activities. To our best knowledge, no previous studies investigated these moderation effects.

Our study results provide practical implications for educational institutes, practitioners and policymakers. First, PD can be identified as the most powerful antecedent of EIs. Thus, universities and practitioners should have the appropriate policies or solutions to foster students' desire to become an entrepreneur (Entrialgo & Iglesias, 2016; Pham, Jones, Dobson, Liñán, & Viala, 2021). Furthermore, even though PF was not directly correlated with EI, we discovered that it plays an important role in indirectly increasing PD and intention to become an entrepreneur among master's students. Therefore, training programs related to business or business venture creation can help youths increase their personal capability related to entrepreneurship (Duong & Le, 2021).

Second, entrepreneurial education or entrepreneurship courses should be included in the curriculum of the educational system (Duong, 2021). This is especially relevant to master's programs, since the findings of this study confirm that entrepreneurial education can directly nurture the development of PF, PD, and EI among master's students. Third, educational institutes or universities should develop educational programs about entrepreneurship based on real business experiences, which may act as a catalyst for the transfer from PD to EI, and then from EI to actual behaviour (Boubker *et al.*, 2021).

Last, our findings illustrate that prior self-employment experience significant moderate the paths from entrepreneurial education and PD into EI. When master's students already have prior self-employment experiences, the effects of entrepreneurial education and PD on EI become stronger than for students without prior self-employment experiences. In other words, prior self-employment experience is considered an important factor in the process of transition from entrepreneurial education and PD to the intention to become an entrepreneur. Thus, to foster concern for and interest in business venture creation among young people (Miralles *et al.*, 2015; Wang *et al.*, 2021) – especially master's students – we should encourage them to engage in entrepreneurial and business activities. These experiences can play a crucial role in transforming initial business ideas into EIs, even actual entrepreneurial behaviour.

Although this study significantly contributes to both entrepreneurship knowledge and practices, there are several limitations that create opportunities for further studies. First, our research only tested the link between entrepreneurial education and intention to become an entrepreneur. Future research should explore the role of entrepreneurial education in the transformation from EI to become actual behaviour. Moreover, we only examined the relationships between entrepreneurial education and EI at a specific point in time. Further studies should conduct a longitudinal study with a time lag to illustrate how entrepreneurial education affects entrepreneurship over time. Second, the convenience sampling method might have limited our study, so future research should employ random sampling to increase the sample's representation. Finally, our study did not test the impact of demographic variables on EI. Thus, researchers should include these variables in future conceptual framework to enrich our understanding of the role of personal characteristics in entrepreneurial activities.

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