

# Importance of Knowledge to Entrepreneurial Activity: Empirical Evidence from Southeast Asian Nations

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*Abstract:* - Although various studies have been conducted to examine the role of knowledge in the entrepreneurial process, the results reveal inconsistencies. Moreover, the relationship between knowledge factors and their role in explaining the entrepreneurial intentions still has no clear answer. Our study investigates the effects of knowledge factors on the likelihood to engage in entrepreneurial activity. Our analyses are based on data collected for the 2015 Global Entrepreneurship Monitors (GEM) from individuals located in Southeast Asian Nations including Malaysia, Thailand and Vietnam with a sample of 1964, 2902 and 1889 participants, respectively. Our findings show that knowledge, skills and experience and knowing an entrepreneur have a significant impact on the entrepreneurial intentions. The contribution of this study is twofold. First, it provides empirical evidence on the relationship between knowledge factors and start-up activity. Second, it contributes to the understanding of entrepreneurship environment in Southeast Asian Nations, a critical part of the world.

*Key-Words:* Knowledge, Entrepreneurial intention, Southeast Asian nations.

Received: November 24, 2020. Revised: April 9, 2020. Re-revised: April 15, 2020. Accepted: April 24, 2020. Published: April 30, 2020.

## 1 Introduction

The development of entrepreneurship has long been considered as a driving force of country's economy. Particular attention is paid to spread the entrepreneurial spirit among community. Prior studies on entrepreneurship have gained much attention since policies and measures cannot be formulated and implemented effectively without fully understanding the factors affecting entrepreneurship [1]. Entrepreneurship research may be conducted on different groups, including real entrepreneurs, nascent entrepreneurs and the general population of non-entrepreneur. Each group fit a different stage of the entrepreneurial process. For the general population, their perceptions about starting a new business may play an important role on the path to becoming a future entrepreneur, because entrepreneurial perception might contribute to forming the intention [2] or affect entrepreneurial behavior and decision.

Prior studies have confirmed that demographic and economic factors such as education, age, wealth, and work situation are important drivers of entrepreneurial behavior. Additionally, a set of variables describing personal perceptions including role models, confidence in one's skills and ability, risk propensity, and alertness to unexploited opportunities were proposed to explain the entrepreneurial behavior [3]. It was found that these perceptual variables are highly correlated with the

decision to start a new business, but the causal direction of the relationship is not clearly established. Continuing this line of research, this study will focus on knowledge-based factors for business start-up activity, including existing knowledge base (education, knowledge, skills, and experiences); external knowledge (role models); and fear of failure. We also address the impact of these above knowledge-based factors in starting a new business.

Various studies have supported the existence of a positive relationship between knowledge-based factors and entrepreneurial activity. However, findings showed that the relationship is not consistent and conflicting [4]. It was indicated that over-investment in human capital leading to high levels of certification may discourage risk taking, while under-investment may encourage it. According to Unger et al. [5], human capital has long been argued to be a critical resource for entrepreneurial success, but the magnitude of this relationship, however, remains unknown. Another important variable in the start-up process is the perception of feasibility [6]. Jiménez et al. [7] indicated that tertiary education increases formal entrepreneurship as a result of the higher self-confidence, lower perceived risk and enhanced human capital. Meanwhile, tertiary education has a negative effect on informal entrepreneurship when it increases awareness of and sensitivity to the possible negative repercussions. In addition, for the

general population, fear of failure plays an important role in their process of starting new ventures [8]. Fear of failure prevents individual with ideas not to explore them and venture into a competitive stage.

In fact, role models have been a familiar variable in entrepreneurship research, however, their occurrence, function and characteristics have been studied only to a limited extent by academics [9]. Anttila [10] confirmed that emotions derived from observing entrepreneurs in the local and social environment influence a number of entrepreneurial activities, such as recognition of opportunities, acquisition of resources, decision making, and coping with stress. However, the connection between the role model and human capital has not been clearly confirmed in the entrepreneurship literature. There are two different views about this relationship [9]. The first view is based on the notion of absorptive capacity. Therefore, the likelihood of role model presence may be higher for entrepreneurs with higher levels of human capital. More highly educated people may also in greater need of successful examples. The second view is that an entrepreneur's human capital can serve as a substitute for the support of a role model. Individuals with higher levels of human capital may be less likely to have entrepreneurial role models.

The objective of our study is to help close a research gap regarding to the relationship between knowledge-based factors, and also the influence of these variables on starting a new business. We draw our analyses on a sample of the general adult population from Malaysia, Thailand and Vietnam based on the Global Entrepreneurship Monitor. These three countries give an interesting view on how startup activity is different in the same overall institutional environment. The paper is organized as follows: in Section 2, we review the theory and previous research on human capital, role models and fear of failure. Section 3 is devoted to research methodology. The results are presented in Section 4. Finally, Section 5 provides discussion and conclusions.

## 2 Literature Review and Hypotheses Development

This section presents primary concepts, including existing knowledge base and external knowledge. Relevant studies on the relationship between the knowledge-based variables and the effect of these variables on starting a business are

also included. Accordingly, research hypotheses are proposed.

### 2.1 The Role of the Existing Knowledge Base

Prior studies have indicated that individuals' existing knowledge is a critical resource for success in entrepreneurial firms [11]–[13]. The individuals' existing knowledge is defined as education, experience, knowledge, and skills that individuals gain through their schooling, on-the-job training and other kinds of experience [14]. Similarly, existing knowledge (in other words, human capital) is the result of formal education, such as university education, informal education, including work experience and non-formal education, i.e., specific training courses that do not belong to traditional formal educational structures [4]. It was suggested that differentiating human capital along with two distinct conceptualizations of human capital attributes: (i) human capital investments versus outcomes of human capital investments and (ii) task-related human capital versus human capital not related to a task [14]. Human capital investments consist of experiences such as education and work experience that may (or not) lead to knowledge and skills. The outcomes of human capital investments are obtained through knowledge and skills. Task-related human capital addresses whether human capital investments and outcomes are related to a specific task, such as starting and running a business. In this study, we use the concept of existing knowledge as knowledge, skills and experiences that an individual actually possesses to start a new business.

The existing knowledge is an important source of competitive advantages to individuals, organizations and societies [15]. The individuals' existing knowledge and skills may be important drivers for their behavior and play an important role in explaining economic activities. Campisi et al. [16] indicated that human capital is a key determinant in the capacity of a nation to innovate new technologies suited to domestic production. The knowledge provides individuals the cognitive abilities and lead to more productive and efficient [17].

The skills and knowledge on entrepreneurship are needed in the entrepreneurial process though to varying degrees [18]. In the field of entrepreneurship, research has attempted to support the existence of a positive relationship between

existing knowledge and entrepreneurial activity or entrepreneurial success [4]. It was stated that a positive effect of one's education level and the likelihood to perceive entrepreneurial opportunities [19]. It was also suggested a positive relationship between entrepreneurial competencies and the success and survival of entrepreneurs [20]. Furthermore, through an extensive literature review, it was found that there is a significant and small overall relationship between human capital and entrepreneurial success. Additionally, the magnitude of this relationship depends on conceptualizations of human capital, the context of the firm, and the choice of success measures [5].

Prior research has suggested a number of arguments. Human capital increases the ability of owners to conduct the generic entrepreneurial tasks of discovering and taking advantage of business opportunities. Human capital helps owners to acquire other utilitarian resources such as financial and physical capital, and it assists in the accumulation of new knowledge and skills. In all, owners with higher human capital should be more effective and efficient in establishing and operating an enterprise successfully than owners with lower human capital [5], [21]. In this study, we focus on the relationship between human capital and the perception to start a business. The individuals with higher quality human capital should be better at perceiving the profitable opportunities. Clercq and Arenius [22] suggested that knowledge-based factors of human capital have a strong impact on the decision to engage in business start-up activity. Once engaged in the entrepreneurial process, such individuals should also have superior ability in successfully exploiting opportunities [4].

The entrepreneurship studies indicate that cognitive factors such as perception play a critical role in the new venture creation process [23]. The perceived feasibility of starting a new venture is defined as the degree to which individual believes that he/she has the required resources (knowledge, abilities and skills) to carry out the new business [24]. Krueger [25] identified that perceived feasibility, perceived desirability, and the propensity to act can explain more than half of the variance in self-employment intentions; noticeably, feasibility perceptions have the higher explanatory power over the variance. Therefore, the impact of individuals' existing knowledge base and the entrepreneurial intentions should be tested. Thus, we hypothesize:

**Hypothesis 1:** The level of individuals' existing knowledge base has a positive effect on the likelihood to start a new venture.

## 2.2 The Role of Exposure to External Knowledge

Individual's exposure to external knowledge play an important role in reasoning entrepreneurial intentions (i.e., role model). According to Bosma et al. [9], relying on the opinions of the entrepreneurs, role models matter for pursuing an entrepreneurial career. An entrepreneurial role model has been defined as a common reference to individuals who set examples to be followed by others and who may motivate other people to make career decisions and obtain certain objectives [8]. It has long been confirmed that role models may have a great influence on career decisions. The presence of successful entrepreneurial role models in a community sends a message to the potential entrepreneurs that business is an attractive career option and provide useful skills and knowledge. Meanwhile, negative public attitude towards entrepreneurs along with the lack of role models may discourage individuals from going into business [26]. Therefore, role models may gain the individual's desire to become an entrepreneur and the entrepreneurial self-efficacy. This may, in turn, positively influence entrepreneurial intentions and entrepreneurial activities. The role model reflects (i) the concept of roles and the tendency of individuals to identify with other people, and (ii) the concept of modeling, the psychological matching of cognitive skills and patterns of behavior between a person and an observing individual [27]. This suggests that individuals are attracted to role models who are perceived to be similar in terms of their characteristics, behavior or goals (the role aspect), and from whom they are able to learn certain abilities or skills (the model aspect).

The exposure to knowledgeable others may be especially meaningful for would-be entrepreneurs. Since individuals are limited in their ability to assemble and absorb information, and to determine the results of their decision alternatives, they often have to rely on external contacts in order to obtain information necessary for making decisions. It was argued that the networking may support new business activities through membership in various organizations because the membership increases

one's exposure to beneficial sources of information [22].

The previous studies have suggested that contact with others entrepreneurs may have two effects. Entrepreneurs furnish opportunities to learn about entrepreneurial tasks and capabilities. In particular, the existence of entrepreneurial role models reduces the ambiguity about starting a business that potential entrepreneurs may have and may help them obtain necessary information and entrepreneurial skills. Other than that, knowing and watching successful entrepreneurs demonstrates to potential entrepreneurs how to locate the resources and activities needed for starting and operating a venture more easily and increases individual self-confidence [28]. Based on a sample of 82 students from two Midwestern universities, Van Auken and Stephens [29] also indicated that direct interactions between other entrepreneurs and prospective entrepreneur through positive discussions and involvement in a business have a significant impact on interest in starting a business; whereas, negative interactions seem to prevent respondents from being interested in starting a business.

Demonstration and legitimation effects related to social and economic interaction with entrepreneurs lead to the two followings (i) a reduction of ambiguity and (ii) an increase in the perceived attractiveness of entrepreneurship as a career choice. The same mechanisms should also contribute to a reduction of the fear of suffering from entrepreneurial failure since observing entrepreneurs allow learning from them, which should decrease the observer's perceived risk of engaging in entrepreneurship. Perceivers can gain knowledge about entrepreneurial tasks and have the opportunity to acquire entrepreneurial capabilities. This should enhance the perceived ability to launch and run an entrepreneurial venture which is almost by definition accompanied by a lower fear of failure. Likewise, fear of failure should be decreased by perceiving entrepreneurship as a n attractive career choice due to the peer effect. Fundamentally, the fact that friends and acquaintances can manage to be an entrepreneur causes the perception that an individual can also be an entrepreneur [28]. Therefore, the following hypotheses are proposed:

**Hypothesis 2:** The level of individuals' exposure to external knowledge has a significant positive effect on the likelihood to start a new business.

## 3 Research Methodology

### 3.1 Data Collection

Our analysis based on a representative sample of the adult population from three Southeast Asian countries, Malaysia ( $N=1964$ ), Thailand ( $N=2902$ ) and Vietnam ( $N=1889$ ). Our study utilized 2015 GEM data. The survey was conducted to gather information about the entrepreneurship characteristics in different stages, from intending to start, to just starting, to running a new or established enterprise and even to discontinuing a business. Based on Adult Population Survey (APS), 2015 GEM data has provided information on components of the entrepreneurship ecosystem using a Likert scale.

### 3.2 Measures

#### 3.2.1 Dependent Variable

At the time of the data collection, respondents who were in the process of setting up their own business (i.e. 'nascent entrepreneurs') were identified by asking the following question: "Are you, alone or with others, currently trying to start a new business, including any self-employment or selling any goods or services to others?" The participants who answered "yes" to this question could be considered as a "nascent entrepreneur". The dependent variable was a binary variable (1 = Yes, 0 = No).

#### 3.2.2 Predictor Variables

##### *Existing knowledge base*

The level of an individual's existing knowledge was identified through two variables. First, the participants were asked about their educational attainment. Their response was in the following options: (1) no secondary degree, (2) secondary degree, (3) post-secondary and (4) graduate experience. We coded the education variable into categorized variable. Second, in order to identify the specific skills and capabilities to start a business, the respondents replied the following question: "Do you have the knowledge, skill and experience required to start a new business?" This variable was a binary variable (1 = Yes, 0 = No).

##### *Exposure to External Knowledge*

Individual's exposure to external knowledge was assessed through the two variables. First, the respondents were required to reply the following

question: “Do you know someone personally who started a business in the past 2 years?”. This measure was a binary variable (1=Yes, 0 = No). Second, they replied the following question: “Have you, in the past three years, personally provided funds for a new business started by someone else, excluding any purchases of stocks or mutual funds?” This question was to identify whether an individual is an informal investor in the past. This measure was treated as a binary variable (1=Yes, 0=No).

### 3.2.3 Control Variables

In order to test our hypotheses, other variables were included into the model. Individual control variables are gender (1 = male, 0 = female), age of

participants (in years), and household income as measured by three different categories. Through extensive literature review, we included “fear of failure” as a control variable by asking the following question: “Would fear of failure would prevent you from starting a business?” The ‘availability of opportunities’ in the environment was also included into the model and identified by the following question: “In the next six months, will there be good opportunities for starting a business in the area where you live?”. These variables are also binary variable (1=Yes, 0=No).

The variables and their descriptions are summarized in Table 1.

Table 1. Individual-level variables

Variable	Description
Gender	Dummy = 1 if the respondent is male
Age	Age of respondents in years
Educational attainment	1 = No secondary degree; 2 = Secondary degree; 3 = Post secondary; 4 = Graduate experience
Household income	Categorical variable: 1 = Lowest; 2 = Middle; 3 = Upper
Fear of failure	Dummy = 1 if respondents stated that fear of failure would prevent them from starting a business
Opportunity	Dummy = 1 if the respondents stated that there will be good opportunities for starting a business in the area where they live in the next six months
Having knowledge, skills and experience required to start a new business	Dummy = 1 if respondents had the knowledge, skill and experience required to start a new business
Personally know an entrepreneur	Dummy = 1 if respondents knew someone personally who started a business in the past 2 years.
Experience as an informal investor	Dummy = 1 if respondents personally provided funds for a new business started by someone else.

### 3.3 Data Analysis

The proposed regression model in this study is logistic regression because of the followings: (i) all the independent variables are dichotomous or categorical and (ii) the dependent variable is dichotomous. The SPSS statistical software was used to analyze the data and test the research hypotheses.

As mentioned, logistic regression method is used to describe data and to understand the relationship between one dependent binary variable and one or more nominal, ordinal, interval or ratio-level independent variables. In many cases, that dependent binary variable (outcome event) can be easily categorized into classes of having occurred, or not having occurred; i.e., the occurrence of a stroke, or of going bankrupt, are relatively easily discerned and coded as either having happened, or

not having happened. Once this categorization has been obtained, the independent variables (predictors of that outcome) can be studied [11], [30]. A concern in developing of a logistic regression model is that which variables are selected to analyze as potential predictors of the outcome.

## 4 Results

We used logistic regression model as a statistic method for analyzing data and confirming hypotheses (H1 and H2). Table 2 reports the results from the logistic regression analyses. A two-step approach was utilized to test our hypotheses. In the first model, only control variables were included; the first model was used as the benchmark against which the effects of the knowledge-related

variables were tested (Table 2: first column). The second model consisted of both the control and predictor variables (Table 2: second column). In order to examine whether the effect of the knowledge-related factors differed across Southeast Asian countries, different analyses for the Malaysia sample (Table 2: second and third columns), the Thailand sample (fourth and fifth columns) and the Vietnam sample (Table 2: sixth and seventh columns). In all, Table 2 shows that the models have an acceptable goodness of fit, in that the Wald chi-square test is significant.

From the second, fourth and sixth columns in Table 2, it can be seen that most individuals with a higher fear of failure were found to be less likely to undertake start-up activities. Moreover, individuals who believe that there are more opportunities for starting a business were more likely to engage in

start-up activity. Also in Table 2, the third, fifth and seventh columns present the role of knowledge-related factors. We found support for Hypothesis 1. There is a positive relationship between one's specific skills and the likelihood to be a nascent entrepreneur. Moreover, there is a positive relationship between an external knowledge factor (i.e. 'personally knowing an entrepreneur') and the likelihood of start-up activity. Therefore, we found support for Hypothesis 2, in that there is a positive relationship between one external knowledge (i.e., "Personally know an entrepreneur") and the likelihood of start-up activity. However, we did not find an effect for one's experience as informal investor. Interestingly, in term of the control variables, for Vietnamese it was found that age is significant driver for start-up activities. In contrast, the Malaysian fear and failure play a negative effect on entrepreneurial activity.

Table 2. Binary Regression Analysis of the Likelihood of Being Engaged in Entrepreneurial Activity <sup>a</sup>

	<i>Malaysia</i>		<i>Thailand</i>		<i>Vietnam</i>	
<b>Existing knowledge based</b>						
No secondary degree		-17.174 (28740352)		.443 (.642)		1.665 (.189)
Secondary degree		-16.918 (22248456)		.393 (.675)		.305 (.737)
Post-secondary		-17.041 (25156782)		.285 (.752)		.035 (.965)
Graduate experience		-17.243 (30800465)		.468 (.627)		.545 (.580)
Specific skills		<b>1.805</b> <b>(.164)***</b>		<b>1.342</b> <b>(.261)***</b>		<b>1.097</b> <b>(.334)***</b>
<b>External knowledge</b>						
Personally know an entrepreneur		<b>1.204</b> <b>(.300)***</b>		<b>.271</b> <b>(.763)*</b>		<b>.394</b> <b>(.674)**</b>
Experience as an informal investor		.522 (.593)		.804 (.447)**		.139 (.566)
Fear of failure	.029 (.971)	.030 (.970)	-.016 (1.016)	.151 (.860)	.074 (.928)	.132 (.876)
Opportunity	<b>1.301</b> <b>(.272)***</b>	.430 (.651)	<b>1.028</b> <b>(.358)***</b>	<b>.700</b> <b>(.497)***</b>	.271 (.763)	<b>.440</b> <b>(.644)*</b>
Gender	-.095 (.660)	.046 (.955)	.083 (.920)	.153 (.858)	.105 (.900)	.173 (.841)
Age	-.005 (.577)	-.001 (1.001)	.005 (.995)	.003 (.997)	<b>.024</b> <b>(.976)***</b>	<b>.031</b> <b>(.969)***</b>
Household income <sup>b</sup>						
Middle	-.123 (1.131)	-.337 (1.401)	.005 (.995)	-.202 (1.224)	.369 (.691)	.336 (.715)
Upper	.005 (.995)	-.184 (1.202)	-.044 (1.045)	-.223 (1.250)	.180 (.835)	.060 (.941)
Constant	<b>2.449</b> <b>(.086)***</b>	18.034 (.000)	<b>1.397</b> <b>(.247)***</b>	-.173 (1.189)	.421 (.656)	-.858 (2.358)
Pseudo R <sup>2</sup>	.058	-.212	.052	-.127	.029	.109
Log likelihood	724.115	622.159	1942.793	1796.071	1635.176	1529.649

\*\*\*p<.001; \*\*p<.01; \*p<.05 one-sided tests for hypothesized variables, two sided tests for control variables

Notes: <sup>a</sup> Regression coefficients and corresponding 'odds ratios' (in parentheses) are presented. The odds ratio is to approximate how much more likely (or unlikely) it is for the outcome (being engaged in start-up activity) to be true; <sup>b</sup> 'Lowest income' is used as base case in the binary regression analyses.

## 5 Discussion and Conclusions

The research findings add to entrepreneurship research field in the the regional context of Southeast Asia by reporting the results of research on start-up activity of nascent entrepreneurs from three major nations. Our study examined the knowledge-related factors that affect the entrepreneurial activity in Southeast Asian nations including Malaysian, Thailand and Vietnamese with a sample of 1964, 2902 and 1889 respondents, respectively. Results show that knowing an entrepreneur is positively and significantly associated with the engagement in start-up activity and entrepreneurial knowledge, skills and experience (specific skills) are the major determining factors of starting a venture in Southeast Asian nations.

The empirical findings revealed that a positive impact of connection with “startup role model” on intentions towards entrepreneurship. Our result is consistent with previous studies, for example, Wagner and Sternberg [31] stated that “contacts with young entrepreneurs will reduce costs because they make it easier to get answers to lots of ‘how to’ type questions relate to a start-up”. Aside, social networks, for instance, having personal entrepreneurial connection provides opportunities and useful information related to startup that makes people be more willing to engage in entrepreneurship. Business-knowledge, business-skill and experience related to human capital help individuals recognize and exploit start-up opportunity (Shane and Venkataraman 2000) and be successful in starting a new venture [5]. Our findings substantiate their arguments in that we find remarkable significant and positive effect of entrepreneurship knowledge, skill and experience to entrepreneurial activity.

Our study is not without limitations. Specifically, we use a full sample which includes entrepreneurs and non-entrepreneurs. As a result, we neglect the difference in perception of starting a new venture between entrepreneurs and non-entrepreneurs. It is, therefore, highly desirable to examine the determinants of perceived feasibility towards entrepreneurship in a two-isolated respondent sample.

Although our study’s hypotheses are based on the solid theory, future research should focus on integrating a greater number of socio-cultural variables into the analysis. Larger dataset from all countries in the region may provide more comprehensive results. Moreover, entrepreneurship

is influenced by various other variables including demographics, individual’s social position. Future research is needed to evaluate these attributes related to entrepreneurship.

In conclusion, in order to foster wealth creation and job generation, the governments need to seek the measure to increase the number of entrepreneurial activities. From a policy perspective, the study shows that officers in education institutions should design and develop special study programs to provide entrepreneurial knowledge, skill for entrepreneurs and youngsters. Our findings demonstrate the need of entrepreneurship support measures and promotion. For instance, youngsters need to be invited more to the classroom or showcase to testify about their career choices, media should focus more on positive entrepreneurial role models. It can be concluded that constraints which hinder the development of entrepreneurial activities may partly be explained by knowledge-related factors.

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