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**Article**

## Entrepreneurial intent of business students: Empirical evidence from a transitional economy

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## BANKING & FINANCE | RESEARCH ARTICLE

# Entrepreneurial intent of business students: Empirical evidence from a transitional economy

Nguyen Dong Phong<sup>1</sup>, Nguyen Thuy Phuong Thao<sup>2</sup> and Nguyen Phong Nguyen<sup>1\*</sup>

**Abstract:** This study, built upon the theory of planned behavior, examines the ability of attitude, social norms, perceived behavioral control, and proactive personality in predicting entrepreneurial intent of business students in Vietnam, a transitional economy. Using a cross-sectional data set from a sample of 396 business students, this study reveals that attitude and social norms toward entrepreneurship and proactive personality significantly influence the entrepreneurial intent of business students, whereas perceived behavioral control toward entrepreneurship does not. These findings suggest that if business students in Vietnam lack confidence in their ability to start new businesses, they should be trained/educated in developing soft-skills rather than focusing only on textbook knowledge.

**Subjects:** Business, Management and Accounting; Entrepreneurship and Small Business Management; Entrepreneurship

**Keywords:** entrepreneurial intent; theory of planned behavior; proactive personality  
**JEL classification:** M100; M130; M160



Nguyen Thuy Phuong Thao

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### PUBLIC INTEREST STATEMENT

This study provides insights into solving this problem by examining the use of Ajzen's model of planned behavior and Bateman and Crant of proactive personality in predicting the entrepreneurial intent of business students in Vietnam. Overall, people with the right attitude toward setting up a new business will generate encouraging results, especially when they possess a proactive approach toward every event occurring in their life, and receive support and encouragement from key people. In contrast, what restrains them from entrepreneurial intent is a lack of confidence in setting up a business, i.e., what keeps them from thinking outside of the box, and makes them question whether they have enough skills and abilities to start and run their businesses. The research results benefit the practitioners on how intentions are formed and how founders' beliefs, perceptions, and motives coalesce into the intent to start a business.

## 1. Introduction

The development of the private sector has provided the Vietnamese economy with a door to the world economy. During Vietnam's subsidy period, the country's economy was close to nepotism, and controlling power was held and manipulated by those with a position in government. In 1986, Vietnam's government approved a strategy of gradual integration into the world economy by launching a political and economic renewal campaign—Renovation (*Doi Moi*). The campaign was a balanced approach to develop both industry and agriculture with a mix of state, collective, and private ownership, which facilitated the transition from a centrally planned economy to a form of market socialism officially termed a “socialist-oriented market economy.” Since then, foreign investment and the establishment and development of private businesses in the production of consumer goods have played a crucial role in the country's economic growth. According to the Library of Congress Federal Research Division (2005), by the late 1990s, more than 30,000 private businesses had been created, and the economy was growing at an annual rate of more than 7%. However, according to Asian Development Bank (2018), by 2018 the private sector had proved its contribution to the wealth of the country by accounting for roughly 60% of the country's GDP (per-capita GDP at current U.S. prices reached \$2,540 in 2018, up from \$1,224 in 2010, the year Vietnam achieved middle-income status according to World Bank criteria). In Vietnam, private enterprises generated 3.35 million new jobs between 2010–2015, or 557,000 new jobs annually, and contributed about \$39 billion to the state budget in 2016, accounting for 79.8% of the total revenue (Asian Development Bank, 2018).

Company Law and Law on Private Enterprise was first adopted in 1990 and later revised into New Enterprise Law in 1999, created a desirable environment for the development of entrepreneurial activities in Vietnam. As a result, Vietnam saw the birth of a new class/career called “entrepreneur.” The development of entrepreneurship in the form of Small and Medium Enterprises (SMEs) became a potent agent for socio-economic diversification as it encouraged de-collectivization. SMEs were formally defined in document 681/CP-KNT issued by the government in 1998. Accordingly, SMEs were those independent business and production establishments that register their business under the current legislation. “Small Enterprises” were referred to as those having registered capital less than VND1 billion and a maximum of 50 employees, while “Medium Enterprises” were those referred to as having capital ranging from VND1 billion to VND5 billion with the number of employees ranging from 51 to 200. The entrepreneurship activities in Vietnam increased significantly and played an essential role in Vietnam's economic map. Pham Nhat Vuong—Vingroup, Dang Le Nguyen Vu—Trung Nguyen, Le Phuoc Vu—Ton Hoa Sen, Bau Duc—Hoang Anh Gia Lai, Mai Kieu Lien—Vinamilk, to name a few, were many famous entrepreneurs have since followed the successful faces of the first entrepreneurial generation in Vietnam. This fact illustrates the proliferation of entrepreneurial activities, and entrepreneurs range from university students to adults, from local Vietnamese to *Viet Kieu* or foreigners, and startups that face strong expectations for their role as key players in the future of the country. However, in Vietnam, entrepreneurship until now has not received adequate attention as the country still has a centrally planned economic system where state-owned enterprises kept control, and the government frequently controlled all market activities.

Many of the studies on entrepreneurship have been conducted in Western countries through the university education system (Schwarz et al., 2009; Souitaris et al., 2007). However, are few studies that focus beyond the West, for example, Engle et al. (2010) and Pruett et al. (2009), who attempted to integrate the nature of entrepreneurial intention in different cultural setups and countries. Unfortunately, entrepreneurship research in Vietnam, a transitional economy, is minimal. Despite the rapid creation of new business ventures in Vietnam, the academic interest in entrepreneurship is limited to a small number of studies (Nguyen et al., 2009; Santarelli & Tran, 2012; Swierczek & Thai, 2003). These entrepreneurship studies, however, focus on issues other than entrepreneurial intentions and their determinants.

Consequently, to develop an understanding of what leads to real venture creation in Vietnam, there is a need to study the cognitive-based factors affecting entrepreneurial intention. According

to Guzmán-Alfonso and Guzmán-Cuevas (2012, p. 722), in recent decades, Western research on the phenomenon of entrepreneurship has increased significantly in both quantity and sophistication. They argue that the rising interest in entrepreneurship parallels its “contribution to economic growth, rejuvenation of productive structure, a relaunch of certain regions, dynamization of the innovative process and generation of employment”. Krueger et al. (2000) argue that the need to predict the behavioral intentions of individuals has increased alongside the growth of new businesses. The primary objective of this study is to examine the degree to which the variables in Ajzen’s model (attitude, social norms, and perceived behavioral control) and proactive personality (Crant, 1996), as operationalized in this study, can be used to predict the entrepreneurial intention of business students in Vietnam. Moreover, the research also seeks to prove that the combination of the four mentioned antecedents offers something new to the literature.

## 2. Literature review

### 2.1. Entrepreneurial intent

Entrepreneurship can be defined as the transformation of innovation into a new product, service, or business in order to take advantage of market opportunities (Prabhu et al., 2012). Guzmán-Alfonso and Guzmán-Cuevas (2012, p. 722) state that the intention to start a firm precedes any attempt at entrepreneurial behavior and is influenced by different factors. Thus, “it is assumed that we can manage these elements in order to affect the entrepreneurial intent positively, and, indirectly, over the venture creation and entrepreneurial behavior in a given territory, as well as over the economic growth at the same time”.

According to Thompson (2009), although the “intentionality” of would-be entrepreneurs has long been stressed as an essential variable in understanding the formation of new business ventures, the term “entrepreneurial intent” has been closely used alongside concepts such as career orientation, vocational aspirations, nascent entrepreneurs, outlook on self-employment, and the desire to own a business. Firstly, Thompson argues that the intent to own a business or to be self-employed is quite different from an entrepreneur setting up a new firm. For example, an individual can own a firm by only buying an existing firm and then retain or put in place managers to run it without undertaking any activities associated with entrepreneurship, or the individual could buy a franchise. Secondly, Thompson (2009, p. 675) distinguishes the term “nascent entrepreneurs” from “entrepreneurial intent”. Specifically, when an individual is involved in the process of many stages, in which the first stage is being conscious of the intention to become an entrepreneur and the last stage is “a period of setting up and operating a new firm, such as creating a legal structure, hiring personnel, or renting space are undertaken”. In essence, the individual can be termed as a nascent entrepreneur. Thirdly, he states that entrepreneurial intent is different from entrepreneurial disposition or personality. Individuals with entrepreneurial intent have given some degree of conscious consideration to the possibility of starting a new business at some stage in the future, and they have not rejected such a possibility. Meanwhile, those with just an entrepreneurial disposition may either possess the consciousness of a possible startup or even reject such a possibility when it arises. In light of the above findings, this study supports the concept of an individual with entrepreneurial intent meets the three criteria as cited in Thompson (2009).

Following on from the above discussion, Thompson (2009) defines the construct as individuals who have the self-acknowledged intent to start a business venture and consciously plans to do so in the future, even if the new business does not eventuate due to unpredictable circumstances. When such individuals undertake advanced actions to further the process of setting up a new business, they may advance to be nascent entrepreneurs. Entrepreneurial intent, therefore, becomes a necessary condition for a nascent entrepreneur while the vice versa is not valid. An individual’s actual behavior may differ from the intended one, while the intent to act toward a planned behavior can predict actual behavior. According to Engle et al. (2010, p. 38), “entrepreneurial intent refers to the intention of an individual to start a new business.” However, while this definition appears to be correct, it is not enough when applied to the Vietnamese market. That is,

entrepreneurs in this developing market represent a diversified community drawing from many classes, which is different from developed countries where the definition of “entrepreneurial intent” was coined. In this paper, an individual with “entrepreneurial intent” is defined as one who wishes to start a business venture and consciously plans to do so in the future, even if unpredictable circumstances halt this plan. The new business should meet the three criteria stated above. That is, if an individual owns a business that is too small in scale, with a manufacturing level that is too low-skilled, or which supplies no products or services to the market, he or she should not be considered as an individual with entrepreneurial intent.

## **2.2. Antecedents of entrepreneurial intent**

The theory of planned behavior proposes three conceptually independent antecedents of intention (Ajzen, 1991). The first predictor of intention is the attitude toward the behavior, which encompasses the extent to which a person has a favorable appraisal of the behavior. The second determinant of intention is the subjective norm, which relates to the perceived social pressure to perform the behavior. The third antecedent of intention is the degree of perceived behavioral control, which is the perceived ease of performing the behavior and the perceived control over the outcome of it. The more favorable the attitude and subjective norm concerning the behavior, and the greater the perceived behavioral control, the stronger the intention to perform the behavior. In the context of entrepreneurship, the theory of planned behavior has been increasingly used since the 1990s, together with other, mostly expectancy-driven, theories focusing on entrepreneurial intent (Boyd & Vozikis, 1994; Krueger, 1993; Krueger & Brazeal, 1994; Krueger et al., 2000).

In the literature, some scholars have investigated the entrepreneurial intention, interest, or propensity of students (Pruett et al., 2009; Turker & Selcuk, 2009). Several contextual variables influencing entrepreneurial readiness have also been identified by prior research. Contextual variables include a broad set of factors that might influence the intention to engage in entrepreneurship activities (Kristiansen, 2001), and include social, cultural, and economic variables. The primary contextual variable used in this research is instrumental readiness (access to capital, access to information, and social networks). For example, Turker and Selcuk (2009) show that educational and structural support factors affect the entrepreneurial intention of students.

Krueger et al. (2000, p. 412) argue that “intentions are the single best predictor of any planned behavior, including entrepreneurship”, and entrepreneurial activity is intentionally planned behavior. Segal et al.’s (2005) study on the motivation to become an entrepreneur reaffirms this groundwork knowledge. They point out there is no relationship between external forces and entrepreneurial activity as external factors are merely a “trigger” that provides a more conducive environment supporting entrepreneurship. Shapero and Sokol’s (1982) model of the Entrepreneur Event (SEE) is an entrepreneurial intention model, which is also based on the cognitive process model, although not so well tested. The other intention model widely used as the main theory-driver model is the theory of planned behavior (TPB) (Ajzen, 1991).

Krueger et al. (2000) show three factors affecting people’ intention to become an entrepreneur. The factors are perceived desirability (the degree to which an individual is attracted to creating his/her own business), perceived feasibility (an individual’s perception regarding his/her capacity to become an entrepreneur), and propensity to act upon opportunities (which depends on the desire to gain control by taking action). The entrepreneurial intention can also be increased when “displacement” events occur (i.e., social pressure) that influence an individual’s desire to take action. Another factor that increases entrepreneurial intention has some family members who are self-employed (Zellweger et al., 2011).

Predicting human behavior is, at best, a difficult task, so the concept of “planning”—a hierarchical thought process leading to a particular action or goal—was created to bridge the gap between intention and action (Engle et al., 2010). According to Segal et al. (2005), during the history of research on predicting behavioral intention, the theories of reasoned action (TRA) (Fishbein & Ajzen, 1975) and the theory of planned behavior (TPB) (Ajzen, 1991) are the most widely applied.

The TRA includes two constructs called attitude towards the behavior and subjective norm. The TPB (Ajzen, 1991) is an extension of the TRA and overcomes the limitations of the TRA by adding another construct called perceived behavioral control (PBC). Ajzen's (1991, p. 195) model consists of three variables in which "attitude toward the behavior" refers to the degree to which an individual has a favorable or unfavorable assessment of a specific behavior determined by the total set of beliefs concerning the many outcomes and attributes. "Subjective norms" refer to the "likelihood that important referent individuals or groups approve or disapprove of performing a given behavior", which is related to the perception an individual has of people's support for the behavior in his/her social environment. "Perceived behavioral control" reflects an individual's perception concerning his/her capacity to achieve desired outcomes, which can be accumulated from experience. Information exchange between an individual and the surrounding environment influences the perceived difficulty of performing the behavior.

Entrepreneurship is a way of thinking that emphasizes opportunities over threats. This way of thinking can be considered as an intentional process, and, therefore, intentions consistently and robustly predict planned entrepreneurial activity. As discussed earlier in this study, while personal and situational variables typically have an indirect influence on entrepreneurial activity, intention-based models offer not only insights into the psychological aspects of targeted individuals but also mechanisms to assess the influence of exogenous parties when creating new ventures (Krueger et al., 2000). Ajzen's (1991) TPB model is probably the most widely accepted approach in predicting the intention to create a new venture; even it does not purely focus on entrepreneurial behavior but rather on all kinds of conduct (Guzmán-Alfonso & Guzmán-Cuevas, 2012). Empirically Ajzen's (1991) model has been supported through much research on the entrepreneurial intention on both micro and macro scale (Engle et al., 2010; Krueger & Brazeal, 1994; Krueger et al., 2000). The overwhelming majority of these studies support the usefulness of Ajzen's theory and his view that behavioral intent is a powerful predictor of the targeted behavior.

### **2.3. Proactive personality as a predictor of entrepreneurial intent**

Bateman and Crant (1993, p. 105) developed the proactive personality concept with a measurement scale of 17 items, which reflect relatively stable behavioral tendencies separate from self-consciousness, the need for achievement, the need for dominance, and the need for the locus of control. People with so-called "proactive behavior" directly alter environments and those with a "proactive personality ... [are] relatively unconstrained by situational forces, effect ... environmental change" and "scan for opportunities, show initiative, take action and persevere until they reach closure by bringing about change". Crant (1996) also points out that more proactive people tend to envision seeking out the desirable environment surrounding him/her to capitalize on individual strengths and needs.

In contrast, people without a proactive personality show little initiative and fail to seize opportunities; they even passively endure circumstances and rely on others to be forced to change. In terms of entrepreneurial intention, Becherer and Maurer (1999) define an entrepreneur as someone who "pursues an opportunity regardless of the resources they control", which fits the proactive personality definition. Crant (1996) found that the proactive personality is positively associated with entrepreneurial intention, and its measurement scale explains a significant amount of additional variance in entrepreneurial intention even when other variables like gender, education and having entrepreneurial parents are added in a regression model.

## **3. Model and hypotheses**

The proposed model and hypotheses were developed based on the Theory of Planned Behaviour (Ajzen, 1991) and the Proactive Personality construct (Bateman & Crant, 1993) and applied to entrepreneurial intent.

### **3.1. Attitude toward entrepreneurship**

In TRA, a person's attitude is used to evaluate a particular behavior; it can be either a positive or negative feeling (Fishbein & Ajzen, 1975). Attitude is "the degree of favorableness and

favorableness of an individual feeling towards a psychological object” (Gopi & Ramayah, 2007, p. 351). This construct can be described as the need to be successful, that is, the effort of a person to achieve set goals. Krueger et al. (2000) state that meta-analyses (Kim & Hunter, 1993) empirically show that intentions successfully predict behavior, and attitudes successfully predict intentions. Guzmán-Alfonso and Guzmán-Cuevas (2012) conclude that Latin America has quite favorable attitudes toward entrepreneurship and starting a business in this region is a common event. In general, the higher the attitude towards entrepreneurship, the stronger the entrepreneurial intention—and consequently, the stronger the possibilities of initiating a business. Krueger et al. (2000) also point out that an individual’s attitude leads to the decision to start a business long before scanning for opportunities. This can be partly explained by the fact we “learn to favor behaviors we believe have largely desirable consequences and we form unfavorable attitudes towards behaviors we associate with mostly undesirable consequences.” (Ajzen, 1991, p. 191); that is, such individuals expect that the outcomes of the attitude will satisfy their needs and wants. Krueger et al. (2000) also found that samples of university business students with favorable attitudes toward entrepreneurship revealed vocational preferences at a time when they faced important career decisions. Therefore, the paper hypothesizes the following:

**H1:** There is a positive relationship between attitudes toward entrepreneurship and entrepreneurial intention.

### **3.2. Social norms toward entrepreneurship**

The second construct of the model named social norms or subjective norms refers to the likelihood that important referent individuals or groups approve or disapprove of performing a given behavior (Krueger et al., 2000). It is related to the perception of the individual of what family members, friends, and mentors think of the behavior (Ajzen, 1991). Studies have shown mixed results regarding subjective norms as predictors of intention. Gopi and Ramayah (2007) point to several studies that show no significant relationship between social norms and intention and other studies that show a significant relationship between them (e.g., Chau & Hu, 2001; Lewis et al., 2003). In their research about entrepreneurial intent in 12 countries (Bangladesh, China, Costa Rica, Egypt, Finland, France, Germany, Ghana, Russia, Spain, Sweden, and the USA), Engle et al. (2010, p. 50) found that “All 12 countries had social norms as a significant predictor (in Costa Rica it alone accounted for 40 percent of the variance in entrepreneurial intent)”. Hence, it can be said that social norms affect individuals’ intent to start their own business. Some people even have the intent to establish their own business when unfavorable conditions exist just because they have observed the experience of their family members or friends who have operated their own business. This construct, originating from TRA, also shows that it is possible for an individual to show entrepreneurial intention as a response to significant social influence and social pressure and proceed to start the process of establishing their own business even though he or she is not in favor of being an entrepreneur (Gopi & Ramayah, 2007). According to Guzmán-Alfonso and Guzmán-Cuevas (2012), this contrasts with many high-income European countries where the absence of a so-called “Entrepreneurial Culture” weakens the intention of becoming an entrepreneur. This is because, in those countries, the existence of the bureaucratic red tape and the excessive protection of workers lessens the intention of entrepreneurial activity. Hence, this study hypothesizes the following:

**H2:** There is a positive relationship between social norms toward entrepreneurship and entrepreneurial intent.

### **3.3. Perceived behavioral control toward entrepreneurship**

The positive association between perceived behavioral control and entrepreneurial intent is also found in previous studies. For instance, Autio et al. (2001) used an international comparative



sample of more than 3000 students in Finland, Sweden, and the USA and found that perceived behavioral control emerges as the most important determinant of entrepreneurial intent. Guzmán-Alfonso and Guzmán-Cuevas (2012) suggest that even if an individual has the right attitude and favorable support from close people, the behavior does not necessarily take place due to factors such as lack of opportunities and resources (e.g., money, time, and skills). Ajzen (1991, p. 724) recognized the limitation of the TRA model and proceeded to review it and add a new factor determining intent called perceived behavioral control which “reflects the individual’s perception concerning the ability to achieve the specific result”. This new model fills the gap of the previous model by setting as a general rule that “the more favorable the attitude and subjective norm with respect to a behavior, and the greater the perceived behavioral control, the stronger should be an individual’s intention to perform the behavior under consideration” (Ajzen, 1991, p. 181); and, at the same time, “the stronger the intention to engage a behavior, the more likely should be its performance” (Ajzen, 1991, p. 188). In other words, it is the degree to which one feels personally capable of starting a business and remains central to the intention toward entrepreneurship (Krueger & Brazeal, 1994). This construct is alternatively called self-efficacy (Byabashaija & Katono, 2011) and represents a distinctive trait distinguishing entrepreneurs from the general population (Krueger & Brazeal, 1994). Therefore, the extent to which the individual feels capable of performing the behavior is based on his/her appraisal of obstacles hindering such performance—with the individual with entrepreneurial intent more likely to investigate obstacles than someone whose intention is not salient. We then hypothesize that the more believable the information and the more influential the support an individual receives, the stronger that individual’s belief in his/her capability on setting up a new business venture and his/her conscious plan to do so at some point in the future in order to become an entrepreneur. Accordingly,

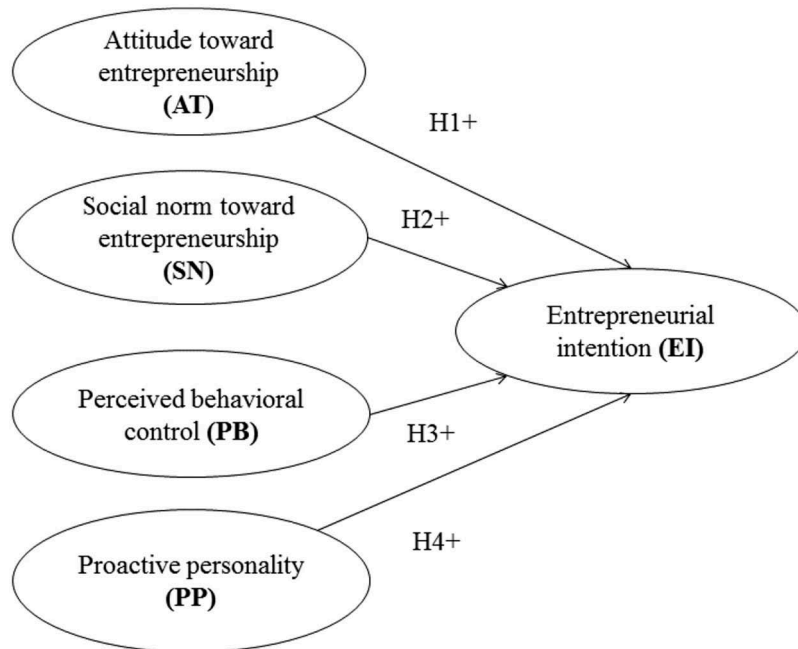
**H3:** There is a positive relationship between perceived behavioral control toward entrepreneurship and entrepreneurial intent.

### **3.4. Proactive personality**

Bateman and Crant (1993) proactive personality construct identifies differences among people based on the extent to which they take action to influence their environments. A prototypical proactive personality is an individual who affects environmental change. Specifically, they “identify opportunities and act on them, show initiative, take action, and persevere until meaningful change occurs” (Crant, 2000, p. 439). As an entrepreneurial disposition, proactivity represents the interface between an individual’s potential entrepreneurial orientation and his/her view of the environment. In a study of 215 presidents of small companies, Becherer and Maurer (1999) explored the relationship between proactive personality and entrepreneurial behavior. They found that the more proactive a president, the more likely he/she was to create an organization that scanned for opportunities while taking an aggressive approach to the market. Analysis of variance showed that proactive presidents were more likely to start further businesses rather than buying or inheriting existing ones. In another proactive personality study, Crant (1996) accumulated data from undergraduate and MBA students and demonstrated a positive correlation between proactive personality and entrepreneurial intent ( $r = 0.48$ ). Proactive personality explained an additional 17% of the variance in entrepreneurial intention even after gender, education, and having entrepreneurial parents were added to the model. It can be argued that that individual with a proactive personality has high levels of initiative that induce him/her to take action and persevere until a meaningful change has been brought about. Taken together, these studies suggest that proactive personality is a construct positively affecting entrepreneurial intention. Based on the above discussion, this study proposes the following hypothesis:

**H4:** The extent to which people possess a proactive personality is positively associated with entrepreneurial intent.

Figure 1. The proposed model.



The proposed model and corresponding hypotheses are shown in Figure 1.

## 4. Research method

### 4.1. Sampling and data collection

The data collection process was designed to encompass two phases. A pilot test with 20 business students in Ho Chi Minh City was first conducted. This was to ensure that the final questions would be well understood, an appropriate sample size could be predicted, and improvements could be made on the study design prior to a full-scale research project. The pilot test was then followed by a final questionnaire with versions in both English and Vietnamese and was sent to business students in local and foreign universities in Vietnam. After all, responses had been collected. A data analysis process was conducted to draw insights from the collected data, allowing suitable and useful recommendations to be made regarding entrepreneurial activities in Vietnam.

The participants in this study were university business students and alumni in Vietnam at both local and transnational business universities. The sampling method was the most convenient choice. Five hundred questionnaires were physically sent to targeted business students in Vietnam, and there were 497 respondents. The questionnaires were distributed to business students studying at the Advanced Diploma, Bachelor degree, MBA degree, and Second-degree levels at Vietnamese universities (University of Economics, Foreign Trade University) and transnational universities located in Vietnam (ERC International/Greenwich University-UK, International School of Business/University of Economics Ho Chi Minh City). However, some of the questionnaires were not fully answered, or response choices were circled randomly, which meant a bias data source; hence, such cases were omitted from the data source. Finally, 396 valid responses out of 497 responses were selected as a data source for the next step of data analysis. This high valid response rate of 79.7% was reasonable in traditional face-to-face surveys (Krysan et al., 1994).

### 4.2. Measurement scales

The overall objective of this study was to test the antecedents of entrepreneurial intent in business students in Vietnam, using scales adopted from Ajzen's TPB model (attitude, social norms, and

perceived behavioral control) and the proactive personality construct (Bateman & Crant, 1993). The research constructs of interest were based on the works of Solesvik (2013), Bateman and Crant (1993), Engle et al. (2010), and Tkachev and Kolvereid (1999). Specifically, an individual with “entrepreneurial intent” was defined as one who wishes to start a business venture and consciously plans to do so in the future—even if this venture does not eventuate due to unpredictable circumstances. The constructs “attitude towards becoming an entrepreneur”, “social norms towards entrepreneurship”, and “perceived behavioral control” were worded to address entrepreneurial activity (Solesvik, 2013) specifically; the construct “proactive personality” was measured by a 17-item scale developed by Bateman and Crant (1993). The construct “entrepreneurial intent” was adopted from the scale developed by Engle et al. (2010). With reference to each statement, personal coding and a seven-point scoring system were employed, whereby a score of 1 suggested “absolutely disagree”/“extremely low level”, 4 suggested “neutral”, and a score of 7 suggested “absolutely agree”/“extremely high level”. The perceived behavioral control was operationalized using 4 items adopted from (Tkachev & Kolvereid, 1999). In this study, the seven-point scale, as opposed to other lower-point scales (e.g., five-point scale), was used to measure all the study’s variables. This choice can enhance the participants’ ability to select the best fitting choice and not merely the closest one to their real opinion, which in turn improves the reliability of their answers (Ogbonna & Harris, 2000).

## 5. Analysis and results

### 5.1. Respondents’ demographics

The descriptive statistics shown in Table 1 describe the characteristics of the sample in which the percentage of male and female respondents was quite balanced (female respondents accounted for 58.8% of the sample while male respondents accounted for 41.2%). The 20–24 age group marked 51.8% of the sample, which was followed by 28.3% of the 16–19 age group. This could be explained by the percentage of undergraduate students in the sample (84.3% of the total respondents) and of the distribution of the total occupation in the sample size (68.5% were College/University students and 19.7% were white-collar workers, staff level). It was not surprising that within the sample, the majority of respondents (65.6%) earned less than VND5 million/month and 23.5% earned from VND5 million to less than VND10 million/month. The percentage of respondents owning at least one business alongside their main occupation covered 70.5% of the total number; meanwhile, less than 38% of them agreed that their closest family members and friends also owned businesses. From that, it could be implied that the data source was healthy and represented the whole population because the majority of the sample constituted the exact target respondent who, moreover, possessed entrepreneurial intent at an early stage in their life.

### 5.2. Measurement reliability and validity

Table 2 reports the measures of key constructs and primary psychometric properties. Specifically, this study used individual indicator loadings, composite reliability, and AVE to assess the adequacy of outer-measurement models. As shown in Table 2, all indicator loadings were greater than the recommended value of 0.5, thus demonstrating satisfactory explanatory-power to the measurement models of the key model constructs. In addition, composite reliabilities ranged from 0.85 to 0.91 and were above the threshold of 0.70 (Nunnally, 1978). The average variance extracted (AVE) values for all constructs, except proactive personality with quite a low EVA of 0.39, ranging from 0.55 to 0.72, were above the 0.50 threshold. These findings demonstrate adequate convergent validity of the outer-measurement models. We also tested the discriminant validity of the key constructs following procedures outlined by Fornell and Larcker (1981). As shown in Table 3, the square roots of the AVE values (from 0.62 to 0.85) were consistently greater than all corresponding correlations, thus demonstrating discriminant validity. Besides, discriminant validity is evident when the correlation between two constructs (the off-diagonal entries) is not higher than their respective reliability estimates. Table 3 demonstrates that no individual correlations (from –0.07 to

**Table 1. Descriptive data (N = 396)**

	Description	Frequency	%
Gender	Female	233	58.8
	Male	163	41.2
Age group	16–19	112	28.3
	20–24	205	51.8
	25–29	51	12.9
	30–35	22	5.5
	Above 35	6	1.5
Education	High school graduate or lower	47	11.9
	Undergraduate	334	84.3
	Postgraduate	15	3.8
University	Vietnamese university	206	65.7
	Foreign university	102	25.7
	Others	34	8.6
Occupation	College/University student	271	68.5
	White-collar worker—Management level	33	8.3
	White-collar worker—Staff level	78	19.7
	Retiree	1	0.3
	Unemployed	3	0.8
	Others	10	2.4
Monthly income	Below VND 5 million	260	65.6
	VND 5 million—below 10 million	93	23.5
	VND10 million—below 15 million	18	4.6
	From VND 15 million	25	6.3
Owner of business alongside the main occupation		279	70.5
Closest family members are owners of businesses		129	32.5
Closest friends are owners of businesses		147	37.2

0.66) were higher than their respective reliabilities (0.85 to 0.91), therefore indicating satisfactory discriminant validity of all constructs in the model.

### 5.3. Common method bias

As we collected cross-sectional data using a single-source method, there was a possibility of common method bias effects leading to spurious relationships among the variables (Podsakoff et al., 2003). This study assessed common method bias using Harman’s single-factor test. The results show that no single factor accounted for the majority of the variance (the first factor accounted for 25.6% of the 62.7% explained variance). In addition, the marker-variable technique recommended by Lindell and Whitney (2001) was also employed. In particular, emotional empathy as a marker variable was selected to control for common method variance ( $rM = 0.02$ ). The mean change in correlations of the key constructs ( $rU - rA$ ) when partialling out the effect of  $rM$  was 0.01, providing no evidence of common method bias (Malhotra et al., 2006).

### 5.4. Model fit

To assess the fit of both outer-measurement and inner-structural models to the data simultaneously, we calculated the goodness-of-fit index ( $GoF$ ) following Tenenhaus et al. (2004). The  $GoF$  in PLS measured the quality of the measurement model for each construct and the redundancy index measured the quality of the structural model for each endogenous construct, taking into account the measurement model. The  $GoF$  was computed by taking the square root of the product

**Table 2. Measures of model constructs and scale psychometric properties**

Construct	Loading
Attitude towards becoming an entrepreneur (AT): AVE = 0.62; Composite reliability = 0.89	
AT1	0.49
AT2	0.87
AT3	0.84
AT4	0.85
AT5	0.83
Social norm (EI): AVE = 0.55; Composite reliability = 0.85	
SN1	0.81
SN2	0.81
SN3	0.86
SN4	0.58
SN5	0.59
Perceived behavioural control (PB): AVE = 0.59; Composite reliability = 0.85	
PB1	0.75
PB2	0.82
PB3	0.79
PB4	0.70
Proactive personality (P): AVE = 0.39; Composite reliability = 0.91	
P1	0.63
P2	0.65
P3	-
P4	0.56
P5	0.69

(Continued)

**Table 2. (Continued)**

<b>Construct</b>		<b>Loading</b>
P6	Nothing is more exciting than seeing my ideas turn into reality	0.59
P7	If I see something I don't like, I fix it	0.53
P8	No matter what the odds, if I believe in something, I will make it happen	0.70
P9	I love being a champion for my ideas, even against others' opposition	0.61
P10	I excel at identifying opportunities	0.55
P11	I am always looking for better ways to do things	0.69
P12	If I believe in an idea, no obstacle will prevent me from making it happen	0.72
P13	I love to challenge the <i>status quo</i>	0.66
P14	When I have a problem, I tackle it head-on	0.69
P15	I am great at turning problems into opportunities	0.62
P16	I can spot a good opportunity long before others can	0.55
P17	If I see someone in trouble, I help in any way I can	0.53
Entrepreneurial intention (EI): AVE = 0.72; Composite reliability = 0.89		
EI1	To what extent have you considered starting your own business?	0.87
EI2	To what extent have you prepared to start your own business?	0.83
EI3	How likely is it that you are going to start your own business within the next five years?	0.84
7-point scale: 1 = strongly disagree and 7 = strongly agree.		

**Table 3. Discriminant validity and tests of differences between correlations**

Constructs	1	2	3	4	5
1. Attitude towards becoming an entrepreneur	0.79 (0.89)				
2. Social norm	0.48	0.74 (0.85)			
3. Perceived behavioural control	(0.06)	(0.06)	0.77 (0.85)		
4. Proactive personality	0.58	0.42	0.01	0.62 (0.91)	
5. Entrepreneurial intention	0.66	0.47	(0.07)	0.50	0.85 (0.89)

Notes: Bold diagonal entries are the square root of AVE and composite reliabilities are in brackets; others are correlation coefficients.

of the average communality of all constructs and the average  $R^2$  value of the endogenous constructs as  $GoF = \sqrt{\text{communality} \times R^2}$ . Drawing upon the categorization of  $R^2$  effect sizes and using the cut-off value of 0.5 for commonality (Fornell & Larcker, 1981), *GoF* criteria for small, medium, and large effect sizes were 0.1, 0.25 and 0.36 respectively (Schepers et al., 2005). The calculated *GoF* for the model was 0.53, indicating a good fit of the proposed model to the data.

### 5.5. Hypothesis testing results

Our four hypotheses propose that attitude toward entrepreneurship, perceived behavioural control, proactive personality and social norms toward entrepreneurship would result in greater entrepreneurial intent of business students. Table 4 summarise the hypothesis testing results which provide strong support for hypotheses 1, 2 and 4 (H1:  $\beta = 0.47$ ,  $t$ -test = 12.71,  $p < 0.01$ ; H2:  $\beta = 0.17$ ,  $t$ -test = 4.65,  $p < 0.01$ ; H4:  $\beta = 0.15$ ,  $t$ -test = 3.50,  $p < 0.01$ ), not for hypothesis 3 (H3:  $\beta = -0.05$ ,  $t$ -test = 1.28). The overall variance explained ( $R^2$ ) was 0.52.

Age, gender, occupation, education, net income, whether the informant has closest family members are owners of businesses (*FAMILY*), whether the informant has closest friends are owners of businesses (*FRIEND*) were added as a control variable, having been shown to be related to entrepreneurship intent in prior research. Our finding was that gender, education, *FAMILY* and *FRIEND* have no statistically significant impact on entrepreneurial intent. However, occupation does have significant effect on entrepreneurial intent ( $\beta = 0.07$ ,  $t$ -test = 2.16,  $p < 0.05$ ) and people with higher levels of net income

**Table 4. Summary of hypothesis testing results**

Hypothesised relationship	$\beta$	Standard error (STERR)	t-test	Hypothesis supported
H1: AT→EI	0.47	0.04	12.71***	Yes
H2: SN→EI	0.17	0.04	4.65***	Yes
H3: PB→EI	(0.05)	0.03	1.28	No
H4: PP→EI	0.15	0.04	3.50***	Yes
<i>Controls</i>				
Age	0.06	0.04	1.66*	
Gender	0.02	0.03	0.77	
Occupation	0.07	0.03	2.29**	
Education	(0.00)	0.02	0.07	
Net income	0.12	0.03	3.73***	
<i>FAMILY</i>	(0.03)	0.03	0.76	
<i>FRIEND</i>	0.02	0.04	0.32	

Notes: \*\*\*:  $p < 0.01$  (2-tailed t-test); \*\*:  $p < 0.05$  (2-tailed t-test); \*:  $p < 0.10$  (2-tailed t-test); AT: attitude toward entrepreneurship; PB: perceived behavioural control; PP: proactive personality; SN: social norms toward entrepreneurship; EI: entrepreneurial intent.

tended to have higher level of entrepreneurship intent ( $\beta = 0.12$ ,  $t$ -test = 3.97,  $p < 0.01$ ). In addition, age has a minor positive influence on entrepreneurial intent ( $\beta = 0.06$ ,  $t$ -test = 1.66,  $p < 0.10$ ).

## 6. Implications and conclusion

### 6.1. Theoretical implications

In Engle et al. (2010) study examining entrepreneurial intent in 12 countries, six countries (China, Finland, Ghana, Russia, Sweden, and the USA) were shown to have an attitude as a significant predictor. Likewise, the positive association between attitude and entrepreneurial intent has been proven in most previous studies (Krueger et al., 2000; Moi et al., 2011) with this variable often demonstrated as the strongest influencer on the intention to set up a new business. In this study, the majority of the students had positive attitudes toward setting up a new business because they had high regard for entrepreneurs who play prominent roles in society (Pihie & Akmaliah, 2009). Therefore, the results of this study confirm the application of the construct in the Vietnamese market, where entrepreneurial activities are more eventful than ever.

The influence of social norms on entrepreneurship is still debated across countries. This study took into account previous studies that have used the planned behavior model to explain entrepreneurial intent. The finding of this study does not support Krueger et al. (2000), who failed to find a link between social norms and entrepreneurial intent in the case of senior university students. In this study, the descriptive statistics illustrate that 32.5% of the sample had close family members and friends who currently owned businesses—a fact that may have influenced the participants to start their own businesses. Role models are a vital influence on entrepreneurial intent. Especially, people learn many of their behaviors from others, especially those closest to them; it would stand to a reason that the opinions of these close people are respected and they can influence others through their encouragement and support. The education system and family culture in Vietnam teach young adults to follow what is considered to be safe, such as things taught by senior people in the family, things successfully done by someone else, and things respected by the majority of society. As well as having a positive attitude toward entrepreneurship, business students will have a higher chance of starting new ventures if they receive encouragement from close family members, friends, or seniors. This finding strongly confirms the effect of social norms on entrepreneurial intent.

Although there have been numerous studies on the proactive personality construct and exploration of positive relationships between a proactive personality and entrepreneurship in undergraduate and MBA students (e.g., Crant, 1996; Frank et al., 2007), there have been very few studies that have used proactive personality as a predictor of entrepreneurial intent in business students in Vietnam. Hence the findings of our study can be considered valuable. Specifically, these findings are consistent with prior research suggesting the importance of a proactive personality in those who wish to set up a new business (Becherer & Maurer, 1999; Crant, 1996, 2000). In their study, Becherer and Maurer (1999) found that since a proactive personality reflects the individual's orientation toward his/her surroundings, a more proactive manager helps create an entrepreneurial company with a more direct relationship with change in sales; that is, he/she uses the firm to shape the environment. Likewise, the findings suggest that business students with strong proactive personalities are not only likely to start a new business, but they are also likely to set up many new businesses. Being an entrepreneur is an aggressive approach by proactive business students towards their environment.

The objective of this study was to examine the degree to which the antecedents of entrepreneurial intent operationalized from the research model can be used to predict entrepreneurial intent in Vietnam. From the above analyses, the value of all predictors illustrated a consistent level of contribution among the independent variables, in which attitude toward entrepreneurship (AT) was at the highest level, followed by social norms toward entrepreneurship (SN), and finally proactive personality (PP) as the lowest among the three variables. The research about the antecedents of entrepreneurial intent is still in discussion regarding whether or not the relationship between attitude, proactive personality and entrepreneurial intent is positive, or the relationship



between social norms and perceived behavioral control is positive or negative. Although the application of the attitude and social norm constructs of the planned behavior model is applicable in Vietnam, the variable “perceived behavioral control toward entrepreneurship” is not. Unlike in Bangladesh, Egypt, Finland, France, Germany, Russia, and Spain, where self-efficacy is considered as a significant predictor of entrepreneurial intent (Engle et al., 2010, p. 50), this construct cannot predict Vietnamese business students’ intent to start up a new business based on respondents’ low score for self-efficacy.

The findings suggest that business students in Vietnam, a transitional economy, may not have the confidence or abilities to be entrepreneurs. However, the study found a moderate association between self-efficacy and intent. This is because students in Vietnam lack soft skills and experience, which may lead to emotional arousal, preventing them from starting their own businesses. Overall, business students in Vietnam presume their attitude toward setting up a new business will generate the desired result, especially when they possess a proactive personality and receive support and encouragement from essential others. However, what restrains them from entrepreneurial intent is the lack of confidence in setting up a business, that is, their belief that they do not have enough skills and ability to start and run their businesses.

In summary, as entrepreneurship is a planned behavior, it is crucial to study intention models and personality traits when discussing entrepreneurial intent. Findings from this study suggest that it is vital to open the “cognitive black box” and try to understand the cognitive processes inside (Krueger et al., 2000); for example, teaching and training on entrepreneurship should identify more specific tasks related to enhancing entrepreneurial self-efficacy and the setting up of typical kinds of businesses. Secondly, the intent is argued to be a planning process itself (Krueger et al., 2000), so understanding intent helps individuals begin the process of generating ideas for new businesses and turn ideas into reality or how to initiate an exit strategy from those businesses. Thirdly, an individual with a stronger proactive personality should be more accessible to entrepreneurial activities, or even to the next step of being a nascent entrepreneur since they are potentially against *the status quo* and good at change management. However, those individuals also need an appropriate education and training on becoming an entrepreneur so that they possess enough tools to confront obstacles when setting up their own business.

## **6.2. Managerial implications**

This study has some managerial implications. Firstly, the study’s results are significant for educators. Entrepreneurs are neither born nor made, they are both, and educators can provide better education and training by invoking the proposed model. It was evident that business students have to engage their natural characteristics with all other skills, which can be learned and improved through training and experience. Therefore, higher education institutions assume a crucial role in teaching students to become entrepreneurs by the way they can contribute to developing essential skills, capabilities, and attitudes toward entrepreneurship. Universities should promote more practical, active, and innovative programs where students are actively involved and felt to be a part of the apprenticeship process. Universities in foreign countries or even transnational schools in Vietnam have been implementing many business communities’ involvement related to activities such as contact with the real entrepreneurial world (seminars, talks, company/factory visits, practical workshops like basic golf, professional dining and wine appreciation with the presence of invited entrepreneurs), entrepreneur clubs in schools with a real entrepreneur advisor, learning by doing method, and ready-for-work skills.

Secondly, the study’s results indicate a low self-efficacy of Vietnamese business students, which indicates that Vietnamese students prefer other careers (i.e., office workers) since they perceive entrepreneurship to be a more dangerous and competitive profession. This fact can be explained by the implementation of entrepreneurship education in universities, and how it does not make students ready for an entrepreneurial career, especially in Vietnamese universities, where the curriculum is still in favor of theory over practice. Therefore, specific intervention programs need to be implemented to improve entrepreneurial self-efficacy, and entrepreneurial interest, such as a series of soft-skill

training programs to help students step out of the classroom. Intervention programs can include critical thinking, negotiation, presentation, time management, networking, cross-cultural awareness skills, or even down-to-earth activities related to business skills like basic golf, professional dining, and grooming. Furthermore, it is also fundamental to promoting and producing a good image of entrepreneurship as a career through the success stories of Vietnamese entrepreneurs.

Thirdly, the study's results are important for consultants, advisors, managers, and the founders themselves. Practitioners will benefit from an understanding of the cognitive processes and personalities of entrepreneurs, and of how their beliefs, perceptions, and motives lead them to start a business (Krueger et al., 2000).

Finally, the study has implications for public policy. Currently, Vietnam is an ideal destination for entrepreneurial activities, because anyone with money can become an entrepreneur there. This raises the question of whether the government can manage these nascent entrepreneurs effectively and profitably. The findings will help policymakers design a policy that would foster entrepreneurial activities and encourage nascent entrepreneurs to expand their business in Vietnam. For instance, the government can support university students (especially business students) in creating their own business and developing their entrepreneurial competence, self-control, and self-efficacy. The government can help students gain entrepreneurial experience by setting up more licensed competitions and entrepreneurial clubs for the youth, assessing their operation, or setting up entrepreneurial funds. The most straightforward approach is to team up with universities to encourage university students to become entrepreneurs.

### 6.3. Limitations and future research directions

This study has faced some limitations. Firstly, the whole sample was generated from business students (Diploma, Bachelor, MBA degrees) in focused business schools; therefore, it is not useful in predicting the behavior of the non-business student population. Moreover, demographically, the sample was collected from local and transnational universities based in Ho Chi Minh City, so the findings cannot be generalized to the entire country. Secondly, given that the majority of respondents were undergraduate students, aged from 16–23, it is hard to justify that their intentions are durable and precise. Finally, there are many predictors of entrepreneurial intent such as gender, education, or whether students have entrepreneurial parents, such as in the study of Crant (1996). However, we chose to include a proactive personality in the proposed model in order to encompass the subjective elements of entrepreneurial intent. Overall, however, future research can use this study as a foundation when studying the same topic, with the hope that such research will address these limitations.

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#### correction

This article has been republished with minor changes. These changes do not impact the academic content of the article.

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