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*Erasmus*

## **Entrepreneurship as A Career Choice Among Graduate Students in Ho Chi Minh City, Vietnam**

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## **Abstract**

Entrepreneurship is an important engine in a country's growth model. Given the high youth unemployment rate in Vietnam, entrepreneurship with the ability to generate more job opportunities and induce innovation and growth can act as a solution for this issue. This paper aims to determine factors influencing entrepreneurial engagement of graduate students from various universities in Ho Chi Minh city, Vietnam. The findings indicate significant relationship between preference for entrepreneurship, perceived opportunity, lack of financial support and the odds of being an entrepreneur. Some variables are found not significantly influence the likelihood of entrepreneurial involvement such as gender, risk-taking level, subjective norm, university facilitation and hence, need further examination in the future.

## **Relevance to Development Studies**

The results of the paper contribute to the world literature about entrepreneurial behaviour with some specific insights about the case of Vietnam. Some implications were drawn to promote the rate of participation in entrepreneurship and improve Vietnamese entrepreneurial environment, which are necessary for the development of Vietnam economy.

## **Keywords**

Entrepreneurial Engagement, Lack of Financial Support, Preference for Entrepreneurship, Self-efficacy, Family Background, Entrepreneurial Industry.

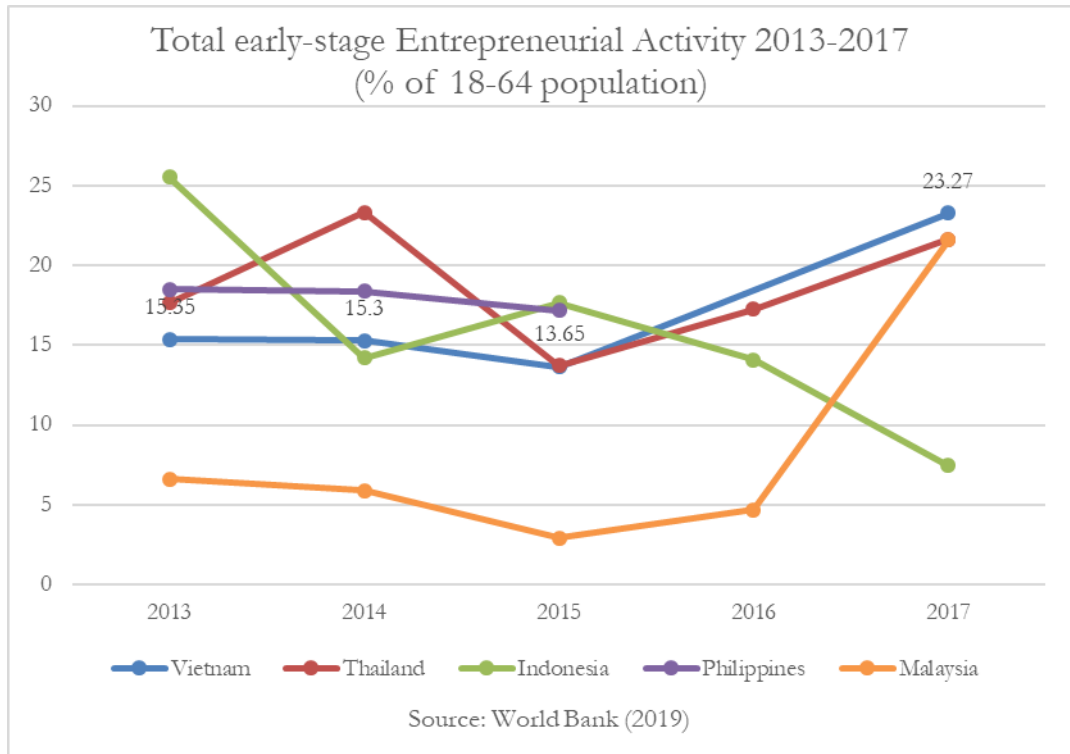
# Chapter 1 Introduction

Entrepreneurship is considered an essential ingredient of the economic growth. First and foremost, it is the mean that pushes economic growth forward. An economy will prosper and grow steadily when there are a large number of entrepreneurs exist in it (Dejardin, 2000, p. 2). Especially in this modern, open economies time, its contribution to economic growth has become more and more significant (Wennekers and Thurik, 1999). Through innovation, employment and welfare effects (Acs, Desai and Hessels, 2008), entrepreneurship is also the main driving force of economic development (Anokhin, Grichnik and Hisrich, 2008) by encouraging growth and structural change as well as offering a feasible way to help people get out of poverty and inequality (Naudé, 2009). Not only limited to economic benefit, a positive and systematic impact on the development of productivity growth and productivity levels, regardless of the model design, is credited to entrepreneurship as well (Erken, Donselaar and Thurik, 2016). It is also proven to be an effective channel for knowledge spill-overs process (Acs et al. 2009). Given the increase in youth unemployment rate and the significant benefits for the economy of entrepreneurship, university students with their attitude and knowledge can be a prosperous source of future entrepreneurs (Wang and Wong, 2004). This paper then aims to determine the motivation to become an entrepreneur of graduate students from various universities in Ho Chi Minh city.

## 1.1 Research Background

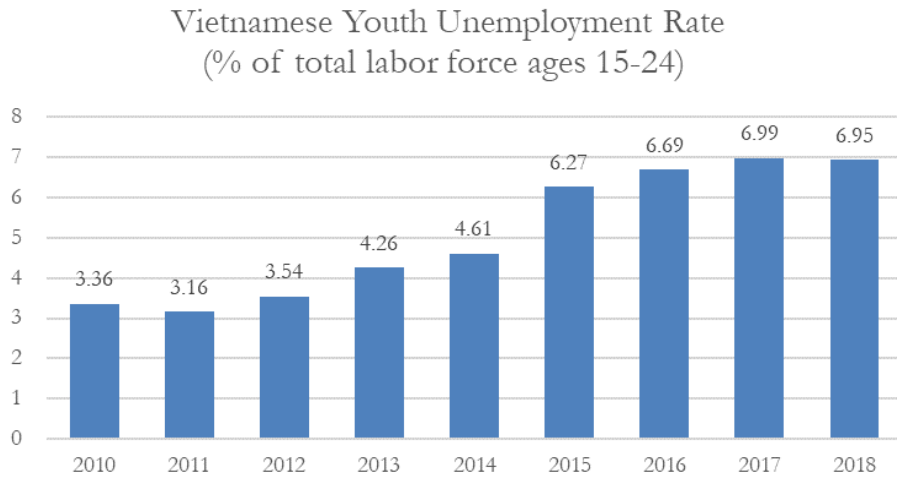
Over the years, promoting the growth of small and medium enterprises has been an utmost priority in policy statements of Vietnamese government (Hansen, Rand and Tarp, 2009). Prime Minister Nguyen Xuan Phuc at the forum "Finding breakthrough solutions for innovative start-ups in Vietnam" stated that the government will ascertain favourable conditions to develop Vietnamese start-up ecosystem and improve it in the coming time since innovative start-up businesses are a powerful engine in Vietnam's growth model (An Dy, 2018). In 2017, the proportion of nascent entrepreneurs and current owners of new businesses of Vietnam rose to the top position among five Southeast Asian countries (Vietnam, Thailand, Indonesia, Philippines and Malaysia). As reported by Global Entrepreneurship Monitor (2018), in 2017, the percentage of business start-up in Vietnam has increased, ranking 6<sup>th</sup> out of 54 economies with 128,859 new enterprises registered. To develop a vibrant economy with entrepreneurship as focus, the report recommends improving the business environment and promoting entrepreneurial spirit.

**Figure 1: Total early-stage Entrepreneurial Activity 2013-2017**



Vietnam has transformed into one of the most dynamic emerging economies in Southeast Asia, however, high youth unemployment rate, (generally around 10-15 per cent in Low and Lower Middle Income Countries (White, 2019)) is a considerable issue. The unemployment rate of Vietnamese young people has been increasing, accounting for two-thirds of the overall unemployment rate. According to the General Statistics Office Of Vietnam, the number of university graduates increased nearly twofold from 2000 to 2017, from 162,500 to 319,500 students (2019). Nevertheless, there were only 126,900 employed bachelors in 2018 as reported by the Ministry of Labour, War Invalids and Social Affairs (Anh Xuan, 2018). It can be observed that the labour market is not able to absorb a huge number of graduate students each year. Hence, entrepreneurship can be a solution for this issue thanks to its ability to create more job opportunities and stimulate growth. Moreover, to reach the government’s goal of one million operating businesses in 2020, promoting entrepreneurship rate especially among Vietnamese youth is vital at the present stage.

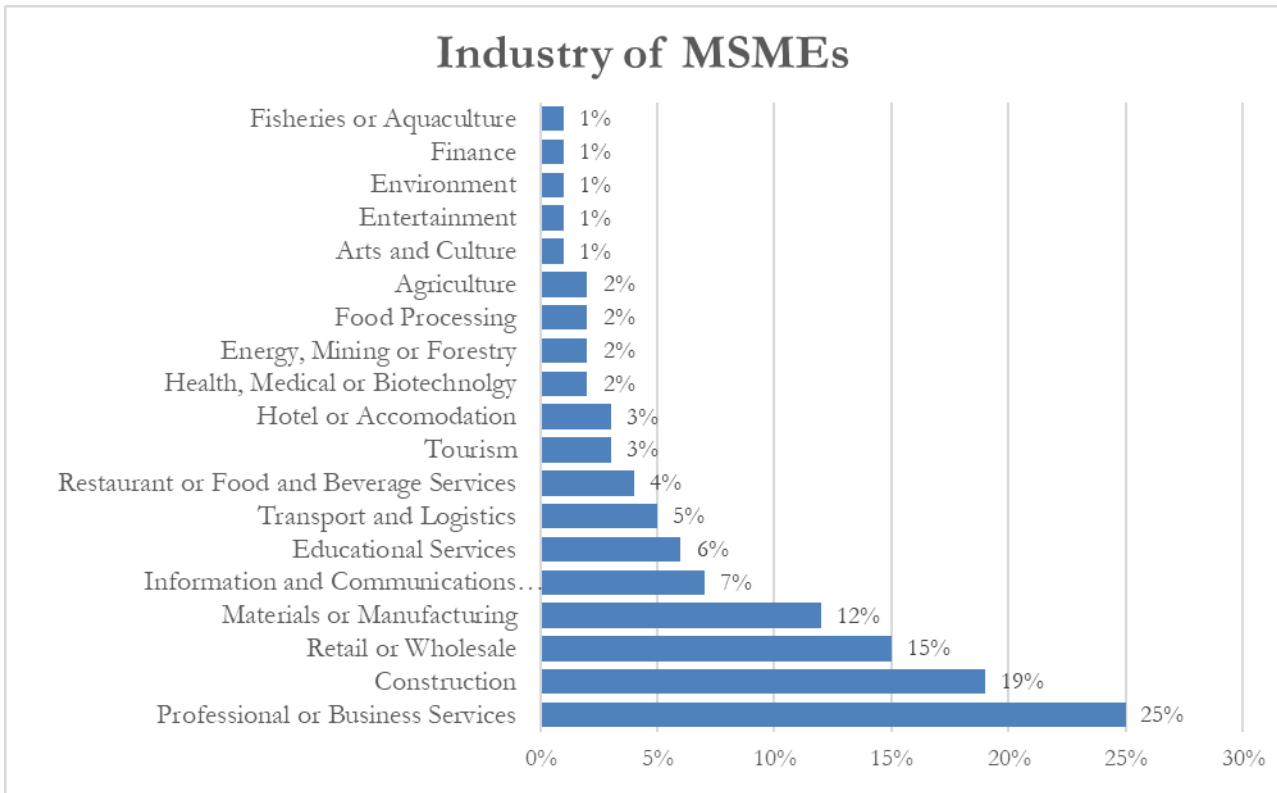
**Figure 2: Vietnamese Youth Unemployment Rate**



Source: World Bank (2019)

According to the Survey of Entrepreneurs and Micro, small, and medium enterprises (MSMEs) in Vietnam conducted by the Asia Pacific Foundation of Canada (2017), the four most prevalent industries in which MSMEs take part are Professional or Business Services (25 percent), Construction (19 percent), Retail or Wholesale (15 percent), and Materials or Manufacturing (12 percent). (Asia Pacific Foundation of Canada, 2017)

**Figure 3: Industry of MSMEs**



Source: Asia Pacific Foundation of Canada (2017)

Also, as reported by Navigos Group in their “Vietnamese Generation Y’s career ambitions and start-up desire” survey involving more than 3,100 Vietnamese millennials, the industries

for start-up in which respondents are most interested are Retail (46%), Hospitality (14%), E-commerce (11%) and Education (10%) (Navigos Group, 2017). Meanwhile, sectors that captivate investment's attention are mostly technology related. More specifically, in the Vietnam Annual Start-up Deals report conducted by Topica Founder Institute, the total amount of investment in Vietnamese start-ups with 92 deals was USD 889 million, three times as much as that in 2017 (Vien Thong, 2019). The industries that attract the most investments are Fintech, E-commerce, Traveltech, Logistics and Edtech (Education Technology) (Vien Thong, 2019). Moreover, the attitude of Vietnamese towards technology is positive providing that 61% of people believe that new technologies bring about more opportunities than risks and 63% of them prefer finishing tasks digitally whenever it is possible (Huynh, 2018). These suggest the prospect of focusing on technology-driven business establishment. From the basis of innovation, technology plays a momentous role because it is the main driving force of change and economic growth (Robert and Larry, 1994; Courvisanos, 2005). Moreover, entrepreneurship in manufacturing should also be promoted because this sector is studied to have a stronger positive effect on economic growth than other sectors (Szirmai and Verspagen, 2015). Thus, it will be beneficial if the factors inducing the choice of entrepreneurial sector are understood so that effort can be made to encourage entrepreneurship's motivation in the desired industries.

## 1.2 Research Objectives

Scholars around the world have studied about various entrepreneurial motivation factors and differences in the business formation across countries are reported. Providing the different contexts, this paper then analyses this subject in Vietnam, particularly in Ho Chi Minh city, where most of the universities and colleges are located. Graduate students who finished their study and are being or preparing for participation in the workforce are great source of entrepreneurs. Academic knowledge equipped from university and practical experience obtained from working situations will facilitate their motivation or process to start a business. Furthermore, their entrepreneurial intention is more apparent because they are now determined to pursue what they are ambitious for compared to undergraduates. This paper aims to study the motivation for entrepreneurship of university students who have graduated for zero to six years, attempting to answer the main question "What determines the entrepreneurial engagement graduate students from universities in Ho Chi Minh city?". Three hypotheses corresponding with three groups of factors are then suggested as follows:

- H1: Demographic factors are positively related to entrepreneurial engagement
- H2: Individual characteristics are positively related to entrepreneurial engagement
- H3: Contextual factors are positively related to entrepreneurial engagement

In addition, the sub-objective of the paper is to study factors correlate with the entrepreneurial industry and entrepreneurial spirit. This can be performed by investigating the sub-sample which contains only students who are current entrepreneurs. The most attracted industries and common purposes of becoming an entrepreneur of respondents will be analysed to gain more insights about the topic. The goal is to understand what are the actual determinants of entrepreneurial motivation of graduate students. As a result, more suitable approaches in career guidance could be applied to encourage entrepreneurship ratio. Furthermore, policy intervention could increase their entrepreneurial involvement through improvement in financial accessibility and public-, university-based entrepreneurial incubator.



# Chapter 2 Literature Review

## 2.1 Definition of Entrepreneurship

Consistent with the prevailing literature, Zhao, Seibert and Lumpkin (2010) determine entrepreneur as an individual who establishes, owns and manages a small business. More comprehensively, in order to discover what researchers and practitioners have in mind when talking about entrepreneurship and some main themes that portray this subject, Gartner (1990) used Delphi method to consult top academic researchers in this field, business leaders and politicians about “entrepreneurship” definition. Answers to the questionnaires were then analysed to elicit a way to define entrepreneurship that was agreed by the majority of participants. According to the research, entrepreneurship involves the process of creating an organization that is innovative, growth-oriented and unique by an entrepreneur who is usually associated with entrepreneurial attributes such as risk taking, locus of control and autonomy (Gartner, 1990, p. 21). Eisenmann (2013), on the other hand, suggests Professor Howard Stevenson’s definition who stated that “*entrepreneurship is the pursuit of opportunity beyond resources controlled*”. This view shows that entrepreneurship is not a particular stage in the life cycle of an organization but an approach to manage it. Furthermore, the Global Entrepreneurship Monitor defines entrepreneurship as “*Any attempt at new business or new venture creation, such as self-employment, a new business organization, or the expansion of an existing business, by an individual, a team of individuals, or an established business*”, which also considers “nascent entrepreneurship”, the stage before launching a business (GEM, 2019). This version will be more suitable for the case of Vietnam, where entrepreneurship is often understood as starting a business, and therefore, will be used in the present paper. However, reflecting on all the mentioned standpoints about entrepreneurship, there will be one section in this study attempting to sort out business-owners who has real entrepreneurial spirit such as assuring innovation, growth and uniqueness, willing to take risks, locus of control and autonomy.

## 2.2 Theoretical Background

The literature about engagement in entrepreneurship can be divided into two major streams: psychological and non-psychological.

### 2.2.1 Psychological

Many entrepreneurship models are process-oriented cognitive models, concentrating on attitudes and beliefs and the prediction of intentions and behaviours. As explained by the psychological approach, entrepreneurship is considered a type of planned behaviour (Bird, 1988) which will be effectively predicted by studying its intention (Krueger, Reilly and Carsrud, 2000). It is believed that intention is the best predictor of actual behaviour (Ajzen, 1991; Liñán and Chen, 2009) and this cognitive approach could be successful when being applied in the field of entrepreneurship (Baron, 2004). Following the process of becoming an entrepreneur, one’s intention to start and manage his/her own business is commonly considered as the first and utmost critical step (Bird, 1988; Krueger, Reilly and Carsrud, 2000). According to Bird (1988, p. 442), intentionality is “a state of mind directing a person's attention (and therefore experience and action) toward a specific object (goal) or a path in order to achieve something (means)”. He develops a comprehensive intentionally model which integrates personal and social contexts and rational and intuitive thinking dur-

ing the formation of entrepreneurial intentions. Evolving from that fundamental theory, the two dominant intention-based models used to predict entrepreneurial behaviour are the Theory of Planned Behaviour by Ajzen (1991) and the model of Entrepreneurial Event by Shapero and Sokol (1982) (Krueger, Reilly and Carsrud, 2000).

In the Theory of Planned Behaviour, the intent to perform a behaviour is defined as a function of three variables: attitude toward the behaviour, subjective norm and perceived behavioural control (self-efficacy). This theory was developed on the basis of the Theory of Reasoned Action (Ajzen and Fishbein, 1980) with the addition of self-efficacy factor which is addressed as perceived behavioural control. Meanwhile, the Entrepreneurial Event model depends on three factors: perceived desirability, perceived feasibility and propensity to act (Shapero and Sokol, 1982). The first two antecedents of Entrepreneurial Event model seem to receive more attention since they account for most of the variance in intention (Schlaegel and Koenig, 2014) and hence, are the main determinants of the model. Two elements of Theory of Planned Behaviour, attitude toward the behaviour and subjective norm, are recognized as similar to the perceived desirability in the Entrepreneurial Event model and the perceived behavioural control is seen as analogous to the perceived feasibility (Krueger and Carsrud, 1993; Liñán and Chen, 2009). Moreover, these two models are proved to be equally useful when predicting intention (Krueger, Reilly and Carsrud, 2000). Therefore, a majority of studies in this field tend to apply the Theory of Planned Behaviour of Ajzen (1991) in anticipating the intention to start a business of an individual (Autio *et al.*, 2001; Wang and Wong, 2004; Liñán and Chen, 2009; Ubierna, Arranz and de Arroyabe, 2014; Mwange, 2018; Li *et al.*, 2019).

Studies follow this path had to accept the assumption that behaviour is predicted by intention. However, the link between intention and actual behaviour is still under-researched with few data confirming this presumption (Autio *et al.*, 2001). Taking into consideration the usually-remarkable time lags from intention to action, there are many nascent entrepreneurs who never translate their intended business ideas into reality (Reynolds, 1994). The number of researches employing longitudinal data to examine the power of intentional models - when predicting the entrepreneurial behaviour from an individual's intention at a specific timepoint - is limited. Many authors in this school when suggesting future research direction often emphasizes the essentiality of conducting studies with extended timeframe to examine whether the surveyed students actually become entrepreneurs (Liñán and Chen, 2009; Zhao, Seibert and Lumpkin, 2010; Schlaegel and Koenig, 2014).

In addition, these researches usually use convenience sample of university students to study entrepreneurial intention, which can produce results that are inconsistent overtime. The intention of students may differ as time passes because they will go through different contexts after graduated. It is hypothesized that the influences of theory-external factors on entrepreneurial behaviour are mediated through the Theory of Planned Behaviour model (Krueger, Reilly and Carsrud, 2000) while in fact, there is evidence that demographic or situational elements can objectively predict behaviour when antecedents of the Theory of Planned Behaviour model are controlled (Mwange, 2018).

The Theory of Planned Behaviour attempts to anticipate if a behaviour will occur provided that this behaviour is intentional or planned (Mwange, 2018). Observing upon many studies which employ this model indicates the use of inadequate methods to measure the intention variable (dependent variable of the model). In more detail, they simply ask survey participants whether they intend to become an entrepreneur in the future or to rate on a Likert scale to assess their entrepreneurial intention level (Krueger, Reilly and Carsrud, 2000; Autio *et al.*, 2001; Ubierna, Arranz and de Arroyabe, 2014; Zhang, Duysters and Cloudt, 2014; Hien and Cho, 2018) except for the case of Liñán and Chen (2009), who

evaluate participants' entrepreneurial intention through a list of questions to ascertain the firmness of their intention. These methods cannot thoroughly show the determination to carry out the actual behaviour of respondents. Instead, the link between intention and behaviour could be strengthened if the authors investigate their respondents' plan to get involved in entrepreneurship, in particular, actions they have taken to prepare for the venture. This way of variable measurement will be applied in this paper to figure out prospective entrepreneurs.

### **2.2.2 Non-Psychological**

The non-psychological models use exogenous, situational variables (for example, political, economic status, social attitude) or individual variables (for example, demographic factors or personalities) to directly predict the entrepreneurial activities. Depending on the authors' approach, the two main factors affecting business formation will be classified into different sources. Models in this school of thought were believed to produce unsatisfactory results, with little explanatory power (Krueger, Reilly and Carsrud, 2000). However, when comparing with the limitations of intentional models listed in previous section, the non-psychological stream delivers more consistent outcomes when examining determinants of the actual behaviour.

Two types of force, internal and external sources, have been proved to affect the decision to establish a business (Katz and Gartner, 1986). The "push" theory and the "pull" theory of Gilad & Levine (1986) suggest two ways to explain entrepreneurial motivation. The "push" theory states that negative external sources such as job dissatisfaction, trouble finding employment, inadequate salary, or work schedule's inflexibility force individuals to become an entrepreneur. These can be considered as social, political, and economic variables as previous studies have mentioned, namely, displacement (Shapiro & Sokol, 1982), changes in markets (Piore & Sabel, 1985) and government deregulation (Farrell, 1985). On the other hand, the "pull" theory argues that individuals follow the entrepreneurship path to seek for independence, self-fulfilment, wealth, and other desired outcomes. These refer to individual variables such as having prior experience as an entrepreneur, personality characteristics which are the need for achievement (McClelland, 1961), need for control (Brockhaus, 1982), and abilities. Research (Keeble, Bryson and Wood, 1992; Orhan and Scott, 2001) demonstrates that individuals start a business mainly because of "pull" effects, rather than "push" effects.

Moreover, decisions related to career selection, which in this case is becoming an entrepreneur, are formed on the basis of social learning and impacted by positive and regular reinforcement through the observation of important vocational role models, for instance, family, and the exposure to images that have connected to a particular career (Millward, 2005). The social learning theory developed by Bandura and Walters (1977) is necessary to explain the process where people learn from others when interacting through internal and external processes including observation, imitation, instruction, then practice and experience the consequences of the behaviour. The authors accentuate that social learning depends on interaction between individuals and their level of success in improving emotional and practical skills, which forms self-perception and others' perception. Interacting with the environment and the people within it can influence, instruct the behaviour practice and facilitate the understanding about that behaviour, which in turn affects self-efficacy (Mwange, 2018).

## 2.3 Empirical Studies

Research analysing entrepreneurial behaviour usually combine the influence of either “pull” or “push” factors, the role of the surrounding environment and its people to better determine which factors affect an individual’s decision to take part in entrepreneurship. This topic attracts a lot of attention from scholars around the world and yet, there has been no universally accepted framework for this issue because choosing a career is a complicated, diverse and individually specific process that involves many theoretical aspects (Nabi, Holden and Walmsley, 2006). Some highlights in the vast literature are introduced as follows.

The paper written by Watson et al. (1998) focuses on “pull” effects such as search for independence, autonomy, enjoyment, or satisfying financial needs. The authors investigate 166 business founders to evaluate their motivation to start a business. Further analysis is then conducted for two sub-samples, business still trading and has ceased trading, to identify characteristics of successful and failed entrepreneurs. Similar paper is written by Barba-Sanchez and Atienza-Sahuquillo (2011), who also survey business founders and asked them to rate 23 motivation factors on a Likert scale. The results show that the need for achievement, self-realization or independence are more influential than making money or becoming one’s own boss. The paper of Watson et al. (1998) has distinguished survivors and failures in entrepreneurship field but insufficiently determined the entrepreneurial motivation of business founders when neglecting the influence of some contextual and personality factors. That also happens with the research of (Barba-Sanchez and Atienza-Sahuquillo, 2011), in fact, the perception of other people towards the behaviour, family background or risk tolerance also share an important role in shaping one’s decision to become an entrepreneur.

Mazzarol, Volery and Doss (1999) conducted a prominent research on elements affecting business start-ups by going beyond the ordinary sample at that time. The authors survey 93 entrepreneurs with 45 of them had seriously considered starting their business but did not proceed for some reasons. Three significant factors, namely, gender, previous working experience in government sector and recent unemployment, were identified as barriers to business start-ups formation. However, due to the sample’s nature, these factors may only have negative influences on those who intended but not actually started their business. For those who never thought about entrepreneurship or intended to become business founders, their motives may not be explored. The next research encounters the same problem with their data.

Utilizing the 1992 Characteristics of Business Owners (CBO) survey in the United States, Fairlie and Robb (2007) study prominent characteristics of entrepreneurs as well as successful businesses. One major drawback of the sample is that it does not contain information about non-entrepreneurs (wage/salary workers) and hence, makes it not possible to directly identify entrepreneurial engagement’s causes. The paper reports that more than 50% of the business owners have at least one family member participating in entrepreneurship and 22.5% of the respondents had worked in their family business before. This amplifies the encouraging role of having an entrepreneurial family background to an individual’s decision to become an entrepreneur although this is not due to the business inheritance from their parents. Furthermore, having worked in the family business also leads to more successful business outcomes thanks to the opportunity to gain useful knowledge and skills in operating the business.

The paper of Grilo and Thurik (2004) builds an integrated model with individual and context variables to determine the entrepreneurial engagement of 15 Europe countries. Because this is a multinational study, administrative complexity is added as an explanatory

variable to reflect different conditions in these countries. With an impressive sample of 20,000 observations across Europe, the research provides credible comparative results at national level, investigates seven levels of entrepreneurial activity, from “Never thought about starting a business”, “Taking steps to start a business” to “Not an entrepreneur any more”. One surprising finding is the insignificant role of the factor “financial support”, which implies that perceived financial obstacles did not affect one’s entrepreneurial position. This is not consistent with most of the research in this field and hence, needs further examination. After this study, Verheul, Thurik and Grilo (2006) broaden the scope of their research to 25 countries in both Europe and the United States and collect 7,194 observations. Recognizing the lower rate of women when participating in entrepreneurship, the authors study the effect of gender on the entrepreneurial preference and actual self-employment. Interestingly, rather than their perceived capability in this field, the reason women do not become entrepreneurs is mostly because of their willingness. Besides, the paper confirms the findings of previous research such as the positive effects of parental entrepreneurial background, risk attitude, educational level, age, favourable economic climate and the new added factor, preference for self-employment. Notwithstanding, the role of lacking financial support as impediment to one’s decision to start a business is showed as inconsistent, being significant in only one regression model.

Arenius and De Clercq (2006) examine the role of knowledge in affecting entrepreneurial behaviour of 4536 respondents between 18 to 64 years old from Belgium and Finland. They develop the concept of self-efficacy into two groups of knowledge factors, the existing knowledge base and the exposure to external knowledge source. Taking into consideration the state of Belgium and Finland, in which one country lacks good entrepreneurial role model and the other is leading the knowledge-based transformation process, this paper effectively compare the roles of knowledge variables on entrepreneurial engagement between different contexts. In addition, the authors find that people’s perception of their skills and knowledge has positive influence on the likelihood of starting a growth-oriented business.

Van Praag and Cramer (2001) conduct a longitudinal study to examine determinants of new business formation as well as the business size which reflects entrepreneurial talent of the business owner. They take risk tolerance and entrepreneurial ability as main predictors of their model with the use of an “unusual” data set ranging from 1952 to 1993. 5800 children in the last year of elementary schools were first recorded their ability, family background and other variables. Thirty years after that, they were surveyed again for information regarding education, earnings, working and household status. The last round of questionnaire was sent in 1993 to complete information about their labour market and entrepreneurship experiences. The findings indicate that family entrepreneurial background, risk-taking trait, gender and educational level have positive effect on entrepreneurial engagement and entrepreneurial talent. The paper employs a new indicator of entrepreneurial success, which is the number of employees demanded by that business, instead of simply observes whether the business has been closed.

There are various factors influence an individual’s decision to start an entrepreneurial venture. After analysing a number of researches in this field, three main types of determinant, namely, demographic factors, individual characteristics and contextual factors, will be combined in order to build an integrated model predicting entrepreneurial behaviour of university graduates in the area of Ho Chi Minh city. To better understand the subject, it will be verified if the field of study matters when an individual chooses the entrepreneurial career. Besides, one methodological issue facing preceding research is the measurement of risk aversion variable. This can be improved by putting the respondents in a realistic situation where their answer will reflect their level of risk tolerance, instead of asking if they are

risk seekers as some papers have exercised (Grilo and Thurik, 2004; Verheul, Thurik and Grilo, 2006). The present paper will use a sample containing both entrepreneurs and non-entrepreneurs to compare between these two groups rather than analysing only business founder population. Lastly, giving the mixed result of “the influence of lacking financial support variable”, this paper will revisit the and determine the true impact of this antecedent.

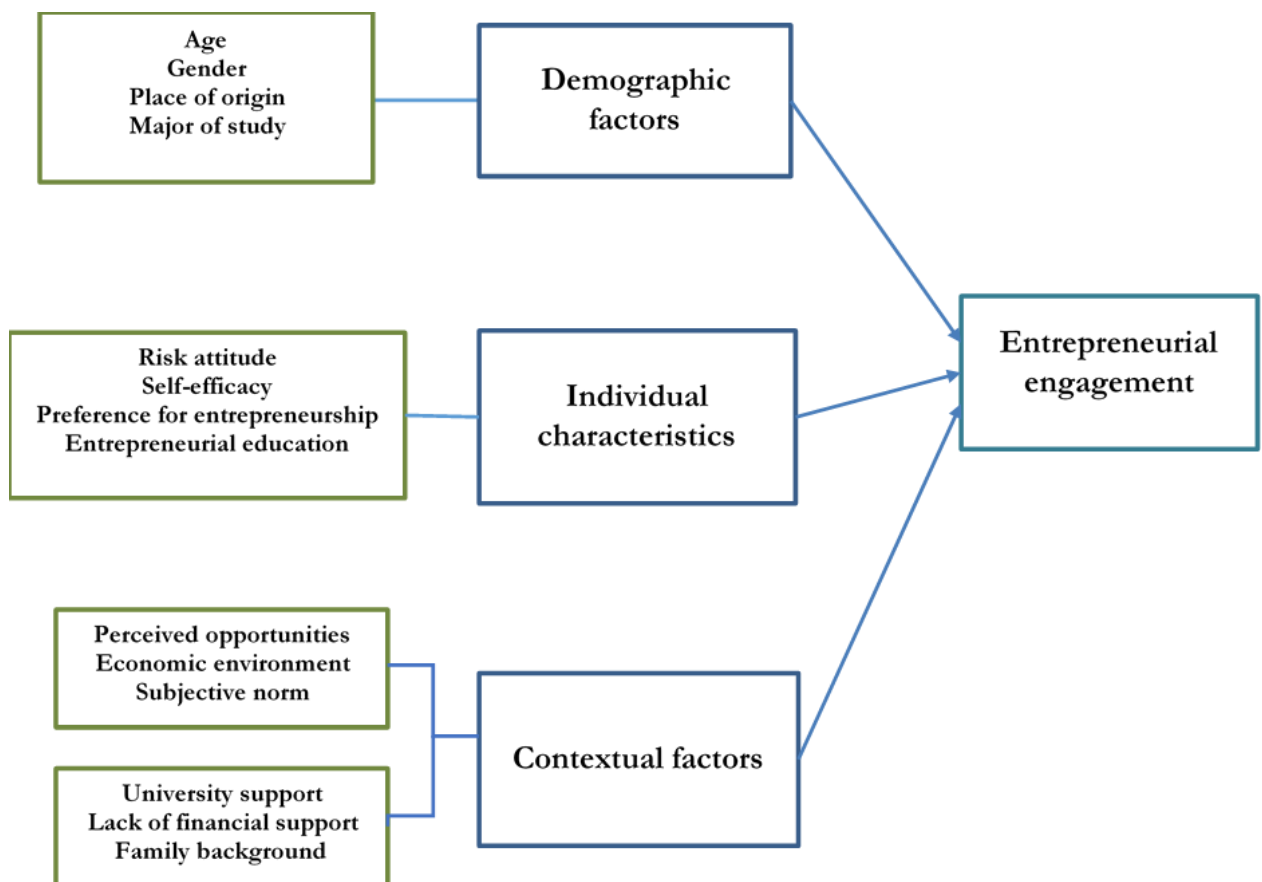
**Table 1: Summary of factors influencing the likelihood of becoming an entrepreneur**

“+” denotes the positive influence, “-“ denotes the negative influence, “x” denotes insignificant effect.

Author(s) Factors	Mazzarol, Volery and Doss (1999)	Ismail, Zain and Ahmed (2006)	Grilo and Thurik (2004)	Arenius and De Clercq (2006)	Van Praag and Cramer (2001)	Verheul, Thurik and Grilo (2006)	Kras niqi (2009)	Dalborg and Friedrichs (2015)
<b>Demographic factors</b>								
Gender (being male)	+	x	+	+	+	+	+	+
Age				-		+	+	+
Living in urban							+	
<b>Individual characteristics</b>								
Fear of failure				-				
Risk tolerance			+		+	+		+
Working sector							+	x
External entrepreneurial knowledge				+				
Educational attainment		+		+	+	+	x	
Preference for entrepre- neurship						+		+
Recent unemployment	-							
Self-efficacy				+				x
Previous working experi- ence in government	-							
<b>Contextual factors</b>								
Lack of financial support			x			-		
Family entrepreneurial background		x			+	+		
Administrative complexity			-			-		
Perceived opportunities				+		+		
Economic environment						+		

## 2.4 Conceptual Framework

Demographic variables include gender, origin of the student (from urban or rural areas), age. Common individual characteristics such as risk attitude, self-efficacy, preference for entrepreneurship and entrepreneurial education which were found in entrepreneurs will also be added to the model. Contextual factors refer to their family background, the favourable condition of the economic, the influences of important people's opinion and the available support. The proposed conceptual framework for the present paper is then shown as below.



### 2.4.1 Demographic Factors

The gender effect on entrepreneurial engagement has been proven by many researches (Van Praag and Cramer, 2001). In many cases, the probability of men becoming an entrepreneur is higher than women as women may face various impediments when doing so. In Vietnam, a country where Oriental way of thinking is still dominant, women are more tied to their families than men do. They have to take care of their parents, siblings as well as their husband and children when got married. As a result, they do not have enough time to pursue their professional goals, which in this case is starting their business or operate it effectively.

In regards to age, older graduates will tend to be more determined with their entrepreneurial decision because of their usual higher perceived self-efficacy (Autio *et al.*, 2001; Krasniqi, 2009; Erken, Donselaar and Thurik, 2016). Age has been widely observed to have



positive correlation with the probability of becoming self-employed (Leoni and Falk, 2010). The influence of age on entrepreneurial engagement is compatible with the expectation that people will accumulate knowledge, experience and necessary capital for their transformation to be their own boss as they grow older, and thus, more likely to become entrepreneurs.

Lastly, origin of the student (from urban or rural areas) and their major of study were added as control variables. As expected, students from urban areas will be more likely to pursue entrepreneurship because of the better entrepreneurial environment and access to essential resources (Krasniqi, 2009). Besides, graduate students from Economics major are expected to have higher rate of becoming an entrepreneur because of the characteristics of their curriculum.

### **2.4.2 Individual Characteristics**

The Theory of Planned Behaviour (Ajzen, 1991) states that behaviour is a function of the intention to perform the behaviour and the perceived behavioural control, which also has mediating effect on the behaviour-intention relationship. Boyd and Vozikis (1994) confirm this statement by claiming that self-efficacy has both direct and indirect effect through intention on entrepreneurial action. Human have the ability to consider potential future outcomes, evaluate which are the most desirable among these options and whether it is possible to pursue these outcomes. Hence, the expectation that people will pursue results that they perceive as undesirable or infeasible is not justifiable (Segal, Borgia and Schoenfeld, 2005). This is also the reason for the inclusion of self-efficacy and preference for entrepreneurship. Researches employing samples of business founders and non-founders show that people who have launched businesses have higher entrepreneurial self-efficacy (Wilson, Kickul and Marlino, 2007). Individuals who strongly believe in their capabilities will put more persistent efforts and always strive harder to overcome a challenge. Meanwhile, people possessing low self-efficacy usually become stressful and depressed, which in turn could restrains or impair their performance (Boyd and Vozikis, 1994).

Students who attended entrepreneurship courses are noticed to be more prompted to start their own business (Seidahmetov *et al.*, 2014). The important role of entrepreneurial education is concluded, not only for prospective entrepreneurs but also for an individual in this modern era (Seidahmetov *et al.*, 2014). Besides, risk tolerance is an indispensable factor to distinguish entrepreneurs and other people (Van Praag and Cramer, 2001; Grilo and Thurik, 2004; Dalborg and Friedrichs, 2015). This is reasonable since entrepreneurship is a risky process and requires high risk tolerance to involve in. Dalborg and Friedrichs (2015) also explore that this variable, when combined with can cancel out the effect of passion for entrepreneurship on the entrepreneurial engagement rate.

### **2.4.3 Contextual Factors**

Entrepreneurial abilities is higher in people who come from family with entrepreneurial background (Van Praag and Cramer, 2001). Furthermore, they found that Individuals would become successful entrepreneurs if their fathers' job requires managerial responsibilities. Besides self-efficacy, entrepreneurial engagement of individuals can be encouraged by the exposure to people who can impart useful knowledge to them (Arenius and De Clercq, 2006). Children of an entrepreneur regularly encounter obstacles and difficulties stemming from entrepreneurial and managerial tasks, either directly or via conversation. This brings those individuals favourable conditions to learn specifically about entrepreneurship. Additionally, if family members of an individual participate in entrepreneurial activities, he or she can gain better access to capital or assets that are necessary for the venture such as

space for the office or factory. Also, the individual may receive free consultancy, have the opportunities to expand their business networks and benefit from good reputation with prospective customers in the business community (Van Praag and Cramer, 2001).

To learn a behaviour, not only observing other people but also the practice of tasks required to perform that behaviour is potent (Mwange, 2018). Learning through the exposure to entrepreneurship in family or school environment incorporated with consulting process by lecturers or older members can encourage the decision to engage in entrepreneurial activities (Mwange, 2018). This emphasizes the influence of these two context factors, which has been mentioned in a variety of research.

The role of subjective norm and university facilitation also plays a significant role in affecting the intention to become an entrepreneur (Ajzen and Fishbein, 1980; Autio *et al.*, 2001; Nguyen *et al.*, 2018) and hence, are integrated in to the model predicting entrepreneurial behaviour. In the cultural context of Vietnam, the opinion of influential people has a weighty impact on an individual's decision (Tran *et al.*, 2018) and this factor is expected to have positive influence on the likelihood of engagement in entrepreneurship. Furthermore, university is considered an excellent place to develop entrepreneurial culture among its students (Mahlberg, 1996). If students perceive that their entrepreneurial ideas are encouraged and appropriately supported, the chance that they become entrepreneurs will be higher.

# Chapter 3 Methodology

## 3.1 Research Design

In order to examine the determinants of graduates' participation in entrepreneurship in Ho Chi Minh city, Vietnam, the questionnaire is designed to collect information about respondents' characteristics. The key variables in the questionnaire are divided into three main groups:

- (1) Demographic factors: This group elicits information on age, gender, university, major of study and year of graduation.
- (2) Individual characteristics: This section provides questions regarding preference for entrepreneurship, entrepreneurial education, risk tolerance and self-efficacy in order to elicit the impacts of individual characteristics on the respondents' decisions to take part in entrepreneurship.
- (3) Contextual factors: This group includes questions obtaining information about the living environment of respondents. They are family entrepreneurship background, subjective norm, university facilitation, perceived opportunity and economic environment.

The complete questionnaire is presented in Appendix 1. The survey written in Vietnamese was sent by email to a large number of students who graduated from zero to six years from various universities in the area of Ho Chi Minh City. The number of observations collected is 277, which is quite limited due to the low response rate from respondents. The mean age of the sample is 25 years old. Female respondents account for a larger proportion of the 277 graduates, about 58%. Among these respondents, 61% of them major in Economics and more than a half coming from urban areas. Detailed information about the sample is presented in descriptive statistics section.

## 3.2 Variables Measurement

### 3.2.1 Demographic factors

Age (AGE) of respondents was measured by asking their year of birth and then subtracted from 2019. Gender (GEN) was coded 1 if the respondent is male and 0 if they are female. To measure their place of origin (ORI), the question "Your main place of residence until 18 years old" has been used. The answer was coded 1 if respondent coming from urban areas and 0 if coming from rural areas. Regarding their major of study (MAJ), respondents were asked to specify their major in university. The result was then coded 1 if they major in Economics and 0 for the remaining majors.

### 3.2.2 Individual characteristics

Preference for entrepreneurship (PRE) was measured by asking the graduate students "Among various career options (wage employee, office staff, government employee, etc.), do you prefer being an entrepreneur?". The answer was coded 1 if respondents chose "Yes" and 0 if they chose "No". Similarly, self-efficacy (SEL) and entrepreneurial education (EDU) were measured by asking respondents to answer the questions "Do you have the skills required to succeed as an entrepreneur (business plan making, market research, networking, etc.)?" and "Have you ever taken part in an entrepreneurship course?". The answer was coded 1 if respondents chose "Yes" and 0 if they chose "No". To assess the

risk tolerance factor, three questions were employed to measure three level of risk-taking trait (Holt and Laury, 2005; Armin *et al.*, 2016). The idea is to change the safe payment to see whether respondents prefer the sure payment or the lottery with a 50% chance of winning VND1,000,000 and 50% chance of receiving nothing. The procedure was first asking respondents to choose between 2 options: “A sure payment of VND500,000” or the lottery. If respondent chooses the sure payment, next question will ask them to choose between “A sure payment of VND250,000” and the same lottery. In case the respondent selects the lottery in the first question, he/she will be moved to the third question to choose between “A sure payment of VND700,000” and the lottery. Answers and their corresponding level of risk-taking are mapped out as following:

Question 1	Question 2	Question 3	Risk-taking level (RISK)
A sure payment of VND500,000	A sure payment of VND250,000		1
A sure payment of VND500,000	The lottery		2
The lottery		A sure payment of VND700,000	3
The lottery		The lottery	4

### 3.2.3 Contextual factors

University facilitation (UNI), perceived opportunity (OPP), economic environment (ECO) and lack of financial support (FIN) were measured by asking the respondents “In your university, are people actively encouraged and supported to pursue their own ideas to start their own business?”, “In the next six months, will there be attractive opportunities to start a business in your living area?”, “Is the current Vietnam economy favourable for business start-up?” and “Is it difficult to start a business when the available financial support is insufficient?”. The answers were coded 1 if respondents chose “Yes” and 0 if they chose “No”.

To measure family entrepreneurial background (FAM), respondents were asked two questions: “Is your parent an entrepreneur?” and “Is one of your relatives an entrepreneur?”. The answers were coded 1 if respondents chose “Yes” in one of the two questions and 0 if they chose “No” for both questions.

Subjective norm (SN) was measured by three questions: “Will the people around you have a positive attitude toward your decision to become an entrepreneur?”, “Will your friends have a positive attitude toward your decision to become an entrepreneur?” and “Will your family have a positive attitude toward your decision to become an entrepreneur?”. The answers were coded 1 if respondents chose “Yes” in one of the three questions and 0 if they chose “No” for all three questions.

### 3.2.4 Dependent Variable

The dependent variable “Current entrepreneur” (CE) was measure by asking the respondent if they are currently an entrepreneur or not. The answer was coded 1 if respondents chose “Yes” and 0 if they chose “No”.

### 3.3 Empirical Estimation Methods

The dependent variables are dichotomous and require respondents to choose between “Yes” and “No” option. For these types of categorical dependent variable, Logistic regression is appropriate to regress them against any combination of dummy and continuous variables (Hosmer and Lemeshow, 1989, p.1). The logit model is specified as:

$$p_i = \Pr \left[ Y_i = 1 = \exp \left( \frac{\beta X'_i}{1 + \exp (\beta X'_i)} \right) \right]$$

where  $p_i$  is the likelihood of an individual being an entrepreneur.

( $0 < p_i < 1$ ), and  $X$  is the vector of independent variables.

The main objective of the empirical analysis is to identify factors inducing the entrepreneurial engagement of graduate students in Ho Chi Minh city, Vietnam and five separate Logit models will be estimated. The first Logit specification is run using only demographic factors:

$$P(\text{CE}) = \alpha + \beta_1 \text{AGE} + \beta_2 \text{GEN} + \beta_3 \text{ORI} + \beta_4 \text{MAJ} + \varepsilon_i$$

The second model will be added individual characteristics with RISK variable is added in the form of 3 dummy variables to compare the likelihood of an individual being an entrepreneur among 4 levels.

$$P(\text{CE}) = \alpha + \beta_1 \text{AGE} + \beta_2 \text{GEN} + \beta_3 \text{ORI} + \beta_4 \text{MAJ} + \beta_5 \text{PRE} + \beta_6 \text{EDU} + \beta_7 \text{SEL} + \beta_8 \text{RISK} + \varepsilon_i$$

The third model is run using demographic factors and environmental factors, which are the first part of contextual elements:

$$P(\text{CE}) = \alpha + \beta_1 \text{AGE} + \beta_2 \text{GEN} + \beta_3 \text{ORI} + \beta_4 \text{MAJ} + \beta_5 \text{SN} + \beta_6 \text{OPP} + \beta_7 \text{ECO} + \varepsilon_i$$

The fourth model is constructed using demographic factors and support factors, which are the second part of contextual elements:

$$P(\text{CE}) = \alpha + \beta_1 \text{AGE} + \beta_2 \text{GEN} + \beta_3 \text{ORI} + \beta_4 \text{MAJ} + \beta_5 \text{FAM} + \beta_6 \text{FIN} + \beta_7 \text{UNI} + \varepsilon_i$$

The last model will include all explanatory variables to test the consistency of these factors:

$$P(\text{CE}) = \alpha + \beta_1 \text{AGE} + \beta_2 \text{GEN} + \beta_3 \text{ORI} + \beta_4 \text{MAJ} + \beta_5 \text{PRE} + \beta_6 \text{EDU} + \beta_7 \text{SEL} + \beta_8 \text{RISK} + \beta_9 \text{SN} + \beta_{10} \text{OPP} + \beta_{11} \text{ECO} + \beta_{12} \text{FAM} + \beta_{13} \text{FIN} + \beta_{14} \text{UNI} + \varepsilon_i$$

## **Chapter 4 Estimation Results**

### **4.1 Descriptive statistics**

Table 2 presents means, standard deviations and intercorrelations of the variables in the study. It can be observed that some variables have significant correlation with the dependent variable, currently is an entrepreneur. The positive correlation of preference for entrepreneurship, self-efficacy, perceived opportunities and favourable economic condition as well as the negative correlation of lack of financial support with the regressand, current entrepreneur, preliminarily support the proposed hypotheses.

**Table 2: Correlations, Means and Standard Deviations**

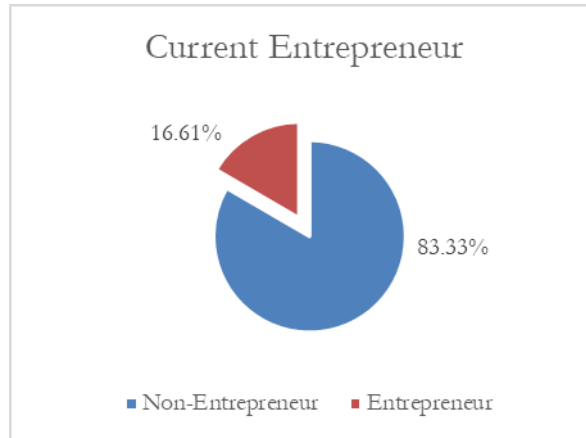
Vars.	Mean	SD	CE	AGE	GEN	ORI	MAJ	PRE	EDU	SEL	RISK	SN	OPP	ECO	FAM	FIN	UNI
CE	0.166	0.373	1.00														
AGE	24.848	1.628	0.048	1.00													
GEN	0.419	0.494	0.054	0.066	1.00												
ORI	0.556	0.498	-0.089	-0.173***	-0.007	1.00											
MAJ	1.606	0.489	0.002	-0.203***	0.085	0.143**	1.00										
PRE	0.798	0.402	<b>0.176***</b>	-0.014	0.063	0.002	-0.056	1.00									
EDU	0.238	0.427	0.046	-0.115*	0.092	-0.029	0.034	0.113*	1.00								
SEL	0.484	0.501	<b>0.170***</b>	0.001	0.174***	-0.080	0.159***	0.128**	0.171***	1.00							
RISK	2.664	1.056	0.013	0.025	0.027	-0.133**	-0.088	0.189***	0.122	0.055	1.00						
SN	0.884	0.32	0.010	-0.131**	-0.06	0.063	0.056	0.071	0.096**	0.056	0.121**	1.00					
OPP	0.567	0.496	<b>0.194***</b>	-0.086	-0.011	0.201***	0.206***	0.177***	-0.024	0.147**	0.074	0.117	1.00				
ECO	0.809	0.394	<b>0.118**</b>	-0.062	-0.108*	0.083	0.040	0.167***	0.035	0.104*	0.063	0.083*	0.297***	1.00			
FAM	0.690	0.464	0.111*	-0.015	0.0002	0.044	-0.061	0.09	0.082	0.103*	-0.044	0.099*	-0.004	0.11*	1.00		
FIN	0.921	0.271	<b>-0.192***</b>	-0.003	0.087	0.033	0.009	0.052	-0.024	-0.063	0.109*	-0.023	-0.014	0.027	0.092	1.00	
UNI	0.690	0.464	-0.057	-0.115*	0.016	-0.066	0.226***	0.012	0.137**	0.166***	0.164***	0.124**	0.106*	0.11*	-0.046	0.063	1.00

**Notes:** \* denotes significance at 10%, \*\* denotes significance at 5%, \*\*\* denotes significance at 1%.

### 4.1.1 Dependent Variable

Figure 4 presents the frequency and percentage of current entrepreneur in the sample including 277 observations. The percentage of graduate students claiming that they are owning a business or self-employed is 16.67%, which is noticeably higher than expected.

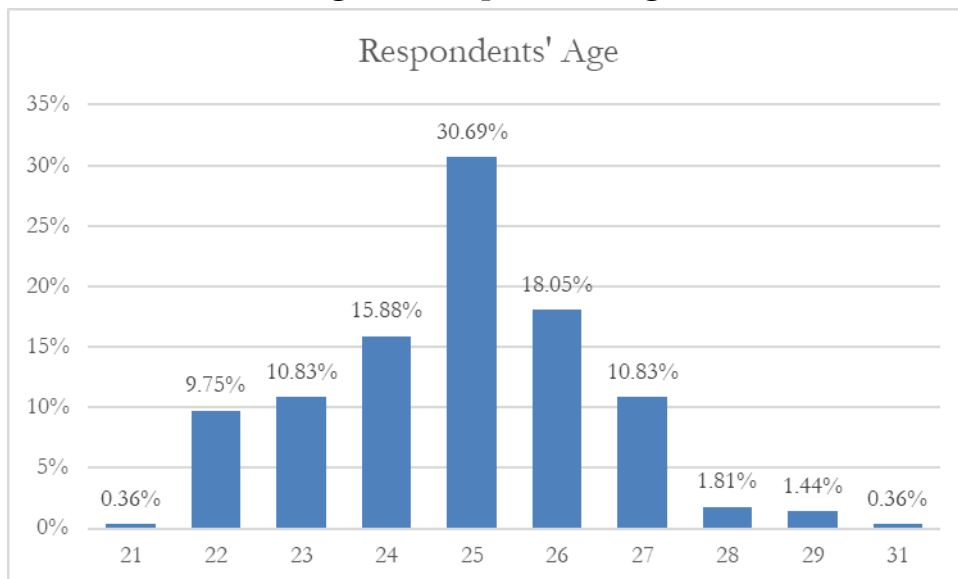
**Figure 4: Current Entrepreneur**



### 4.1.2 Demographic Factors

Respondents are ranging from 21 to 31 years old, with the mean age of the sample is 25 years. Graduate students from 24 to 26 years old account for a majority of the sample (64.62%). As studied by Storey (1994), people belong to the 25 to 45 age group are most likely to engage in entrepreneurship. This shows that the age range of the sample collected, although on the younger side, is appropriate for the study purpose.

**Figure 5: Respondents' Age**





Variables	Frequency of 1	Percentage	Pearson Chi2	P-value
Gender (male=1)	116	41.88%	0.802	0.371
Place of origin (urban=1)	154	55.60%	2.2092	0.137
Major of study (economics major=1)	168	60.65%	0.0011	0.973

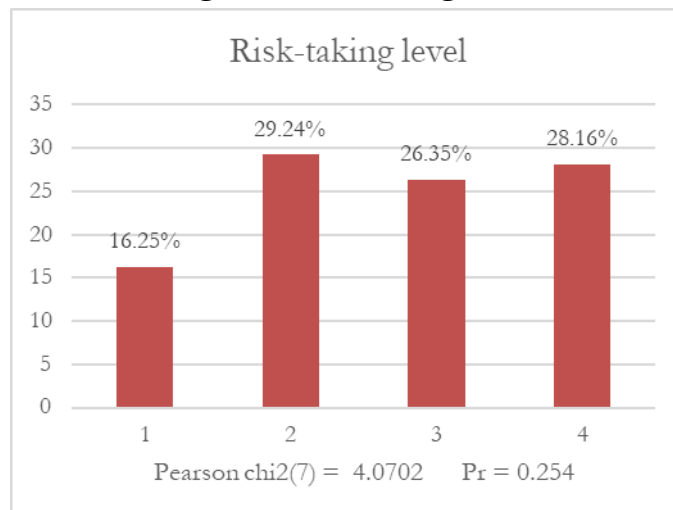
Female respondents account for a larger part of the sample than their male counterparts, about 58% of 277 observations. Chi-squared test result indicates that there is no significant difference in the business start-up rate between women and man in this study. The number of graduates coming from urban areas is slightly higher than that of respondents living in rural areas until 18 years old. A majority of our sample, about 61%, possess a degree in economics yet, the start-up rate of these students is not significantly different from people from other majors.

### 4.1.3 Demographic Factors

Variables	Frequency of 1	Percentage	Pearson Chi2	P-value
Preference for entrepreneurship (yes=1)	221	79.78%	8.6118	0.003
Self-efficacy (yes=1)	134	48.38%	7.9869	0.005
Entrepreneurial education (yes=1)	66	28.83%	0.5976	0.440

The sample has a surprisingly high preference for entrepreneurship with nearly 80% of them answer “Yes” to the question asks if they prefer being an entrepreneur among various career options. About half of the sample perceived that they have efficient skills to become successful entrepreneurs but the percentage of graduate students took part in entrepreneurial courses is only 29%. There is significant difference between the entrepreneurial engagement rate of respondents preferring entrepreneurship and the ones who do not. The same pattern applies for self-efficacy variable.

**Figure 6: Risk-taking level**



Three higher levels of risk tolerance measured by three questions distribute approximately in the sample with level 1 is lower than the remaining. Respondents in this study relatively prefer risk with 55% of the sample are ranked at level 3 and 4. Nevertheless, the differences in the start-up rate among four levels of risk attitude are not significant.

## 4.1.4 Contextual Factors

### *Support factors*

Variables	Frequency of 1	Percentage	Pearson Chi2	P-value
University facilitation (yes=1)	191	68.95%	0.8998	0.343
Lack of financial support (yes=1)	255	92.06%	10.1919	0.001
Family entrepreneurial background (yes=1)	191	68.95%	3.3968	0.065

A larger proportion of respondents, around 69%, states that their universities encourage and support entrepreneurial ideas. Remarkably, 92% of graduates think that it would be difficult to become an entrepreneur when financial supported is insufficient. There is also a significant difference in start-up rate between who highly value the essentiality of financial support and who do not. Among 277 respondents, there is 69% of them have at least one family member is an entrepreneur. Having a family member participating in entrepreneurship will lead to a significant difference in the probability of being an entrepreneur.

### *Environmental factors*

Variables	Frequency of 1	Percentage	Pearson Chi2	P-value
Perceived opportunities (yes=1)	157	56.68%	10.4639	0.001
Economic environment (favourable=1)	224	80.87%	3.8841	0.049
Subjective norm (positive=1)	245	88.45%	0.0252	0.874

More than a half of the sample perceive that there are opportunities for entrepreneurship in their living areas in the next six months. Interestingly, more than 80% of graduates think that Vietnamese economy is favourable for entrepreneurial activities. There are significant differences in the likelihood of being an entrepreneur between respondents who perceive opportunities as well as favourable economic conditions and who do not. Moreover, a substantially high percentage of graduates state that surrounding people will have positive attitude towards their decision to become an entrepreneur.

However, these results only imply statistical correlation between the studied variables. In order to examine the causal relationship between the regressand and its predictor, regression procedure needs to be implemented.

## 4.2 Regression Results

The factors presented in Table 1 describe the effect of the corresponding factors on the odds (ratio of two probabilities) of an individual being an entrepreneur. A positive coefficient implies that the corresponding independent variable increase the likelihood of engage in entrepreneurship. Conversely, a negative coefficient implies that the factor decreases the odds of an individual becoming an entrepreneur.

**Table 3: Logistic regression results for Model 1 to 5**

Variables	Model 1	Model 2	Model 3	Model 4	Model 5
<i>Demographic factors</i>					
AGE	1.054 (0.113)	1.062 (0.127)	1.066 (0.115)	1.045 (0.114)	1.068 (0.132)
GEN	1.306 (0.428)	1.153 (0.386)	1.405 (0.477)	1.457 (0.506)	1.419 (0.510)
ORI	0.631 (0.216)	0.649 (0.238)	0.475** (0.170)	0.601 (0.222)	0.464* (0.186)
MAJ	1.092 (0.395)	0.997 (0.386)	0.845 (0.318)	1.202 (0.456)	0.973 (0.423)
<i>Individual characteristics</i>					
PRE		6.949** (5.326)			5.271** (3.998)
EDU		1.080 (0.381)			1.081 (0.426)
SEL		2.186** (0.783)			1.776 (0.693)
RISK 2		1.081 (0.589)			1.543 (1.023)
RISK 3		0.395 (0.233)			0.576 (0.392)
RISK 4		0.918 (0.488)			1.390 (0.839)
<i>Contextual factors</i>					
SN			1.023 (0.520)		0.968 (0.556)
OPP			3.570*** (1.586)		3.081** (1.517)
ECO			2.275 (1.306)		2.483 (1.569)
FAM				2.471** (1.081)	2.238* (1.075)
FIN				0.202*** (0.105)	0.171*** (0.106)
UNI				0.735 (0.289)	0.590 (0.270)
Cons	.0572 (0.158)	.007 (0.024)	0.012 (0.033)	0.172 (0.509)	0.006 (0.022)
Log-Likelihood	-122.840	-114.341	-114.58	-117.059	-102.541
R-square	0.012	0.08	0.079	0.059	0.175
No. obs	277	277	277	277	277

**Notes:** \* denotes significance at 10%, \*\* denotes significance at 5%, \*\*\* denotes significance at 1%. Robust standard errors are shown in parentheses.

The factors presented in Table 3 describe the effect of the corresponding factors on the odds (ratio of two probabilities) of an individual being an entrepreneur. A positive coefficient implies that the corresponding independent variable increase the likelihood of engage in entrepreneurship. Conversely, a negative coefficient implies that the factor decreases the odds of an individual becoming an entrepreneur.

The first regression model which only contains demographic, control variables shows no significant relationship between predictors and the dependent variable. It also has the lowest Pseudo R-square among five models, which implies the improvement in the goodness-of-fit with the addition of other explanatory variables.

Adding individual characteristics into the first model leads to significant influences of some variables in the second model. More specifically, preference for entrepreneurship and self-efficacy will increase the likelihood of being an entrepreneur of graduate students. Both variables are significant at  $p=0.05$  level. The effect of taking courses about entrepreneurship is not significant in the model, which could be explained that respondents have not recognized the importance of possessing entrepreneurial knowledge when pursuing their own business. The same pattern applies for risk-taking level, which is inconsistent with many papers in this field (Van Praag and Cramer, 2001; Grilo and Thurik, 2004; Dalborg and Friedrichs, 2015). This discrepancy may be due to the slightly high preference for risk of the sample collected, which as a result shows no difference in the odds of involving in entrepreneurship between different levels of risk tolerance.

In model 3, which includes environmental factors, the place of origin variable becomes significant at  $p=0.05$  level, indicating a significant negative effect on the dependent variable. This means that *ceteris paribus*, being a graduate coming from rural area will lead to 52.5 percentage point higher in the odds of entrepreneurial involvement. This factor maintains to keep its significance at  $p=0.1$  level in the last model when all explanatory variables are combined, which yields a result inconsistent with the study of Krasniqi (2009). The author finds that people living in urban areas will be twice more likely to engage in entrepreneurship than people originate from rural areas. The diverse findings could be due to the differences in two samples' characteristics with one studies Kosovians aging 18 to 65 and the other studies Vietnamese graduates who are mainly in their twenties. Moreover, students from Vietnamese rural areas often possess strong willpower to overcome their disadvantages and becoming an entrepreneur may be an appealing way to achieve success. In this regression, perceived opportunity has a significant positive influence on the odds of entrepreneurial involvement, which confirms the previous findings about this factor (Arenius and De Clercq, 2006; Verheul, Thurik and Grilo, 2006). Taking others factors equal, an individual who perceive that there will be opportunities for entrepreneurship in the next six months will experience 257 percentage point increase in the odds of participate in entrepreneurial activities.

Model 4 presents the impacts of supporting factors with two variables having significant relationship with the dependent variable. Having at least one family member engage in entrepreneurship will increase the odds of becoming an entrepreneur. This is reasonable since these graduates have the chance to expose to entrepreneurship as well as learn from their family's experience in operating a business (Van Praag and Cramer, 2001; Arenius and De Clercq, 2006). Importantly, the lack of financial support will reduce the likelihood of an individual becoming an entrepreneur. If an individual claim that insufficient financial support will hinder their process of becoming an entrepreneur, there will be 79.8 percentage point decrease in their odds of entrepreneurial engagement. This is especially true for the used sample which mostly encompasses young people who usually face difficulties in acquiring necessary capital for their own business. However, the impact of university support on the likelihood of becoming an entrepreneur is insignificant although there is 69% of

respondents think that their university encourages and facilitates entrepreneurial ideas. This raised questions about the effectiveness of and the spread of university campaigns in promoting entrepreneurial activities among students. Furthermore, the entrepreneurial wave in Vietnam just became popular in 2016 and hence, the effect of this variable may be unclear for students graduated before that time.

The last model includes all independent variables to examine their effects on the odds of entrepreneurial involvement together. All five models do not find significant influences of age, gender and major of study. The present paper finds the effect of gender variable, which implies that being a male, on the likelihood of becoming an entrepreneur is statistically insignificant. Previous findings about this factor (Mazzarol, Volery and Doss, 1999; Van Praag and Cramer, 2001; Grilo and Thurik, 2004; Arenius and De Clercq, 2006) do not apply for Vietnam, where the gender equity index of business start-up is highest among 54 countries in the 2017 report of Global Entrepreneurship Monitor (2018). This is a good sign showing that Vietnamese women do not face as many barriers in starting their own business as in other countries. There is also no significant difference in the likelihood of being an entrepreneur among different majors of study. This could be interpreted that having an economics university degree does not necessarily increase the odds of entrepreneurial engagement of graduate students. Students from natural science majors also possess entrepreneurial passion and hence should be encouraged to pursue their ideas. Some factors lose their high significant level when being combined with other variables such as self-efficacy, place of origin and family entrepreneurial background. Lacking financial support, perceived opportunity and preference for entrepreneurship maintain their significant relationship with the dependent variable both in separate and incorporate models. Overall, all three hypotheses are supported.

### 4.3 Further Analysis

In this section, the sub-sample which contains only current entrepreneurs will be analyzed to better understand their selected industries and the purposes of pursuing entrepreneurship.

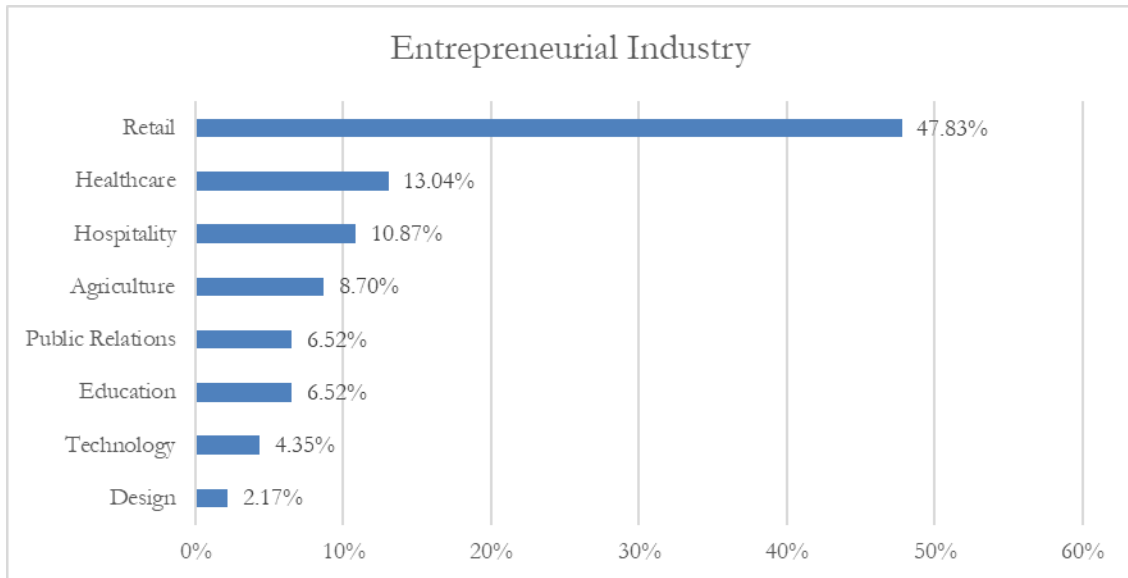
#### 4.3.1 Entrepreneurial Industry

Respondents were asked “Which industry is your entrepreneurial business belong to?” to collect data on this information. Compatible with the trend in Vietnam, nearly 50% of 46 current entrepreneurs are operating in retail industry. The next two popular industries are healthcare (13.04%) and hospitality (10.87%). The desired industry which is related to technology accounts for 4.35% of the sub-sample with only two graduates operating in this field. Due to the small sample size (only 46 entrepreneurs), empirical relationships could not be verified, instead, Chi-squared tests will be conducted to check if there are correlations between the industry chosen and other factors.

Among many factors, the test for major of study and entrepreneurial industry produces significant result (Pearson  $\chi^2(7) = 17.0055$ , P-value = 0.017). This implies that there is significant difference in the industry chosen among graduates from different majors. 82% of students operating in retail industry are from Economics major, which shows that students have a trend to start their business in the fields related to their major of study. The low rate of technology business calls upon necessary actions to encourage entrepreneurship rate in this potential field. To explain for the popularity of retail industry, the cost and effort required for participating in this industry is, to an extent, lower than the other industries but receiving profit in the short-term. In contrast, entrepreneurship in technology or

manufacturing industry requires consistent effort and may take longer time to become fruitful.

**Figure 7: Entrepreneurial Industry**



### 4.3.2 Purposes of entrepreneurial engagement

To gather information on this issue, respondents were asked to pick out the three most important purposes of their decision to become entrepreneur. There are two groups of answers created on the basis of the definition of entrepreneurship, which is the attempt to start a business that is innovative, growth-oriented and unique by a risk-taking, autonomous individual (Gartner, 1990).

Group 1:

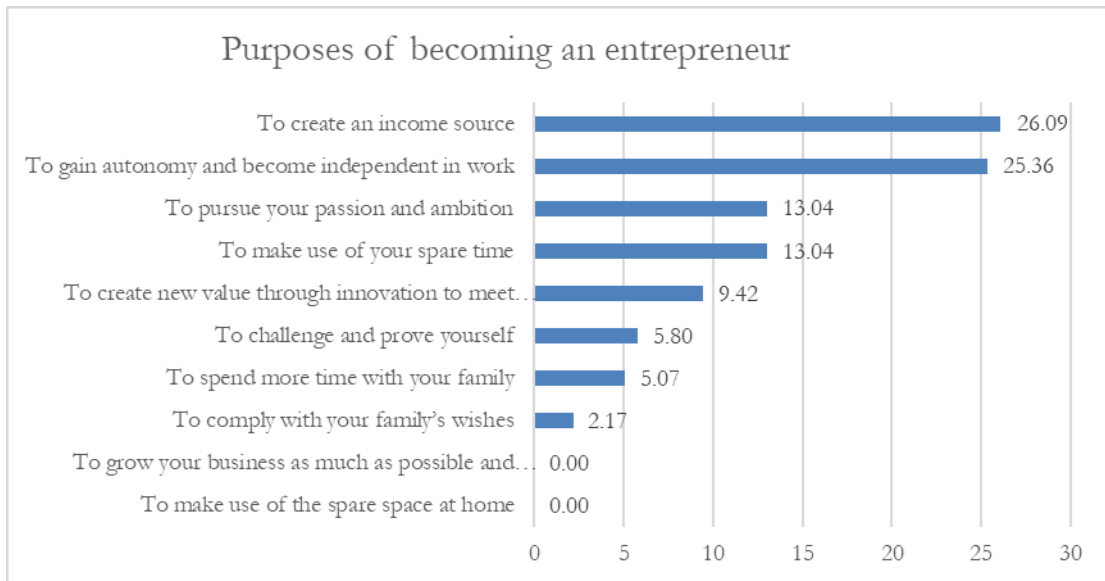
- To create an income source
- To comply with your family’s wishes
- To make use of your spare time
- To spend more time with your family
- To make use of the spare space at home

Group 2:

- To gain autonomy and become independent in work
- To pursue your passion and ambition
- To challenge and prove yourself
- To create new value through innovation to meet market demand
- To grow your business as much as possible and achieve the initial goals

If the respondents choose two over three purposes from group 2, they will be categorized as having “real” entrepreneurial spirit and coded 1, the remaining cases will be coded 0. The percentage of real entrepreneurs who have at least two answers belong to group 2 among the sub-sample is 59% corresponding to 27 graduate students.

**Figure 8: Purposes of becoming an entrepreneur**



The most chosen reason is to create an income source which makes up 26.09% of 46 current entrepreneurs. The second and third common purpose is to gain autonomy and independence in work and to pursue their passion and ambition. Besides, no graduate considers the purpose to grow their business as much as possible and achieve the goals.

After running Chi-squared tests to investigate correlations between the entrepreneurial industry and other variables. This study finds that male graduates have higher entrepreneurial spirit than their female counterparts. This result is understandable as it was recorded that Vietnamese women become entrepreneur because of necessity-driven motives at a much higher rate (18%) compared to men (13%) (Global Entrepreneurship Monitor, 2018).

Another variable having significant Chi-squared test result (Pearson  $\chi^2(1) = 2.9713$ , P-value = 0.085) with industry is preference for entrepreneurship. The difference in the entrepreneurial industry between graduates who prefer and do not prefer entrepreneurship is plausible with all 27 real entrepreneurs show preference for entrepreneurship.

Lastly, the test indicates that there is difference in entrepreneurial spirit between respondents who perceive that they have sufficient skills to become entrepreneurs and who do not (Pearson  $\chi^2(1) = 5.9056$ , P-value = 0.015). There are 82% of graduates who believe in their self-efficacy are real entrepreneurs.

## Chapter 5 Concluding Remarks

The present paper uses a framework that incorporating various streams of literature to better understand and determine which factors affecting entrepreneurial engagement of graduates in Ho Chi Minh city, Vietnam. Given the increased youth unemployment rate and the prominent benefits for the economy of entrepreneurship, university students with their attitude and knowledge can be a prosperous source of future entrepreneurs (Wang and Wong, 2004). Most of the studies about this topic conducted for Vietnam mainly focus on the intention of undergraduates (Mai and Nguyen, 2015; Nguyen, 2018; Tran *et al.*, 2018), whose intention could vary overtime. Thus, this study can contribute to the overall understanding of this field, especially in Vietnam. Econometric analysis reveals the significant effects of lacking financial support, perceived opportunity and preference for entrepreneurship with the three proposed hypotheses statistically supported. The lack of financial support will decrease the likelihood of an individual becoming an entrepreneur. If the graduate claim that insufficient financial support will hinder their process of becoming an entrepreneur, there will be 79.8 percentage point decrease in their odds of entrepreneurial engagement. This result re-examines the finding of Grilo and Thurik (2004), who show no significant relationship between this variable and the odds of being an entrepreneur. Perceived opportunity is shown to have a significant positive impact on the odds of entrepreneurial involvement, which confirms the previous findings about this factor (Arenius and De Clercq, 2006; Verheul, Thurik and Grilo, 2006). The results also imply that graduates who prefer for entrepreneurship as a career will have higher odds of participate in entrepreneurial activities. In the final model which combines all independent variables, self-efficacy, place of origin and family entrepreneurial background lose their significance when being run in separate models. Nevertheless, they still produce some statistical values for drawing implications.

According to Prime Minister Nguyen Xuan Phuc, related to innovation and creativity in the digital age, it is important for graduate students to pursue entrepreneurial ideas besides getting a job (Mai Cham, 2018). He also emphasizes that universities need to transform into research and entrepreneurial universities in the process of educational renovation. The insignificant effect of university support factor may raise question about the effectiveness of university's campaign to promote entrepreneurial activities among students and its ability to spread useful information about entrepreneurship to the students. In addition, the university has a significant role in forming students' capabilities to generate knowledge and innovation under constantly changing conditions (Seidahmetov *et al.*, 2014). This can lead to better perceived self-efficacy and as a result, raising the odds of entrepreneurial involvement. As students become more interested in entrepreneurial career, it is advantageous if they have the opportunities to acquire business knowledge and skills at their university. Providing the statistical difference in choosing entrepreneurial industry between students from various majors, basic courses in entrepreneurship should be implemented in university and not limited to only business majors since students from other fields could be prosperous source of future entrepreneur, especially technological ones.

Having recognized the importance of preference for entrepreneurship, there should be mechanism to disseminate entrepreneurial spirit and impart entrepreneurial knowledge for successful business start-up. University is considered an excellent place to develop entrepreneurial culture among its students (Mahlberg, 1996). The results could be helpful for universities in redesigning the curriculum and organizing vocational activities which produce attractive image of entrepreneurship and improve students' preference for this career choice. The role of leaders in this field should not be underestimated in inspiring and guid-



ing nascent entrepreneurs since preference for entrepreneurship also correlates with the chance of being “real” entrepreneurs.

Government, who acknowledged that entrepreneurship is beneficial for the country, should also be aware of difficulties that hinder the entrepreneurial engagement of students and create a supportive environment for entrepreneurship. The fact that entrepreneurs usually face financial difficulties urges the state to facilitate them in acquiring necessary capital. The Prime Minister has proposed the State Bank to complete financial support project to create a favourable procedure for innovative start-up loans. Despite the implementation since 2016 of Resolution No.35/NQ-CP on supporting and developing enterprises until 2020, institution reform still needs real driving forces to improve domestic business environment and provide favourable conditions for small businesses (VNA, 2017).

## Chapter 6 Limitations

The study still experiences some limitations theoretically and empirically. First, this paper utilizes cross-sectional data to study the motivation to establish a firm of graduate students in Ho Chi Minh city. The results hence could not be used to represent the non-student population as well as students graduate from colleges or universities not residing in Ho Chi Minh city. It is also worth noticing that the studied subjects are nascent entrepreneurs and their businesses may not be successful in the future. Studies with extended timeframe could help examine the success rate of these ventures since these findings can benefit the economy.

Moreover, the performance of online survey may not be as good as face-to-face interview. It could happen that an individual chooses one answer randomly because they do not really understand the question, which can be clarified with the use of face-to-face interview. Another limitation lies in the use of single-item measurement. Some constructs were measured using only one question or item which could be improved for more confident results with the application of multiple-item measure.

The effect of self-efficacy is well studied from the theory, however, it could be argued that the relationship between this variable and the likelihood of entrepreneurial engagement is two-way. More specifically, it could be that involving in entrepreneurship induces people to perceive that they have the necessary skills and knowledge to participate in this field (Arenius and De Clercq, 2006). Furthermore, their entrepreneurial capabilities could be enhanced with exposure to other entrepreneurs after they start their entrepreneurial venture. Further research could investigate this relationship to clarify the causality.

# Appendix 1

## QUESTIONNAIRE

### PART 1: Background information

**Question 1.** Year of birth:

**Question 2.** Gender:  Male  Female  Other

**Question 3.** Main place of residence until 18 years old:

Urban  Rural

**Question 4.** Your university:

University of Economics HCMC

HCMC International University

HCMC University of Technology

HCMC University of Technology and Education

Other

**Question 5.** Your major of study:

**Question 6.** Year of graduation:

**Question 7.** Is your parent an entrepreneur?

Yes  No

**Question 8.** Is one of your relatives an entrepreneur?

Yes  No

### PART 2: Entrepreneurial status

**Question 9.** Are you currently an entrepreneur?

Yes  No

**Question 10.** Which industry is your entrepreneurial business belong to?

Retail

Construction

Technology

Hospitality

Healthcare

Agriculture

Tourism

Manufacturing

Design

Education

Public Relations

Other:

**Question 11.** Which are the three main purposes of your entrepreneurial business?

To create an income source

- To comply with your family's wishes
- To make use of your spare time
- To spend more time with your family
- To make use of the spare space at home
- To gain autonomy and become independent in work
- To pursue your passion and ambition
- To challenge and prove yourself
- To create new value through innovation to meet market demand
- To grow your business as much as possible and achieve the initial goals

### **PART 3: Entrepreneurial motivation**

#### *Entrepreneurial preference:*

**Question 12.** Among various career options (wage employee, office staff, government employee, etc.), do you prefer being an entrepreneur?

- Yes       No

#### *Financial support:*

**Question 13.** Is it difficult to start a business when the available financial support is insufficient?

- Yes       No

#### *Entrepreneurship knowledge:*

**Question 14.** Have you ever taken part in an entrepreneurship course?

- Yes       No

**Question 15.** Do you have the skills required to succeed as an entrepreneur (business plan making, market research, networking, etc.)?

- Yes       No

#### *Entrepreneurial traits:*

**Question 16.** Imagine a situation where you can choose between 2 options. Which one do you prefer?

- A sure payment of VND500,000 -> **Go to question 17**
- A lottery with a 50% chance of winning VND1,000,000 and 50% chance of receiving nothing -> **Go to question 18**

**Question 17.** Which one do you prefer between these two options?

- A sure payment of VND250,000
- A lottery with a 50% chance of winning VND1,000,000 and 50% chance of receiving nothing

-> **Go to question 19**

**Question 18.** Which one do you prefer between these two options?

- A sure payment of VND700,000
- A lottery with a 50% chance of winning VND1,000,000 and 50% chance of receiving nothing

#### *Influencing role of family and significant others:*

**Question 19.** Will the people around you have a positive attitude toward your decision to become an entrepreneur?

Yes       No       Don't know

**Question 20.** Will your friends have a positive attitude toward your decision to become an entrepreneur?

Yes       No       Don't know

**Question 21.** Will your family have a positive attitude toward your decision to become an entrepreneur?

Yes       No       Don't know

*Entrepreneurial environment:*

**Question 22.** In your university, are people actively encouraged and supported to pursue their own ideas to start their own business?

Yes       No       Don't know

**Question 23.** In the next six months, will there be attractive opportunities to start a business in your living area?

Yes       No       Don't know

**Question 24.** Is the current Vietnam economy favourable for business start-up?

Yes       No       Don't know

**Thank you for completing the survey!**

## Appendix 2

**Logistic regression results for Model 1**

<b>Vars.</b>	<b>Odds Ratio</b>	<b>Std. Err.</b>	<b>z</b>	<b>P&gt;z</b>	<b>[95% Conf.</b>	<b>Interval]</b>
AGE	1.054155	<b>0.113</b>	0.49	0.623	.8541819	1.300944
GEN	1.305734	<b>0.428</b>	0.81	0.415	.6870764	2.481444
ORI	.6305295	<b>0.216</b>	-1.35	0.178	.3222225	1.233829
MAJ	1.091675	<b>0.395</b>	0.24	0.808	.5371651	2.2186
_cons	.0572163	<b>0.158</b>	-1.04	0.300	.0002544	12.86647

**Logistic regression results for Model 2**

<b>Vars.</b>	<b>Odds Ratio</b>	<b>Std. Err.</b>	<b>z</b>	<b>P&gt;z</b>	<b>[95% Conf.</b>	<b>Interval]</b>
AGE	1.061888	<b>0.127</b>	0.50	0.614	.840744	1.341201
GEN	1.153103	<b>0.386</b>	0.43	0.671	.5980434	2.223328
ORI	.6485476	<b>0.238</b>	-1.18	0.238	.3160853	1.330698
MAJ	.9968961	<b>0.386</b>	-0.01	0.994	.4664159	2.13072
PRE	6.948502	<b>5.326</b>	2.53	0.011	1.547044	31.20898
EDU	1.080194	<b>0.381</b>	0.22	0.827	.5407991	2.157583
SEL	2.185897	<b>0.783</b>	2.18	0.029	1.082824	4.412671
RISK 2	1.081395	<b>0.589</b>	0.14	0.886	.3718544	3.144818
RISK 3	.3952363	<b>0.233</b>	-1.57	0.116	.1243036	1.256695
RISK 4	.9178177	<b>0.488</b>	-0.16	0.872	.3239345	2.600493
_cons	.0073273	.024	-1.49	0.137	.0000112	4.801646

**Logistic regression results for Model 3**

<b>Vars.</b>	<b>Odds Ratio</b>	<b>Std. Err.</b>	<b>z</b>	<b>P&gt;z</b>	<b>[95% Conf.</b>	<b>Interval]</b>
AGE	1.066384	<b>0.115</b>	0.60	0.551	.8634247	1.317052
GEN	1.405022	<b>0.477</b>	1.00	0.316	.7225505	2.732109
ORI	.4745467	<b>0.17</b>	-2.09	0.037	.2355	.9562403
MAJ	.8446547	<b>0.318</b>	-0.45	0.654	.4036813	1.767339
SN	1.022921	<b>0.52</b>	0.04	0.964	.3778945	2.768943
OPP	3.56972	<b>1.586</b>	2.86	0.004	1.494112	8.52875
ECO	2.275247	<b>1.306</b>	1.43	0.152	.7384665	7.010134
_cons	.0117182	0.033	-1.56	0.118	.0000445	3.086053

**Logistic regression results for Model 4**

<b>Vars.</b>	<b>Odds Ratio</b>	<b>Std. Err.</b>	<b>z</b>	<b>P&gt;z</b>	<b>[95% Conf.</b>	<b>Interval]</b>
AGE	1.044694	<b>0.114</b>	0.40	0.688	.8438074	1.293405
GEN	1.456875	<b>0.506</b>	1.08	0.279	.7374678	2.87807

ORI	.600774	<b>0.222</b>	-1.38	0.169	.2908155	1.241094
MAJ	1.20188	<b>0.456</b>	0.48	0.628	.5716301	2.527009
FAM	2.470865	<b>1.081</b>	2.07	0.039	1.048462	5.822978
FIN	.2015477	<b>0.105</b>	-3.07	0.002	.0724621	.5605888
UNI	.7352237	<b>0.289</b>	-0.78	0.435	.3398366	1.590629
_cons	.1717972	0.509	-0.59	0.552	.0005188	56.88686

**Logistic regression results for Model 5**

<b>Vars.</b>	<b>Odds Ratio</b>	<b>Std. Err.</b>	<b>z</b>	<b>P&gt;z</b>	<b>[95% Conf.</b>	<b>Interval]</b>
AGE	1.067665	<b>0.132</b>	0.53	0.597	.8375039	1.361078
GEN	1.418569	<b>0.510</b>	0.97	0.331	.7009817	2.870743
ORI	.4640288	<b>0.186</b>	-1.92	0.055	.2115334	1.017914
MAJ	.9725279	<b>0.423</b>	-0.06	0.949	.4148268	2.280013
PRE	5.270957	<b>3.998</b>	2.19	0.028	1.191724	23.31326
EDU	1.081489	<b>0.426</b>	0.20	0.842	.4998224	2.34007
SEL	1.776225	<b>0.693</b>	1.47	0.141	.8264966	3.817287
RISK 2	1.542926	<b>1.023</b>	0.65	0.513	.4205722	5.660432
RISK 3	.576207	<b>0.392</b>	-0.81	0.418	.1518197	2.1869
RISK 4	1.390499	<b>0.839</b>	0.55	0.585	.4262738	4.535786
SN	.9680575	<b>0.556</b>	-0.06	0.955	.3138168	2.986249
OPP	3.08129	<b>1.517</b>	2.29	0.022	1.174301	8.085104
ECO	2.482816	<b>1.569</b>	1.44	0.150	.7195015	8.567563
FAM	2.238409	<b>1.075</b>	1.68	0.093	.8732272	5.737882
FIN	.1706085	<b>0.106</b>	-2.84	0.004	.0503881	.5776606
UNI	.5902023	<b>0.270</b>	-1.15	0.248	.241117	1.444688
_cons	.0061213	0.022	-1.40	0.161	4.95e-06	7.567016

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