The relationship between higher education and entrepreneurial intention among Vietnamese students

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ABSTRACT

This study aims to examine the effects of higher education on self-efficacy, perceived behavioral control and entrepreneurial intention among Vietnamese students. By collecting data from 553 Vietnamese students at universities and colleges in Vietnam, authors employed the quantitative approach such as certain descriptive statistics, explorative factor analysis, correlation coefficient analysis, ANOVA test and multiple linear regression to analyze the relationship between higher education, self-efficacy, perceived behavioral control and entrepreneurial intention. In addition, Chi-square and Cramer’s V tests are implemented to indicate the difference of higher education on entrepreneurial intention. The research results show that there is a positive relationship between higher education and entrepreneurial intention, while self-efficacy and perceived behavioral control also had positive effects on entrepreneurial intention. Moreover, Chi-Square and Cramer’s V test report that there was a strong evidence of higher education in entrepreneurial intention but there were no differences in self-efficacy and entrepreneurial intention.

1. Introduction

In entrepreneurship literature, many researchers have tried to explain the reasons why an individual has the tendency to run his/her own business whereas others do not (Iakowleva et al., 2014; Moriano et al., 2012; Krueger et al., 1994; Kolvereid, 1996). Entrepreneurship is considered as a process of innovation and creation and plays an essential role in producing new value for the society, improving productivity and quality, bringing the new job chances and developing the economy of the country (Guerrero et al., 2008; Bandura, 1986,1987). Moreover, entrepreneurs also play a key role in developing the national economy and contribute to well-being of a society (Iakowleva et al., 2014; Krueger et al., 2000), innovation and employment (Kelley et al., 2011). Historically, the founding of new market, the link with profit orientation and capital investment (Schumpeter, 1975) led to the beliefs of economics regarding to the role of entrepreneurship for economic growth (Code, 1965; Weber, 1930; Bird & Jelinek, 1989). As a result of open-door policies, Vietnam is becoming a potential nation and attractive destination for many investors from various countries. Vietnam economy has also achieved a high economic growth rate over the past consecutive years. Consequently, the recognition of the role of entrepreneurship is growing among government, society and researchers as well. According to the General Statistics Office (GSO, 2019), there are 561,064 active enterprises in Vietnam, increased by 11.1% in comparison with previous year. 126,859 new enterprises were established in 2019, increased by 15%, which is the highest level of enterprises established and the average capital of each firm is estimated at 448,800 USD. Keeping pace with the high rate of economic growth of Vietnam, private sectors increased significantly and contributed nearly 40% to gross domestic product (GDP) and the private firms is projected to contribute 50% to GDP by 2020.
The population of Vietnam is over 92 million people, with the median age of 30, ranked as the 14th most populous nation in the world. As a result, Vietnam attracts many investors because of its potential customers and employees.

Although Vietnam achieves many goals for the development of economy, according to GEM Vietnam report, the entrepreneurship ecosystem almost remains unchanged in comparison with previous years. Fig. 1 illustrates the level of the indicators (score from 1 to 5) of conditions of entrepreneurship in Vietnam in two years (2018 and 2017). Overall, in 2018, physical infrastructure continues to reach the highest score in the entrepreneurial ecosystem in Vietnam, reaching 4.07 points, followed by internal market (3.59 points) and Cultural & Social Norms (3.23 points). However, only 03 in 12 indicators can reach the average rate (3 points) while the last indicators are lower than the average rate. Two indicators have been developed by GEM study in order to evaluate the situation of entrepreneurship development of countries. Firstly, TEA indicator (Total Early-stage Entrepreneurial Activity) refers to new entrepreneurial activities (less than 3.5 years) and just started up business (less than 3 months), Secondly, EB indicator (Established business ownership) refers to persistent entrepreneurial activities (more than 3.5 years). This study indicates that the percentage entrepreneurial intention is rather high, achieving 22.3%, while the TEA rate is only 13.7% (1% for business Start-up less than 3 months and 12.7% for owner of new entrepreneurial activity less than 3.5 years). It means that in 2018, nearly 14 of every 100 adults run an own business. In addition, 19.6% owner/managers established their own business more than 3.5 years. In 2018, GEM study also stated that Vietnam stands the 20th out of 60 countries for the rate of entrepreneurial motivations for total early-stage entrepreneurial activity. In ASEAN region, this rate was lower than Indonesia (13th) and Philippine (16th), while Vietnam only stands higher than Malaysia, and the same holds with Thailand. Fig. 3 shows the group of young people from 25 to 34 years old had the highest rate of business start-up, followed by the age group from 35-44 years old and 18-24 years old, reaching at 16% and 13%, respectively. In contrast, this rate among middle and aged people (from 45 to 54 and from 55-64 years old) was very low, only 8%. In terms of entrepreneurial motivations in Vietnam, only 37.4% of people who start a business because of no better jobs option (necessity-driven entrepreneurs), while of approximately 62.6% of those who recognize business opportunity and run their own business (opportunity-driven entrepreneurs). Even though the concept of entrepreneurship has become more universal in the world, almost all entrepreneurial intention studies have been conducted in the developed countries, in which the entrepreneurial ecosystem and the market economy have been developed. There are few studies of entrepreneurship performed in developing countries, such as Vietnam, especially in investigating the effect of higher education on entrepreneurial intention among students. Thus, this research gap needs to be fulfilled. The principle objective of this study is to examine the impact of higher education in entrepreneurial self-efficacy, perceived behavioral control and entrepreneurial intention. This study also provides a useful sightseeing of youths’ entrepreneurship to policy makers, education managements and governments with the goal of fostering students’ entrepreneurship, developing entrepreneurial ecosystem and enhancing business environment. In addition, authors also hope that this study will bring an interesting insight to researchers and academic staffs. This study is organized in the following manner: First, theoretical background and research model related to the relationship between higher education, self-efficacy, perceived behavioral and entrepreneurial intention will be introduced. Secondly, research method and ways to collect data will be described. Thirdly, authors will discuss the research results. Finally, conclusion and recommendation for further researchers will be performed.
2. Literature review

2.1. The relationship between higher education and entrepreneurial intention

Many definitions about the concept of entrepreneurship have been developed over the last few recent decades. Talpas (2014) states that entrepreneurship is a cognitive process which can be realized throughout business activities by representing effective leadership within uncertain market, risks and competitive advantages. Entrepreneurship is the process of creating and establishing new venture and new business organization (Shane & Venkataraman, 2000), that not only provides goods and services, creates job opportunities but also contribute to the development of economy and the national welfare. Entrepreneurial intention is seen as the intent to run a new business (Krueger & Brazeal, 1994), or the intent to be self-employed (Douglas & Shepherd, 1997) or the intent to own a business (Crant, 1996). There are many reasons such as personal circumstances, social and political problems and business environment, which may become either obstacles or motivated factors to transform this intention becoming a real behavior. Thus, entrepreneurial intention is considered an essential and fundamental condition to become a nascent entrepreneur. While entrepreneurship is defined as the emergent process of an organization (Gartner et al., 1992), a person’s intention to pursue an entrepreneurial career plays an important role on this process (Lee et al., 2011). Moreover, entrepreneurial intention is determined as the first step in a series of action to create a firm (Bird, 1988), but Fishbein and Ajzen (1975) consider that intentions toward a behavior can be seen as important indicators to predict that behavior. In other words, intentions are still seen as the best predictor of a person’s real behavior (Krueger, 2008). According to Ajzen (1991), who proposed Theory of Planned Behavior, intentions are determined by subjective norms and perceived behavioral control. Social norms are considered as a person’s perception of his or her behavior that is consistent with significant others of the same kind, while perceives behavior control is the range of the target behavior within the ability of a decision maker (Esfordiar et al., 2017). From a societal viewpoint, both entrepreneurship and the educational system play important role in economic growth, but the importance of higher education for entrepreneurship has been only interested in some recent studies (Kuip & Verheul, 2003; Wu & Wu, 2008). Higher education is one of the largest and most essential investment a person makes. By accessing to higher education, people not only acquire knowledge and improve capacities and skills, but they also have more chance to increase their quality of life. Some researches show that higher education has the strong effect on entrepreneurial intention (Wu & Wu, 2008; Xuan et al., 2020).

H1: Entrepreneurial intention is positively affected by higher education.

2.2. The relationship between higher education, self-efficacy and perceived behavioral control

Entrepreneurial self-efficacy has been defined by scholars from different perspectives (Doanh & Bernat, 2019). Some researchers have defined entrepreneurial self-efficacy as entrepreneurs’ self-confidence related to carrying out a specific task (Baum et al., 2001; Baron et al., 1999) while others argue that entrepreneurial self-efficacy is seen as a person’s confidence in his ability to accomplish the entrepreneurial process (Chen et al., 2004; Segal et al., 2005; Tsai et al., 2014). Doanh and Bernat (2019) also state that entrepreneurial self-efficacy and perceived behavioral control are two distinct concepts, distinguished in many researches (Tsai et al. 2014; Tavousi et al. 2009). Indeed, while control beliefs are considered as individual’s belief in terms of presence of factors that is able to help in carrying out a behavior, perceived behavioral control relates to whether an individual perceives carrying out a specific task as easy or difficult (Ajzen, 1991). Specifically, perceived behavioral control refers to the extent to which a personal control belief in terms of the activities being studied (Solesvik et al., 2012), while Liñán & Chen (2006, p.4) has defined perceived behavioral control as “the perception of easiness or difficulty in the fulfillment of the behavior of interest”. This construct consists of not only being able to have the essential skills to run a business and achieve success (Miranda et al., 2017), but also the perception about controllability of the behavior (Liñán & Chen, 2009).
Entrepreneurship research emphasizes the importance of perceived behavioral control as a mechanism for overcoming awareness of the greater technological, financial, legal uncertainties which are often related to new ventures (Osbachonka et al., 2010; Silveira-Perez et al., 2016). Higher education can help students build entrepreneurial self-efficacy and perceived behavioral control (Siegel & Phan, 2005). Lockett et al. (2003) state that many courses, which are taught at universities, only focus on theory and not enough practical, so, students can lack of essential skills and knowledge to run their own business. Besides, higher education can bring students many opportunities to obtain entrepreneurship knowledge and skills, technology abilities for example. However, whether these skills and knowledge can help students improving self-efficacy and perceived behavioral control is seen as a big question (Doanh & Bernat, 2018). Below hypotheses are proposed to test links between higher education, self-efficacy and perceived behavioral control (Fig. 4).

**H2.** Entrepreneurial intention is positively affected by self-efficacy.

**H3.** Self-efficacy is positively affected by higher education.

**H4.** Perceived behavioral control is positively affected by self-efficacy.

**H5.** Perceived behavioral control is positively affected by higher education.

**H6.** Entrepreneurial intention is positively affected by perceived behavioral control.

3. Methodology

This study mainly focuses on investigating the effect of higher education on entrepreneurial self-efficacy, perceived behavioral control and entrepreneurial intention among Vietnamese students. In terms of research techniques, quantitative method such as certain descriptive statistics, KMO and Bartlett test, correlational coefficient analysis and multiple regression throughout SPSS 20.0 in order to show the relationship between higher education, self-efficacy, perceived behavioral control and entrepreneurial intention. Moreover, the Chi-Square and Cramer’s V Tests are also used to illustrate the higher education difference in self-efficacy, perceived behavioral control and entrepreneurial intention. Even though more than 1000 questionnaires were distributed among students at universities in Vietnam, only 553 students (N=553) fulfilled completely. The surveys are divided into 2 sections, which is based on the purpose of the study, theoretical background and hypotheses. In the first section, demographic questions are designed to obtain respondents’ information such as gender, age group, higher education and the willingness level to take risks. In the second section, the questions are designed to allow respondents providing their viewpoint regarding of self-efficacy, perceived behavioral control and entrepreneurial intention, which is based on the previous studies (Baughn et al., 2006; DeNoble et al., 1999; Liñán & Chen, 2009; Maresch et al., 2015; Liñán & Chen, 2009; Adekiya & Ibrahim, 2016). The questionnaires are based on the Liker scale with self-efficacy and perceived behavioral control (0= Strongly disagree, 1=Disagree, 2= Slightly disagree, 3= Slightly agree, 4= Agree, 5= Strongly agree) and entrepreneurial intention (1= Strongly disagree, 2=Disagree, 3= Agree, 4= Strongly agree).

4. Results

4.1. Demographic profile

Demographic information of respondents is presented in Table 1. The results of descriptive statistics of demographic layouts indicate that the major proportion of respondents aged from 20 to 24 years old, compared to only 16.6% and 7.4% respondents who aged from 18 to 19 years old, and over 24 years old respectively. However, the percentage of female respondents reaches 69.4%, which is twofold higher than that of male respondents (just 30.6%). In addition, the figure for university/college students accounts for 71.4%, followed 24.8% master students and 3.8% high school students. In terms of type of current professional (working) activities, 65.1% students consider that they are studying and looking for a job, 19.9% students are only studying, 13.4% students are studying and working for a company, and only 1.6% of them are studying and running a business.
Table 1
Descriptive Statistics of Sample Demographics

| Demographic variables | F     | %    | Mean   | Std. Deviation |
|-----------------------|-------|------|--------|----------------|
| 1. Age                |       |      |        |                |
| 18 - 19 years old     | 92    | 16.6 | 1.9078 | 0.48210        |
| 20-24 years old       | 420   | 75.9 |        |                |
| Over 24 years old     | 41    | 7.4  |        |                |
| 2. Gender             |       |      |        |                |
| Male                  | 169   | 30.6 | 1.6944 | 0.46108        |
| Female                | 384   | 69.4 |        |                |
| 3. Education          |       |      |        |                |
| High School           | 21    | 3.8  | 1.2315 | 0.54569        |
| University/College    | 395   | 71.4 |        |                |
| Master                | 137   | 24.8 |        |                |
| 4. Type of current professional (working) activities | | | |
| Only studying         | 110   | 19.9 | 3.1917 | 2.14243        |
| Studying and working for a company | 74 | 13.4 | |
| Studying and running own business | 9 | 1.6 | |
| Studying and looking for a job | 360 | 65.1 | |

Note: N=553; F: Frequency; %: Percent

Source: Authors’ elaborations based on research study

Authors have also examined the willingness level to take risks among Vietnamese students, which is represented in Fig. 5. Overall, only 27.3% students believe that their willingness level to take risks are high and very high (20.6% at high level, and 6.7 % at very high). However, the considerable percentage of respondents argues that their willingness level to take risks are neutral (44.70%) and 28.0 % at low and very low level.

4.2. Reliability and explorative factor analysis for variables

Table 2 reports that the values of Cronbach’s Alpha for independent variables such as self-efficacy (SE) and perceived behavioral control (PBC) represent for 0.809 and 0.771, which are higher than 0.7. These values are high, indicating good reliability.

Table 2
Reliability test and descriptive statistics for independent variable

| Variables, items                                                                 | Mean   | Std. Deviation | Cronbach's Alpha |
|----------------------------------------------------------------------------------|--------|----------------|------------------|
| Self-efficacy (SE) (Baughn et al., 2006; DeNoble et al., 1999)                   |        |                | 0.809            |
| SE1. I can identify potential capital sources for the venture                     | 3.1212 | 1.71464        | 0.805            |
| SE2. I can develop relationship with people who connect to sources of funds       | 2.75016| 1.48895        | 0.766            |
| SE3. I can react quickly to unexpected changes                                     | 2.7595 | 1.43141        | 0.776            |
| SE4. I know how to legally protect a new venture                                  | 3.7844 | 1.31399        | 0.796            |
| SE5. I can identify new areas for potential growth in the future                  | 3.0814 | 1.32925        | 0.791            |
| SE6. I can manage my time effectively                                            | 3.2355 | 1.45182        | 0.777            |
| SE7. I can manage risks effectively                                              | 2.6239 | 1.50589        | 0.799            |
| SE8. I can communicate effectively with others                                    | 2.9837 | 1.52466        | 0.788            |
| Perceived behavioral control (PBC) (Liu & Chen, 2009; Maresch et al., 2015)       |        |                | 0.771            |
| PBC1. To start a firm and keep it working would be easy for me                    | 3.0271 | 1.37827        | 0.731            |
| PBC2. I am prepare to start a viable firm                                         | 2.8807 | 1.47695        | 0.733            |
| PBC3. I can control the creation process of a new firm                            | 3.2839 | 1.40420        | 0.730            |
| PBC4. I know the necessary practical details to start a firm                      | 1.9186 | 1.69256        | 0.754            |
| PBC5. I know how to develop an entrepreneurial project                             | 2.3699 | 1.61031        | 0.757            |
| PBC6. If I tried to start a firm, I would have a high probability of succeeding   | 3.1808 | 1.48050        | 0.738            |
| PBC7. I am usually able to protect my personal interests                           | 2.9402 | 1.59800        | 0.755            |

Note: N=553, 1= Strongly disagree, 2= Disagree, 3= Slightly disagree, 4= Agree, 5= Strongly agree

Source: Authors’ elaborations based on research study
Table 3
Reliability test and descriptive statistics for dependent variable

| Variables, items                                                                 | Mean   | Std. Deviation | Cronbach's Alpha |
|----------------------------------------------------------------------------------|--------|----------------|------------------|
| Entrepreneurial intention (EI) (Liñán & Chen, 2009; Adekiya & Ibrahim, 2016)     | 2.0942 | 0.83384        | 0.775            |
| EI1. I am ready to do anything to be an entrepreneur                              | 2.0942 | 0.83384        | 0.775            |
| EI2. My professional goal is to become an entrepreneur                            | 2.5054 | 0.83697        | 0.767            |
| EI3. I will make every effort to start and run my own firm                         | 2.4601 | 0.83280        | 0.763            |
| EI4. I am determined to create a firm in the future                                | 2.6467 | 0.88762        | 0.758            |
| EI5. I have very seriously thought of starting a firm                              | 2.5308 | 0.94252        | 0.760            |
| EI6. I have the firm intention to start a firm someday                              | 2.7554 | 0.88748        | 0.768            |
| EI7. It is my plan to start my own business within five years after graduating     | 2.3593 | 0.95045        | 0.777            |
| EI8. If I had the opportunity and resources, I'd like to start a firm              | 2.3093 | 0.98734        | 0.762            |
| EI9. I am ready to make any form of sacrifice to become an entrepreneur            | 2.8777 | 0.88856        | 0.765            |
| EI10. Among various options, I would rather be an entrepreneur                     | 2.5172 | 0.89604        | 0.772            |

Note: N=553, 1= Strongly disagree, 2=Disagree; 3= Agree, 4= Strongly agree

Source: Authors’ elaborations based on research study

Table 3 shows the value of Cronbach’s Alpha for dependent variable (Entrepreneurial intention-EI).

Table 4
KMO and Bartlett’s Test

| Type of variables | Independent | Dependent |
|-------------------|-------------|-----------|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy | 0.870 | 0.837 |
| Bartlett's Test of Sphericity | Approx. Chi-Square 3018.847 | 1070.455 df |
| Sig. | 0.000 | 0.000  |

Source: Authors’ elaborations based on research study

The results of KMO and Bartlett’s Test for independent and dependent variables are introduced in Table 4. KMO and Bartlett’s test provide an important test that the data is suitable for Factor Analysis and KMO provides a measure of whether the distributions of values in the variables is suitable. The value for independent and dependent variables are 0.870 and 0.837 respectively, which are rather high. Technically, as the size of sample making up 553, thus, the factor loading of EFA in this study is 0.30. The significance value of both independent and dependent variables is 0.000 which is excellent.

4.3. Correlation coefficients between variables

Table 5 presents the correlation coefficients between variables including higher education, self-efficacy (SE), perceived behavioral control (PBC), and entrepreneurial intention (EI). In terms of research framework, the model focuses on examining the effect of higher education on self-efficacy, perceived behavioral control and entrepreneurial intention. The result indicates that there is a positive relationship between higher education and entrepreneurial intention (r = 0.199, p-value = 0.000). Moreover, with the lower significance level, self-efficacy (r = 0.055, p-value = 0.200) and perceived behavioral control (r = 0.063, p-value = 0.140) are positively affected by higher education. Self-efficacy also has the positive effects on perceived behavioral control (r = 0.725, p-value = 0.000) and entrepreneurial intention (r = 0.103, p-value = 0.016). Finally, perceived behavioral control influences on entrepreneurial intention positively (r = 0.133, p-value = 0.002).

Table 5
Correlation coefficients between variables

| Higher education | SE | PBC | EI |
|------------------|----|-----|----|
| Pearson Correlation |   |     |    |
| Sig. (2-tailed)   | 1 |     |    |
| SE                | 0.055 | 1 |    |
| Sig. (2-tailed)   | 0.200 |   |    |
| PBC               | 0.063 | 0.725** | 1 |
| Sig. (2-tailed)   | 0.140 | 0.000 |    |
| EI                | 0.199** | 0.103* | 0.133** | 1 |
| Sig. (2-tailed)   | 0.000 | 0.016 | 0.002 |

Note: N=553; *: p < 0.05, **: p < 0.01 (2-tailed).

Source: Authors’ elaborations based on research study

4.4. Multiple Linear Regression

Multiple regression is used to predict the value of entrepreneurial intention given the value of higher education, self-efficacy and perceived behavioral control.
According to Table 6, the overall Pearson coefficient between higher education, self-efficacy (SE), perceived behavioral control (PBC) and entrepreneurial intention (EI) are provided. The result shows that the multiple correlation only reaches at 0.233 ($R=0.233$) and so the Adjust R Square is just 0.054 (Adjusted $R^2=0.054$) which proves that only 5.4 of variation of entrepreneurial intention can be explained by the model comprised of three variables (higher education, self-efficacy and perceived behavioral control).

Table 7

| Model | Sum of Squares | df | Mean Square | F     | Sig  |
|-------|----------------|----|-------------|-------|------|
| 1     | Regression     | 8.730 | 3 | 2.910 | 10.507 | 0.000 |
|       | Residual       | 152.053 | 549 | 0.277 |         |
|       | Total          | 160.783 | 552 |       |         |

a. Dependent Variable: EI
b. Predictors: (Constant), Higher education, SE, PBC

Table 6 (ANOVA) reports the significance of regression model. In this study, the Sig. associated with the F-Test is 0.000 which is highly significant, which confirms that the model can explain a significant amount of variation in the entrepreneurial intention. Moreover, the Mean Square column also confirms that very much of the variance is explained by the Regression line than by the Residual (2.910 compared to 0.277). This reinforces the conclusion that the model is rather good.

Table 8

| Model        | Unstandardized Coefficients | Standardized Coefficients | t      | Sig  |
|--------------|-----------------------------|---------------------------|--------|------|
| (Constant)   | 2.088                       | 0.089                     | 23.454 | 0.000|
| Higher education | 0.190                     | 0.041                     | 0.192  | 4.609| 0.000|
| SE           | 0.006                       | 0.034                     | 0.010  | 0.170| 0.865|
| PBC          | 0.062                       | 0.033                     | 0.113  | 1.879| 0.061|

a. Dependent Variable: EI

Table 7 (Coefficients) represents the coefficients for the regression equation, which is:

\[
\text{Entrepreneurial intention} = 2.088 + 0.190 \times \text{higher education} + 0.062 \times \text{perceived behavioral control} + 0.006 \times \text{self-efficacy}.
\]

Particularly, the Standardized Coefficients Beta reports us the contribution each variable to the model. In this study, higher education is the most important: a variation of 1 % in higher education would lead to a change of 19.0% in entrepreneurial intention ($\beta_1=0.190$, $p=0.000$). Similarly, perceived behavioral control has the second strongest effect on entrepreneurial intention ($\beta_2=0.062$, $p=0.061>0.005$), followed by self-efficacy ($\beta_3=0.006$, $p=0.865>0.005$).

4.5. Chi-Square and Cramer’s V Tests

Chi-Square and Cramer’s V Tests are employed to report the difference of higher education in self-efficacy, perceived behavioral control and entrepreneurial intention.

\[\text{Chi-Square and Cramer’s V Tests for higher education difference in entrepreneurial self-efficacy}\]

Table 9

| Chi-Square Tests | Value | df | Asymp. Sig. (2-sided) | Symmetric Measures | Value | Approx. Sig. |
|------------------|-------|----|-----------------------|--------------------|-------|--------------|
| Pearson Chi-Square | 98.912 | 123 | 0.946 | Phi | 0.423 | 0.946 |
| Likelihood Ratio | 98.429 | 123 | 0.950 | Cramer’s V | 0.244 | 0.946 |
| Linear-by-Linear Association | 1.644 | 1 | 0.200 | | |

Note: N=553, a. 131 cells (78.0%) have expected count less than 5. The minimum expected count is 0.02
Source: Authors’ elaborations based on research study
The Chi-Square Tests in Table 9 shows that the probability of differences this larger or larger occurring by chance is 0.946, which is higher than the normal 0.05 criterion level used (95% significance). Thus, there are no evidences of higher education difference in self-efficacy. Moreover, Cramer’s V change between 0 and 1, with 0 referring to no association and 1 showing the perfect association, the result in Table 9 indicates that the value is 0.423, which means that the association between higher education and entrepreneurial self-efficacy makes up the moderate level.

Table 10
Chi-Square and Cramer’s V results for higher education difference in perceived behavioral control

| Chi-Square Tests                | Value df Asymp. Sig. (2-sided) | Symmetric Measures | Value Approx. Sig. |
|--------------------------------|---------------------------------|--------------------|--------------------|
| Pearson Chi-Square             | 77.831* 105 0.978               | Phi 0.375          | 0.978              |
| Likelihood Ratio               | 89.636 105 0.858                | Cramer’s V 0.217   | 0.978              |
| Linear-by-Linear Association   | 2.176 1 0.140                  |                    |                    |

Note: N=553, a. 109 cells (75.70%) have expected count less than 5. The minimum expected count is 0.02

Source:Authors’ elaborations based on research study

Analogously, Table 10 presents that there is no difference between higher educations in perceived behavioral control and the association is moderate (Sig. = 0.978 > 0.05, φ = 0.375).

Table 11
Chi-Square and Cramer’s V results for higher education difference in entrepreneurial intention

| Chi-Square Tests                | Value df Asymp. Sig. (2-sided) | Symmetric Measures | Value Approx. Sig. |
|--------------------------------|---------------------------------|--------------------|--------------------|
| Pearson Chi-Square             | 112.473* 84 0.021              | Phi 0.451          | 0.021              |
| Likelihood Ratio               | 96.514 84 0.165                | Cramer’s V 0.260   | 0.021              |
| Linear-by-Linear Association   | 21.941 1 0.000                 |                    |                    |

Note: N=553, a. 85 cells (73.3%) have expected count less than 5. The minimum expected count is 0.02

Source: Authors’ elaborations based on research study

Finally, the strong evidences in educational differences in entrepreneurial intention and the association is rather high (Sig. = 0.021 < 0.05, φ = 0.451).

5. Conclusion

The objective of this study was to investigate the impacts of higher education, self-efficacy, and perceived behavioral control on entrepreneurial intention among Vietnamese students. The research results show that the higher education, self-efficacy, perceived behavioral control had positive effects on entrepreneurial intention at the high level (p-value <0.05). Thus, the hypotheses including H1, H2, H4, H6 are accepted. In addition, higher education is seen the most influential factor to entrepreneurial intention, followed by perceived behavioral control, self-efficacy. In addition, there are the strong evidence of higher education differences in entrepreneurial intention, but no education differences in self-efficacy and perceived behavior control.

However, there are some restrictions. Firstly, authors only focused to figure out the direct effects of higher education, self-efficacy and perceived behavior control on entrepreneurial intention, the further researches should extend the research model by supplementing mediating variables, or using different variables. Secondly, the quantitative method through the availability sample can be seen as a restriction of this study, the further research should use the different approach to collect data in order to increase the significance level.

References

Adekiya, A. A. & Ibrahim, F. (2016). Entrepreneurship intention among students. The antecedent role of culture and entrepreneurship training and development. The International Journal of Management Education, 14, 116-132.

Baughn, C. C, Cao, J. S.R, Le, L.T.M, Lim, V. A., & Neupert, K. E. (2006). Normative, Social and Cognitive predictors of entrepreneurial interest in China, Vietnam and The Philippines. Journal of Developmental Entrepreneurship, 11(1), 57-77.

Ajzen, I. (1991). The theory of planned behavior. Organizational Behavior and Human Decision Processes, 50(2), 179–211.

Ajzen, I. (1987). Attitudes, traits, and actions: dispositional prediction of behavior in personality and social psychology, In: Berkowitz, L. (Ed.). Advances in Experimental Social Psychology, vol. 20. Academic Press, Inc., San Diego, CA, 1–63.

Ajzen, I., & Code, N.G. (2008). Attitudes and the prediction of behaviour. In: Crano, W.D., Prislin, R., editors. Attitudes and Attitude Change. New York: Psychology Press. 289-311.

Bandura, A (1986). The Social Foundations of Thought and Action, Englewood Cliffs. NJ: Prentice-Hall.

Bandura, A. (1987). Social Foundations of Thought and Action. Prentice-Hall, Englewood Cliffs, NJ.

Bird, B., & Jelinek, M. (1989). The operation of entrepreneurial intentions. Entrepreneurship Theory and Practice, 13(2), 21-30.
Chen, G., Gully, M.S., & Eden, D. (2004). General self-efficacy and self-esteem: toward theoretical and empirical distinction between correlated self-evaluations. *Journal of Organizational Behavior, 25*(3), 75-95.

Crant, J.M. (1996). The proactive personality scale as a predictor of entrepreneurial intentions. *Journal of Small Business Management, 34*(3), 42-49.

De Noble, A.F., Jung D. & Ehrlich, S.B (1999). Entrepreneurial self-efficacy: The development of a measure and its relationship to entrepreneurial action. *Frontiers of Entrepreneurship Research*. MA: Babson College, 73-87.

Doanh, D.C. & Bernat, T. (2018). A study of gender and age differences in entrepreneurial intention among Vietnamese students, *Filodiritto Editore-Proceedings*, Filodiritto Publisher, Bologna, Italy, 71-76.

Doanh, D.C. & Bernat, T. (2019). Entrepreneurial self-efficacy and intention among Vietnamese students: A meta-analytic path analysis based on the theory of planned behavior. *Procedia Computer Science, 159*, 2447-2460.

Douglas, E.J., & Shepherd, D.A. (1997). Why entrepreneurs create businesses: a utility maximizing response. *Procedia Computer Science, 17*, 185-186.

Esfandiar, K., Sharifi-Tehrani, M., Pratt, S., & Altinay, L. (2019). Understanding entrepreneurial intentions: A developed integrated structural model approach. *Journal of Business Research, 94*, 172-182.

Fishbein, M.& Ajzen, I. (1975) Belief, Attitude, Intention, and Behavior: An Introduction to Theory and Research. Addison-Wesley, New York.

Gartner, W. B., Bird, B. J., & Starr, J. A. (1992). Acting as if: Differentiating entrepreneurial from organizational behavior. *Entrepreneurship Theory and Practice, 16*(3), 13-32.

Guerrero, M., Rialp, J., & Urbano, D. (2008). The impact of desirability and feasibility on entrepreneurial intentions: A structural equation model. *International Entrepreneurship and Management Journal, 4*(1), 35-50.

Xuan, H., Trung, T., Ngoc, H., Phuong, L., Cong, D., & Quynh, T. (2020). The effect of educational background on entrepreneurial intention. *Management Science Letters, 10*(1), 91-102.

Kelley, D. J., Bosma, N., & Amorós, J. E. (2011). *Global Entrepreneurship Monitor 2010 Global Report*. Babson Park, MA: Babson College und Santiago, Chile: Universidad del Desarrollo.

Kolvereid, L. (1996). Organizational employment versus self-employment: Reasons for career choice intentions. *Entrepreneurship Theory and Practice, 20*(3), 23-31.

Krueger, N.F. (1993). The impact of prior entrepreneurial exposure on perceptions of new venture feasibility and desirability. *Entrepreneurship Theory and Practice, 18*(1), 5-21.

Krueger, N. F., & Brazeal, D. V. (1994), Entrepreneurial potential and potential entrepreneurs, *Entrepreneurship: Theory and Practice*, 18*(1), 91-105.

Krueger, N.F., Reilly, M.D., & Carsrud, A.L. (2000). Competing models of entrepreneurial intentions. *Journal of Business Venturing, 15*(5/6), 411–432.

Krueger, N. (2008). Entrepreneurial Resilience: Real and Perceived Barriers to Implementing Entrepreneurial Intentions. *Working Paper, SSRN, http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1155269* (11.04.2019).

Lee, L., Wong, P. K., Foo, M. D. & Leung, A. (2011). Entrepreneurial intentions: The influence of organization and individual factors. *Journal of Business Venturing, 26*, 124-136.

Liñán, F., & Chen, Y. W. (2009). Development and cross-cultural application of a specific instrument to measure entrepreneurial intentions. *Entrepreneurship Theory and Practice, 33*(3), 593-617.

Liñán, F., & Chen, Y. (2006). *Testing the Entrepreneurial Intention Model on a Two-Country Sample*. Departament d'Economia de l'Empresa.

Maresch, D., Harms, R., Kailer, N., & Wimmer-Wurm, B. (2016). The impact of entrepreneurship education on the entrepreneurial intention of students in science and engineering versus business studies university programs. *Technological Forecasting and Social Change, 104*, 172-179.

Miranda, F.J., Chamorro-Mera, A. & Rubio, S. (2017). Academic entrepreneurship in Spanish universities: An analysis of determinants of entrepreneurial intention. *European Research on Management and Business Economics, 23*, 113-122.

Moriano, J.A., Gorgievski, M.J., Laguna, M., Stephan, U. and Zarafshani, K. (2012). A cross-cultural approach to understanding entrepreneurial intention. *Journal of Career Development, 39*(2), 162-185.

Obschonka, M., Silbereisen, R. K., & Schmitt-Rodermund, E. (2010). Entrepreneurial intention as developmental outcome. *Journal of Vocational Behavior, 77*(1), 63–72.

Schumpeter, J.A. (1975). *Capitalism, socialism and democracy*. 3rd ed., New York, Harper and Row.

Shane, S. & Venkataraman. S. (2000). The promise of entrepreneurship as a field of research. *Academy of Management Review, 25*(1), 217-226.

Silveira-Pérez, Y., Cabeza-Pullés, D., & Fernández-Pérez, V. (2016). Emprendimiento: perspectiva cubana en la creación de empresas familiares. *European Research on Management and Business Economics, 22*(2), 70–77.

Solesvik, M., Westhead, P., Kolvereid, L. and Matlay, H. (2012). Student intentions to become self-employed: The Ukrainian context. *Journal of Small Business and Enterprise Development, 19* (3), 441–460. DOI: http://dx.doi.org/10.1108/14626001211250153

Talpas, P. (2014). Integration of Romani women on the labor market. *Polish Journal of Management Studies, 10*(1), 198-203.
