

THE DETERMINANTS OF ENTREPRENEURSHIP IN DEVELOPING COUNTRIES – A CASE STUDY OF ASIA

Vu Thuy Mai Uyen

School of Business, International University, Vietnam National University Ho Chi Minh City

ABSTRACT

The study is aimed to examine the influence of different determinants on entrepreneurship in some developing Asian countries. In this dissertation, entrepreneurship determinants are represented by a set of independent variables including Economic development, Population Growth Unemployment, Macroeconomic volatility, Education level, Financial development Technological development, Tax level, Corruption, Political stability and Cost of doing business. In addition, entrepreneurship, which is dependent variable of this research, is measured New Density entry firm. The sample of this research is collected from 9 Asian developing countries (Afghanistan, India, Indonesia, Kazakhstan, Malaysia, Nepal, Philippines, Tajikistan and Thailand). Collected data are analyzed by implementing OLS regression model. The research results show that the stage of economic development, population growth rate, unemployment rate, financial development, level of political stability are the most influent determinants of entrepreneurship. In the meanwhile, level of education, inflation rate and level of the tax system are found to have negative impact on the level of entrepreneurial activities.

Keywords: Entrepreneurship, Asian developing countries

1. INTRODUCTION

Entrepreneurship is regarded as one of the most important market drivers that a market-oriented economy should have. Many economists have emphasized its importance as a crucial factor affecting the development of market. According to Bird (1988), careful thoughts, actions as well as decisions are the main reasons for the emergence of entrepreneurial ventures. A study conducted by Bernier (2001) showed that the survival as well as the performance outcomes of a start-up depends considerably on cost of doing business. Nowadays, it is considered to be wise to encouraging entrepreneurship as an economic development strategy. One of the crucial elements to push entrepreneurship is to encourage and inspire people to become entrepreneurs and equip them with knowledge and appropriate skills in order to take the opportunities and earn

profits from those opportunities. Understanding the potentials as well as benefits of encouraging entrepreneurship, many governments and social organizations have implemented different initiatives to create awareness of entrepreneurship and equipped potential entrepreneurs with a wide range of skills. In developed countries, it seems to be easier for people to understand and want to become an entrepreneur because of its social and economy support the idea of entrepreneurship. However, the situation in developing countries is not as easy as its in developed nations. Governments perceive as a mechanism to achieve their socioeconomic targets as a mechanism to improve the distribution of income, to stimulate economic growth, and to reform the economic structure. They regard entrepreneurs as an economic growth driving factor.

The miracle economic changing in Asian developing countries have been supported by right macro-economic policies encouraging increase in number of new companies. The increase in number of new-opened companies is considered as a positive economic indicator that represents that more people decide to invest partially their asset into the economy through opening a company to do business. Some studies suggest that the number of entrepreneurs would increase at certain period of times and in certain places when economic environment and socioeconomic policies encourages the development of entrepreneurs.

This research reviews previous theoretical and empirical studies on entrepreneurship to identify the determinants of entrepreneurship in Asian developing countries. Moreover, this study will investigate the impacts of determinants of entrepreneurship on different economic aspects in Asian countries. Finally, by analyzing the data, the research will try to make practical suggestions to encourage and improve entrepreneurship.

2. LITERATURE REVIEWS

It is a matter of fact that there are various theoretical and empirical studies have been done to identify the determinants impacting entrepreneurial dynamics, either within one single country or in a group of nations like European Union. Giannetti & Simonov (2004) divided different factors into 3 major groups which may got significant impact on entrepreneurial activities including individual characteristics (i.e. demographic features, wage, age, etc.), economic environment where an individual does business (i.e. GDP, income per capita, unemployment rate, macro-economic indicators, etc.), and social environment where an individual does business (i.e. religion, education level, etc.). Wennekers, et al., (2002) suggest similarly that technology, the degree of economic development, demographic characteristics, culture and institutions are determinants of entrepreneurship.

2.1 Educational factors

2.1.1 Education as Determinant of Entrepreneurship Selection

Le (1999) stated that managerial ability and outside options are two different channels of thoughts that education might get influence on the propensity to become self-employed. By using general equilibrium model developed by Lucas (1978), the research conducted by Calvo & Wellisz (1980) argued that managerial ability has impact on the probability of selection in an entrepreneurial position. By improving the managerial ability, entrepreneurship might be able to increase the probability of entrepreneurship. Another channel, which is outside option, gets an opposite outcome. There is a negative relationship between outside option and entrepreneurship selection that the higher the education is, the greater outside options generate. Outside options may be higher wage employment under well-improved working conditions. Thus, this would increase the cost of doing business leading to the decrease in choosing entrepreneurship as preferred choice. Although there is no theoretical evidence predicting the effect of these channels, "these offsetting forces might be on the relationship between schooling and entrepreneurship selection" (Vijverberg, et al., 2008).

2.1.2 Entrepreneurship education

Drucker (1986) once said in his book that "most of what you hear about entrepreneurship is all wrong. It's not magic; it's not mysterious; and it has nothing to do with genes. It's a discipline and, like any discipline, it can be learned". However, entrepreneurship education does not have a long history. In fact, in recent decades entrepreneurship education has been emerged as an important factor of entrepreneurship. The majority of previous studies found a positive relationship between education and entrepreneurship in upgrading students' perception towards entrepreneurship (Peterman and Kennedy, 2003; Souitaris, et al., 2007; Harhoff, et al., 2010). However, the universal agreement on this topic has not achieved. Some researches do not find a significant relationship or cannot get a final conclusion about the relationship between 2 factors. Some papers even found a negative influence of education on entrepreneurship (Oosterbeek, et al., 2010).

Entrepreneurship education was taught with a purpose of equipping students with appropriate entrepreneurial skills and abilities (Dragustin, 2007). However, nowadays, it is no longer enough. The role of education is now wider and deeper. It is expected to change personal attitudes towards entrepreneurship in order to give people's dynamic to become entrepreneurs due to the fast changing entrepreneurial and international business environment. Regarding to this field, the European Commission developed an integral approach at higher education level. This approach's purposes is to develop entrepreneurial capacities and instill the entrepreneurial mindset at the same time.

In order to achieve this, the World Economic Forum has set t a series of approaches and successful factors for entrepreneurship education namely leadership and soft skills, taking a cross-disciplinary approach, utilizing interactive pedagogy, and leveraging technology (Volkman, et al., 2009).

2.1.3 Motives Instigation

One of the entrepreneurship education is motives instigation in people who have entrepreneurship traits. In order to successfully educated, it is crucial to know people form their abilities and capacities to inform int this field and motivate them with entrepreneurial skills. Motives instigation includes tending to obtaining wealth, gettable, independence, trends to making new something, reject available methods, not placing people in social base that have not its merit and like it cause to people placing in become entrepreneur path (Rahimi & Damirch, 2011).

There are empirical and theoretical evidences supporting personal traits (Robbins & Judge, 2008). Personal traits have been applied in many researches as factor to get prediction on entrepreneurial intention (Ciavarella, et al., 2004). In his study, Goldberg (1981) stated that there are 5 broad domains of invidual differences of human personality. His findings are that there are positive relationship between agreeableness, openness to experience, extraversion and conscientiousness and entrepreneurial intention. While negative relationships can be found between neuroticism and entrepreneurial intention. The similar results can be withdrawn from other studies by Nga & Shamuganatha (2010). Zhao & Seibert (2006) in their study has emphasized the roles of openness and agreeableness factors positively affecting entrepreneurial intentions. There is relationship associated between personal traits and entrepreneurial activity (McClelland, 1961).

2.1.4 Characteristics and Skills Training

The characteristics that lead people to become entrepreneurs are not inherited but they are acquisitive. Training these characteristics is necessary to different people. Some people train in environments that their characteristics are training automatically and naturally; therefore, if these people begins a business, it will be more likely to be successful. However, most people have not those conditions and are not in this environment, so characteristics training is necessary for them through didactic terms or graduate courses. These characteristics consist of features such as creative thought, raising risk ability, raising ambiguity tolerance, self-confidence, punctual, and giving didactic information to individual characteristics from control center (Rahimi & Damirch, 2011).

These trainings divide into three terms: before, during and after enterprise establishment. In terms, before establishment of enterprise the entrepreneur, learn how the business starts and how perform teamwork and communication skills. During establishment of enterprise, entrepreneur should acquiring necessary awareness and conversance in field of financial issues, market recognition, management principles, insurance, economy, law affairs, and after establishment of enterprise, entrepreneur requiring skills are: ability of development management and company growth, finding new methods, competition and keeping location in market and finding new market (Rahimi & Damirch, 2011).

2.2 Corruption

There is an increase in number of researches on the association between corruption and economic indicators of welfare such as economic growth, GDP growth per capita (Kaufmann & Kraay, 2003), United Nation welfare index (Rose-Ackermann, 2004), income inequality (Carmignani, 2005), bond factor (Ciocchini, et al., 2003), capital investment and FDI (Lambsdorff, 200; Mauro, 1995), productivity factor (Rivera-Batiz, 2002). There are controversial results amongst studies that some studies suggest a positive relationship, while other found a curvilinear relationship. A nation's governance, which control of corruption is one of the most important components, moderated a wide range of crucial economic indicators and therefore, control of corruption plays an important role in shaping economic performance across the nations (Anokhin & Schulze, 2008). The considerable fragment of the variance in economic outcomes of nations regardless of level of economic development can be explained by nation's governance (Kaufmann, et al., 2006). The mechanism, nevertheless, of how control of corruption may impact economic welfare remains unclear and there is not much theoretical and empirical to explain this issue. Some researchers claim that it is possible to control corruption based on economic development (Bardhan, 1997). In addition, control of corruption and institutionalized trust play key roles in creating an appropriate business environment as well as institutional context where entrepreneurship can survive and flourish (Rose-Ackerman, 2001)

2.3 Economic institutional environment conditions

The relationship between economic environment and entrepreneurship is significant according to the result of the research conducted by Simón-Moya et al. (2014). This research had analyzed the economic and institutional environment, the effect on entrepreneurship in 62 countries. The data sample was divided into 3 different groups and the result differs from one group to another. The concluded that those countries with certain conditions such as high-income inequality, high unemployment rate and low level of development will witness a significant high entrepreneurial activity. While in developed countries, entrepreneurial activity is diminishing, and innovation is

considerably high.

2.4 Economic growth

Economic growth is a relatively wide topic and how economic growth is measured is different from perspective to perspective and from scholars to scholars. However, it is a widely accepted methodology that economic growth is represented by macro-economic indicators such as GDP growth rate, GDP per capita, inflation rate, tax rate etc.

2.4.1 GDP and GDP per capita

Gross domestic product (aka GDP) and GDP per capita are one of the most fundamental concepts of macroeconomics. It is widely accepted that GDP growth and GDP per capita are macroeconomic factors that have impact on entrepreneurial activities. There is positive relationship between growth of GDP and GDP per capita and entrepreneurial activities (Aparicio, et al., 2016, Klapper, et al., 2010, Vidal-Sune & Lopez-Panisello, 2013) because the grow in income determine an increase in demands for goods and services that would stimulate entrepreneurial activities. More people want to do business when GDP grows because people are richer and willing to pay more o consuming. However, the relationship between GDP and entrepreneurship depends heavily on the degree of economic development of a certain nation (Wennekers, et al., 2002; Arin, et al., 2015; Shane, 2008). The negative association can be witnessed in poorer nations because low GDP encourages individuals to start their own business due to lack of employment. In contrast, in developed countries where employment opportunities are available and job is stable, individual tends to settle with stable career rather taking risks opening a new business.

2.4.2 Tax rate

Another determinant of entrepreneurial activities is tax rate (as percentage of commercial profits). It is understandable that tax rate has certain effect on the entrepreneurial intention because it can make entrepreneurial activities less attractive and profitable compared with wages offered for other jobs. Some studies on this field concluded that high tax rate has negative impact on entrepreneurship because it leads to lower self-employment cause it creates business obstacles for new business (Wennekers, et al., 2002; Arin, et al., 2015; Shane, 2008).

2.4.3 Inflation rate

Another macro-economic factor affecting entrepreneurship is inflation rate. There are some definitions about inflation rate. However, in this dissertation inflation rate is the annual increase

in consumer price. The relationship between inflation and entrepreneurship is unclear. Some scholars argue that inflation rate has positive relationship with entrepreneurship because when the prices of goods and services remain at high level due to inflation rate, it encourages individual to open new enterprise and enter on the market (Sayed & Slimane, 2014, Vidal-Suñé & López-Panisello, 2013). On the other hand, inflation make the risk of doing business increase significantly. As the result, the increase in cost of doing business will discourage individual to enter on the market. Moreover, high inflation rate will cause an increase in borrowing cost (borrowing interest rate), which in its turn, reduce the access to finance of enterprise. The harder access to finance one firm deals with, the more likelihood that firm continues doing business. Thus, the relationship between inflation rate and entrepreneurship can be either positive or negative, it depends.

2.4.4 Access to finance

One of the biggest problems that entrepreneurs have to deal with when opening a new business is the difficulty to access to finance. In developing countries where financial market, especially capital market, is not as good as one in developed countries, small and medium enterprises (SMEs) faces a lot of difficulties to raise enough fund for their business. Therefore, the main source of capital that entrepreneurs can lean on is bank credit. Bank credit is used as proxy for access to finance in many researches (Sayed & Slimane, 2014) (Aghion, et al., 2007) (Arin, et al., 2015). On the other hand, negative relationship between access to finance and entrepreneurship can be found in some researches (Hurst & Lusardi, 2004) (Kim, et al., 2006) (Mueller, 2006). The rationale for negative association is that at the early stage of enterprise, entrepreneurs does not need a large amount of financial capital, thus access to finance at this stage is not a big problem.

2.4.5 Unemployment factors

Unemployment is one of the most fundamental macroeconomic factors. Unemployment rate is defined as the percentage of unemployment workers over total labor force. As a matter of fact, the association between unemployment and entrepreneurship has been studied from a very long time to address the question what the relationship between entrepreneurship and unemployment is (Oxenfeldt, 1943) (Audretsch, et al., 2001) (Pfeifer & Reize, 2000) (Blanchflower & Meyer, 1994). Regardless of number of empirical researches, the association between entrepreneurship and unemployment remains uncertain (Bosma & Schutjens, 2011) (Arin, et al., 2015). The study conducted by Vivarelli (2013) reveals that at regional level, to some extent new firm is determined by job losses and entrepreneurship shall be considered as a socioeconomic solution for unemployment. Specially, in economic downturn, entrepreneurship may play an even more

important role, for certain nations (Santarelli & Vivarelli, 2007). The positive relationship is explained because new business will hire workers, which result in a decrease in unemployment. In addition, in situation of high unemployment rate, entrepreneurs will have opportunity to reduce HR costs. It means that high unemployment will result in increase in entrepreneurial activities. On the other hand, when applied macro-economic theory the business opportunities will decline when unemployment rate increases because it leads to a decrease in demands for goods and services.

3. METHODOLOGY

This research studies the public information on World Bank Indicators. This study focuses on developing countries in Asia, which most countries in Asia are except for Japan, Korea, Hong Kong and Taiwan (Society for the Study of Reproduction, 2017). To be more specific, according to the International Monetary Fund, the emerging and developing countries in Asia include Afghanistan, Bangladesh, Bhutan, Brunei Darussalam, Cambodia, China, Fiji, India, Indonesia, Kazakhstan, Kiribati, Lao P.D.R., Malaysia, Maldives, Marshall Islands, Micronesia, Mongolia, Myanmar, Nepal, Palau, Papua New Guinea, Philippines, Samoa, Solomon Islands, Sri Lanka, Tajikistan, Thailand, Timor-Leste, Tonga, Tuvalu, Vanuatu, and Vietnam (Statista, 2018).

The data set we use in our empirical investigation is an 11-year panel data covering the period from 2006 to 2016 from 9 Asian developing countries (Afghanistan, India, Indonesia, Kazakhstan, Malaysia, Nepal, Philippines, Tajikistan and Thailand). The dependent variable is entrepreneurship indicator which is defined as the activities of an individual or a group aimed at initiating economic enterprise in the formal sector under a legal form of business. To quantify this definition across countries, and following Klapper & Love, 2011, we use the Business Entry Density indicator as a proxy for entrepreneurship activities

Table 1: Summary table for independent and dependent variables

<i>Variable</i>	<i>Description</i>	<i>Source</i>	<i>Expected relationship</i>
<i>Dependent variable</i>			
Entrepreneurship	New Density entry firm	Doing Business Dataset	N/A
<i>Independent variables</i>			
Economic development	Log of Real GDP per Capita	WDI	Positive
Population Growth	Annual percentage growth rate of population	WDI	Positive

Unemployment	Unemployment rate	WDI	Positive
Education level	Secondary school enrolment rate	WDI	Positive
Macroeconomic volatility	Annual inflation rate	WDI	Positive/ Negative
Financial development	Log of domestic credit to private sector % GDP	WDI	Positive
Technological Development	Access to internet per capita	WDI	Positive
Tax level	Total tax rate (% of commercial profit)	Doing Business Dataset	Negative
Corruption	Control of Corruption index	Worldwide Governance Indicators (World Bank)	Negative
Political stability	Political Stability and Absence of Violence/Terrorism	Worldwide Governance Indicators (World Bank)	Positive
Cost of doing business	Cost (% of income per capita)	Doing Business Dataset	Negative
	Paid-in Min. Capital (% of income per capita)	Doing Business Dataset	Negative

OLS regression model is applied in which new density entry firm (NDEF), is the dependent variable and others – log of real GDP per capita (logGDP), annual percentage growth rate of population (GROW), secondary school enrolment rate (EDU), unemployment rate (UNEMP), annual inflation rate (INFLA), log of domestic credit to private sector % GDP (logDOMES), access to internet per capita (INTERNET), total tax rate (TAX), control of corruption index (CORR), political stability and absence of violence or terrorism (POLISTAB), cost of starting a new business (COST) and paid-in minimum capital (PAIDIN), are the independent variables. There are two OLS regression models fixed effects run in this research.

For better empirical results, the dominants of entrepreneurship are divided into two groups: indicators measuring macroeconomic stability and indicators related to institutional and political factors. The research will conduct two models of regression as following:

Model 1: Economic determinants

$$NDEF_{i,t} = \alpha_0 + \alpha_1 \log GDP_{i,t} + \alpha_2 GROW_{i,t} + \alpha_3 UNEMP_{i,t} + \alpha_4 EDU_{i,t} + \alpha_5 \log DOMES_{i,t} + \alpha_6 INTERNET_{i,t} + \alpha_7 TAX_{i,t} + \varepsilon_{i,t}$$

Model 2: Institutional and Political determinants

$$NDEF_{i,t} = \alpha_0 + \alpha_1 COST_{i,t} + \alpha_2 PAIDIN_{i,t} + \alpha_3 TAX_{i,t} + \alpha_4 POLISTAB_{i,t} + \alpha_5 CORR_{i,t} + \varepsilon_{i,t}$$

4. RESULTS

4.1 Model 1: Economic determinants

For the model 1, the besides running OLS multiple regression model for dependent variables, the new density entry firm, and independent variables, population growth, unemployment rate, education level, financial development level, inflation rate and technological development level, the research also runs the simple regression for each independent variable with dependent variable. The results obtained for the coefficient, probability and adjusted R- squared are centralized the results in the table 4.

Table 2: Economic determinants of entrepreneurial activities in Asian countries

	I	II	III	IV	V	VI	VII	VIII
Log GDP per capita	0.491014 (9.73)**							0.393541 (4.82)**
Population growth		-0.054675 (-0.48)						0.351318 (2.10)**
Employment			0.046254 (-1.84)*					0.061097 (2.03)**
Education				0.013085 (3.08)**				-0.01115 (-2.42)**
Financial development					0.363577 (4.74)*			0.371123 (3.27)**
Inflation						-0.00805 (-0.49)		-3.87492 (-5.11)**

Technological Development							0.025834 (10.32)**	0.00078 0 (0.08)
Constant	-2.96960 (- 7.62)**	0.8690981 (4.45)**	1.010604 (6.95)**	-0.19896 (-0.61)	-0.53702 (- 1.87)*	0.832913 (6.49)**	0.175269 (2.2)**	- 3.87492 (- 5.11)**
N	99	99	99	99	99	99	99	99
Adjusted R-squared	0.4886	-0.0079	0.0237	0.0795	0.1799	-0.0078	0.5185	0.6685

*Note: * and ** denotes that coefficients are significant at the 10% and 5% level respectively*

Based on the results of the fixed effects regression models and the statistically significant coefficients obtained for model 1, summarized in table 4, it is concluded that economic development, population growth rate, unemployment rate, education level, financial development level and inflation rate are significantly correlated with entrepreneurial activities in Asia. The value of adjusted R-squared of each single regression model ranges from - 0.0079 to 0.5185. The value of adjusted R-squared of the multiple regression model is 0.6685, meaning that each independent variable in helps to explain and predict the value of the dependent variable, and all independent variables can predict up to 66.85% precise value of the dependent variable, the number of newly registered firms among 9 studied countries in Asia.

Generally speaking, the research results are consistent with the predictions of theoretical studies as well as the results of previous empirical studies. The first hypothesis, which is “there will be a significant positive relationship between the growth of GDP per capita and entrepreneurship”, is confirmed. The coefficient of economic development, represented by the logarithm of GDP per capita, is positive and statistically significant at 10%. This result is accordance with our expectation as well as the findings of other empirical studies in other areas (Santarelli & Vivarelli, 2006; Lerner & Antoinette, 2010; Vidal-Suñé & López- Panisello, 2013; Aparicio, et al., 2016). Hence, it is able to conclude that the richer the countries are, the more likelihood the new firms are established.

The second, third and sixth hypothesis are also confirmed, positive relationships between population growth and entrepreneurial activities, between unemployment rate and entrepreneurship and between financial development level and entrepreneurial activities. The coefficient of population growth is positive and statistically significant at 10%. It is consistent with our prediction and the previous researches (Bais & Verhoeven, 1995; Armington & Acs,

2002). When the population grows fast, the demand side of the market increase significantly which leads to the lack of supply and there would be more opportunities for new economic activities. This is the reason why more business entities will be established in the fast- growing population nations. The coefficient of unemployment rate is positive and statistically significant at 10%, which is accordance with the expectation and previous empirical study (Grilo & Thurik, 2004; Bosma & Schutjens, 2011; Vidal-Suñé & López-Panisello, 2013; Vivarelli, 2013; Arin, et al., 2014; Sayed & Slimane, 2014). People in developing countries in Asia tends to build their own business during economic downturn, when the unemployment rate and layover rate are high. In other words, there will be more newly registered firm during the economic downturn when the layover rate is high. In accordance with our prediction as well as previous researches (Volery, et al., 1997; Kouriloff, 2000; Choo & Wong, 2006; Klapper & Love, 2011; Sayed & Slimane, 2014), the coefficient between development level and entrepreneurial activities is positive and statistically significant at 10%. The ease to access financial resources will help to increase the number of entrepreneurs in the market.

The result goes against the fourth hypothesis. The coefficient between education level and entrepreneurship is negative and statistically significant at 10%. This result opposes the expectation as well as some empirical researches (Olivari, 2016). This indicates that the more being trained, the less likelihood they establish their own business.

The fifth hypothesis, negative relationship between inflation rate and entrepreneurial activities, is confirmed. The coefficient of inflation rate is negative and statistically significant at 10%. This result is consistent with previous researches (Perotti & Volpin, 2004; Meyer & Sinani, 2009; Arin, et al., 2014). The high inflation rate always comes along with high interest rates, which will create barriers for newly registered firms in accessing to financial resources.

The seventh hypothesis is rejected because of statistically insignificant coefficient. This indicates that the technological development level does not impact on the prediction of the number of newly registered business.

The model to prediction the number of new business in developing countries in Asia is shown as following:

Business entry density = $-3.87 + 0.394 \log\text{GDP per capita} + 0.351 \text{ population growth} + 0.0061 \text{ unemployment rate} - 0.0111 \text{ education level} + 0.3711 \text{ financial development} - 3.875 \text{ inflation rate}$.

4.2 Model 2: Institutional and Political determinants

For the model 2, the besides running OLS multiple regression model for dependent variables, the new density entry firm, and independent variables, cost of starting a business (% of income per capita), paid-in minimum capital (% of income per capita), tax rate, political stability level and corruption level, the research also runs the simple regression for each independent variable with dependent variable. The results obtained for the coefficient, probability and adjusted R-squared are centralized the results in the table 5.

Table 3: Institutional and Political determinants of entrepreneurial activities in Asian countries

	I	II	II	IV	V	VI
Cost (% of income per capita)	-0.014673 (-5.08)**					0.005424 (-1.45)
Paid-in Min. Capital (% of income per capita)		-0.002821 (-3.54)**				-0.000591 (-0.62)
Total tax rate (% of profit)			-0.017345 (-3.86)**			-0.012500 (-2.70)**
Political Stability				0.452633 (5.29)**		0.378548 (4.27)**
Corruption					-0.0558986 (-0.34)	-0.102654 (-0.75)
Constant	1.161319 (11.44)**	0.900058 5 (11.23)**	1.539157 (7.36)**	1.193572 (11.53)**	7.441459 (5.37)**	1.765145 (7.46)**
N	99	99	99	99	99	99
Adjusted R-squared	0.2019	0.1053	0.124	0.2157	-0.0091	0.3537

Note: * and ** denotes that coefficients are significant at the 10% and 5% level respectively

For the model 2, the empirical results indicated that the entrepreneurship in Asia is strongly influenced by the tax rate and political stability. The value of adjusted R-squared of each single regression model ranges from -0.0091 to 0.2157. The value of adjusted R-squared of the multiple regression model is 0.3537, meaning that each independent variable in helps to explain and predict the value of the dependent variable, and both percentage of tax rate and political stability level can predict up to 35.37% precise value of the dependent variable, the number of newly

registered firms among 9 studied countries in Asia.

The eighth and tenth hypothesis are confirmed while others are rejected. It is confirmed that there is negative relationship between total tax rate and entrepreneurial activities, the coefficient of total tax rate is negative and statistically significant at 10% whereas the relationship between political stability level and entrepreneurship is positive, the coefficient of political stability level is positive and statistically significant at 10%. The results are consistent with the theoretical prediction as well as the empirical studies (Briscoe, et al., 2000; Thurik & Wennekers, 2004; Klapper, et al., 2006; Bruce & Mohsin, 2006; Simeon Djankov, et al., 2011; Vidal-Suñé & López-Panisello, 2013; Dutta, et al., 2013; Arin, et al., 2014; Salman, 2014). Other determinants such as cost of starting a business, paid-in minimum capital and corruption do not impact on the number of new established business in Asian developing countries.

The model to prediction the number of new business in developing countries in Asia is shown as following:

Business entry density = 1.765 - 0.0125 total tax rate + 0.3785 political stability

5. CONCLUSION

In this study, we have tested the relationship between 11 factors in the entrepreneurship specialized literature and the entrepreneurial activities in 9 developing countries in Asia. The main objective of this research was to figure the main determinant of entrepreneurship in Asian developing countries by testing the 11 proposed hypotheses. For more precise, we have grouped the explanatory variables into two group economic determinants and institutional and political determinants and conducted two separate tests.

The research results show that the stage of economic development, population growth rate, unemployment rate, financial development, level of political stability are the most influent determinants of entrepreneurship. In the meanwhile, level of education, inflation rate and level of the tax system are found to have negative impact on the level of entrepreneurial activities.

From the point of view of an economic policy maker, this research is relatively valuable since these determinants are considered as the economic policy instruments. Economic policy makers can take advantage of this study's results by influencing the determinants of entrepreneurial activities in order to promote the entrepreneurship among Asian countries. As a result, policy makers can create a business environment and supporting systems for newly registered firms that encourage the emergence of new business and start-ups in developing countries.

With regard to policy changing basing upon this study, on the one hand, government can intervene the policy by influencing the supply side of the entrepreneurship by (i) reducing total tax rate for start-ups or entrepreneurship, (ii) increasing the labor force participation rate, (iii) trying to control the inflation rate. On the other hand, government can also intervene the demand side of entrepreneurship to enhance the number of newly registered firms by (i) raising the ease of access to financial resources such as promoted borrowing interest rate for entrepreneurs, (ii) provide business support programs and services for entrepreneurship such as incubator centers, advisory services, mentoring services, networking events, etc.

REFERENCES

- Aghion, P., Fally, T. & Scarpetta, S., 2007. Credit constraints as a barrier to the entry and post-entry growth of firms. *Economic Policy*, 22(52), pp. 733-779.
- Aghion, P., Fally, T. & Scarpetta, S., 2007. Credit constraints as a barrier to the entry and post-entry growth of firms. *Economic Policy*, Volume 22, pp. 731-779.
- Allison, P. D. (., 2009. *Fixed effects regression models*. s.l.: SAGE publications, Inc..
- Anderson, D., Sweeney, D. & Williams, T., 1990. *Essentials of Statistics for Business and Economics*. 4th ed. ed. Cincinnati, OH, USA: South-Western College Publishing.
- Anokhin, S. & S.Schulze, W., 2009. Entrepreneurship, innovation, and corruption. *Journal of Business Venturing*, 24(5), pp. 465-476.
- Anokhin, S. & Schulze, W. S., 2008 . Entrepreneurship, innovation, and corruption. *Journal Business Venturing*.
- Aparicio, S., Urbano, D. & Audretsch, D., 2016. Institutional factors, opportunity entrepreneurship and economic growth: Panel data evidence. *Technological Forecasting and Social Change*, Volume 102, pp. 45-61.
- Aparicio, S., Urbano, D. & Audretsch, D., 2016. Institutional factors, opportunity entrepreneurship and economic growth: Panel data evidence. *Technological Forecast Society*, Volume 102, pp. 45-61.
- Arin, K. P. et al., 2015. Revisiting the determinants of entrepreneurship: A Bayesian approach. *Journal of Managment*, Volume 41, pp. 607-631.

- Armington, C. & Acs, Z. J., 2002. The Determinants of Regional Variation in New Firm Formation. *Regional Studies*, 36(1), pp. 33-45.
- Audretsch, D. B., Carree, M. A. & Thurik, A. R., 2001. *Does entrepreneurship reduce employment?*, s.l.: s.n.
- Avnimelech, G., Zelekha, Y. & Sarabi, E., 2011. *The Effect of Corruption on Entrepreneurship*. Denmark, Paper to be presented at the DRUID 2011.
- Bais, J. V. D. H. W. & Verhoeven, W., 1995. Determinants of Entrepreneurship: International Comparison. *OSA Working Paper 132/95, Tilburg University*.
- Bardhan, P., 1997. Corruption and development: a review of issues. *Journal of Economic Literature* , 35(3), pp. 1320-1346.
- Baumol, W. ..., 1990. Entrepreneurship: productive, unproductive and destructive. *Journal of Political Economy*, 98(5), pp. 893-921.
- Benoit, K., 2011. Linear Regression Models with Logarithmic Transformations.
- Blanchflower, D. & Meyer, B., 1994. A longitudinal analysis of young entrepreneurs in Australia and the United States. *Small Business Economics* , Volume 6, pp. 1-20.
- Bosma, N. & Schutjens, V., 2011. Understanding regional variation in entrepreneurial activity and entrepreneurial attitude in Europe. *The Annals of Regional Science*, 47(3), pp. 711-742.
- Bosma, N. & Schutjens, V., 2011. Understanding regional variation in entrepreneurship activity and entrepreneurship attitude in Europe. *The Annals of Regional Science*, Volume 47, pp. 711-742.
- Breschi, S., Lenzi, C., Malerba, F. & Mancusi, M. L., 2014. Knowledge-intensive entrepreneurship: sectoral patterns in a sample of European high-tech firms. *Technology Analysis & Strategic Management*, 26(7).
- Briscoe, G., Dainty, A. & Millett, S., 2000. The impact of the tax system on self-employment in the British construction industry. *International Journal of Manpower*, 21(8).
- Bruce, D. & Mohsin, M., 2006. Tax policy and entrepreneurship: New time series evidence. *Small Business Economics*, 26(5), pp. 409-425.

- Bryman, A. & Cramer, D., 2001. *Quantitative Data Analysis with SPSS Release 10 for Windows: A Guide for Social Scientists*. London, UK: Routledge.
- Calvo, G. & Wellisz, S., 1980. Technology, entrepreneurs and firm size. *Quarterly Journal of Economics*, Volume 95, pp. 663-678.
- Carmignani, F., 2005. *Efficiency of institutions, political stability and income dynamics*, s.l.: s.n.
- Choo, S. & Wong, M., 2006. Entrepreneurial Intention: Triggers and Barriers to New Venture Creations in Singapore. *Singapore Management Review*, Volume 28, pp. 47-64.
- Ciavarella, M. A. et al., 2004. The BIG FIVE and venture survival: Is there a linkage?. *Journal of Business Venturing*, Volume 19, pp. 465-483.
- Ciocchini, F., Burbin, E. & Ng, D., 2003. Does corruption increase emerging market bond spreads?. *Economics and Business*, Volume 55, pp. 503-528.
- Collis, J. & Hussey, R., 2013. *Business Research: a practical guide for undergraduate and postgraduate students*. 4 ed. s.l.: Macmillan Education & Palgrave.
- Dragustin, M., 2007. National and regional women entrepreneurs' networks.. *Romanian Journal of Regional Science*, 1(1), pp. 81-90.
- Drucker, P. F., 1986. *Innovation and entrepreneurship: practice and principles*. s.l.: Harper & Row.
- Dutta, N., Sobel, R. S. & Roy, S., 2013. Entrepreneurship and political risk. *Journal of Entrepreneurial and Public Policy*, 2(2), pp. 130-143.
- Giannetti, M. & Simonov, A., 2004. On the Determinants of Entrepreneurial Activity: Social Norms. *Economic Environment and Individual Characteristics*, Volume 11, pp. 269-313.
- Gibb, A. & Ritchie, J., 1982. Understanding the Process of Starting Small Businesses. *European Small Business Journal*.
- Goldberg, L. R., 1981. Language and individual differences: The search for universals in personality lexicons. *Review of Personality and Social Psychology*, Volume 2.
- Grilo, I. & Thurik, R., 2004. *Determinants of Entrepreneurship in Europe*. s.l., ERIM Report Series Reference No. ERS-2004-106-ORG.

- Harhoff, D., Graevenitz, G. v. & Weber, R., 2010. The Effects of Entrepreneurship Education. *Journal of Economic Behavior and Organization*, 76(1), pp. 90-112.
- Hisrich, R. D. & Peters, M. P., 2002. *Entrepreneursip*. Sydney : McGraw-Hill/Irwin.
- Hurst, E. & Lusardi, A., 2004. Liquidity constraints, household wealth, and entrepreneurship. *Journal of Political Economics*, Volume 112, pp. 319-347.
- Kaufmann, D. & Kraay, A., 2003. *Governance and growth: which causes which?*, Washington DC: World Bank .
- Kaufmann, D., Kraay, A. & Mastruzzi, M., 2006. *Governance matters V: governance indicators for 1996 - 2005*, s.l.: s.n.
- Kennedy, P. A., 2008. *Guide to Econometrics*. 6th ed. ed. Cambridge, UK: Wiley- Blackwell.
- Kim, P. H., Aldrich, H. E. & Keister, L. A., 2006. The impact of financial, human, and cultural capital on entrepreneurial entry in the United States. *Small Business Economy* , Volume 27, pp. 5-22.
- Klapper, L., Amit, R. & Guillen, M. F., 2010. Entrepreneurship and firm formation across countries. In: *International Differences in Entrepreneurship* . Chicago: University of Chicago Press, pp. 129-158.
- Klapper, L., Laeven, L. & Rajan, R., 2006. Entry regulation as a barrier to entrepreneurship. *Journal of Financial Economics*, Volume 82, pp. 591-629.
- Klapper, L. & Love, I., 2011. The Impact of Business Environment Reforms on New Firm Registration. *Economics Letters*.
- Kouriloff, M., 2000. Exploring Perceptions of a Priori Barriers to Entrepreneurship: a Multi Disciplinary Approach. *Entrepreneurship: Theory & Practice*, pp. 59-79.
- Kuratko, D. F. & Hodgetts, R. M., 2001. *Entrepreneurship: A Contemporary Approach*. s.l.: Harcourt College Publishers.
- Lambsdorff, G. J., 2003. How corruption affects productivity. *Kyklos*, Volume 55, pp. 457-474.
- Le, A., 1999. Empirical studies of self-employment. *Journal of Economic Surveys*, 13(4), pp. 381-416.

- Lerner, J. & Antoinette, S., 2010. International Differences in Entrepreneurship. In: *Entrepreneurship and firm formation across countries*. s.l.: University of Chicago Press, pp. 129-158.
- Litsareva, E., 2017. Success Factors of Asia-Pacific Fast-Developing Regions' Technological Innovation Development and Economic Growth. *International Journal of Innovation Studies*, pp. 72-88.
- Lucas, R., 1978. On the size distribution of business firms. *Bell Journal of Economics*, 9(2), pp. 508-523.
- Mauro, P., 1995. Corruption and growth. *Quarterly Journal of Economics*, pp. 681-712.
- McClelland, D. C., 1961. *The achieving society*. New Jersey(Princeton): Van Nostrand.
- Meyer, K. E. & Sinani, E., 2009. When and where does foreign direct investment generate positive spillovers? A meta-analysis. *Journal of International Business Studies*, 40(7), pp. 1075-1094.
- Mueller, P., 2006. Entrepreneurship in the region: Breeding ground for nascent entrepreneurs. *Small Business Economy*, Volume 27, pp. 41-58.
- Nga, J. K. H. & Shamuganatha, G., 2010. The Influence of Personality Traits and Demographic Factors on Social Entrepreneurship Start Up Intentions. *Journal of Business Ethics*, 95(2), p. 259-282.
- Okorie, N. et al., 2014. Technopreneurship: An urgent need in the material world for sustainability in Nigeria. *European Scientific Journal*, 10(30).
- Olivari, J., 2016. Entrepreneurial traits and firm innovation. *Eurasian Business Review*, 6(3), pp. 339-360.
- Oosterbeek, H., Praag, M. & Ijsselstein, A., 2010. The impact of entrepreneurship education on entrepreneurship skills and motivation. *European Economic Review*, 54(3), pp. 442-454.
- Oxenfeldt, A., 1943. *New Firms and Free Enterprise*, s.l.: s.n.
- Perotti, E. C. & Volpin, P. F., 2004. *Lobbying on Entry*. s.l., EFA 2004 Maastricht Meetings Paper No. 2277.

- Peterman, N. & Kennedy, J., 2003. Enterprise education: influencing students' perceptions of entrepreneurship. *Entrepreneurship Theory and Practice*, 28(2), pp. 129-144.
- Pfeifer, F. & Reize, F., 2000. From unemployment to self-employment - public promotion and selectivity. *International Journal of Sociology*, Volume 30, pp. 71-99.
- Rahimi, G. & Damirch, Q. V., 2011. Entrepreneurship's Effectiveness Factors in Managers of Small and Medium Enterprises of Iran. *British Journal of Humanities and Social Sciences*, 1(2), pp. 91-98.
- Reynolds, P. D., Hay, M. & Camp, S. M., 1999. *Global Entrepreneurship Monitor 1999 Executive Report*, s.l.: Kauffman Center for Entrepreneurial Leadership at the Ewing Kaufman Foundation.
- Rivera-Batiz, F. L., 2002. Democracy, governance, and economic growth: theory and evidence. *Review Development Economics*, 6(2), pp. 225-247.
- Robbins, P. S. & Judge, T., 2008. *Organizational Behavior*. s.l.: Pearson Prentice Hall.
- Rose-Ackermann, S., 2004. *The challenge of poor governance and corruption*, s.l.: s.n.
- Rose-Ackerman, S., 2001. Trust, honesty, and corruption: reflection on the state-building process. *European Journal of Sociology*, Volume 42, pp. 27-71.
- Rusu, V. D. & Roman, A., 2017. Entrepreneurial Activity in the EU: An Empirical Evaluation of Its Determinants. *Sustainability*, 9(10).
- Salman, D. M., 2014. Mediating role of research and development on entrepreneurial activities and growth: Evidence from cross-country data. *WORLD JOURNAL OF ENTREPRENEURSHIP, MANAGEMENT AND SUSTAINABLE DEVELOPMENT*.
- Santarelli, E. & Vivarelli, M., 2006. *Entrepreneurship and the process of firms' entry, survival and growth*. s.l., IZA Discussion Paper No. 2475.
- Santarelli, E. & Vivarelli, M., 2007. Entrepreneurship and process of firm's entry, survival and growth. *Industrial and Corporate Change*, Volume 16, pp. 455-488.
- Sayed, O. & Slimane, S., 2014. An Appraisal of the Determinants of Entrepreneurship in Developing Countries: The Case of the Middle East, North Africa and Selected Gulf Cooperation Council Nations. *63 African Journal of Social Sciences*, Volume 4, pp. 63-

74.

Sayed, O. & Slimane, S. B., 2014. An Appraisal of the Determinants of Entrepreneurship in Developing Countries: The case of Middle East, North Africa and Selected Gulf Cooperation Council Nations. *African Journal of Social Sciences* , Volume 4, pp. 63-74.

Shane, S. A., 2008. *he Illusion of Entrepreneurship: The Costly Myths that Entrepreneurs, Investors and Policy Makers Live by*. New Haven, CT, USA: Yale University.

Shane, S. A., 2008. *The Illusion of Entrepreneurship: The Costly Myths that Entrepreneurs, Investors and Policy Makers Live by*. New Haven: Yale University.

Shapiro, A., Friedman, R. & Schweke, W., 1987. The role of entrepreneurship in economic development at the less-than-national level. In Expanding the Opportunity to Produce: Revitalising the American Economy through New Enterprise Development. *The Corporation for Enterprise Development: Washington, DC, USA*, pp. 25-35.

Simeon Djankov, T. G., McLiesh, C., Ramalho, R. & Shleifer, A., 2011. The Effect of Corporate Taxes on Investment and Entrepreneurship. *The National Bureau of Economic Research*.

Simón-Moya, V., Rafael, F.-G. & Lorenzo, R.-T., 2014. Institutional and economic drivers of entrepreneurship: An international perspective. *Journal of Business Research*, 67(5), p. 715–721.

Society for the Study of Reproduction, 2017. *ssr*. [Online] Available at: <http://www.ssr.org/print/DevelopingCountries> [Accessed 28 July 2018].

Souitaris, V., Zerbinati, S. & Al-Laham, A., 2007. Do entrepreneurship programmes raise entrepreneurial intention of science and engineering students? The effect of learning, inspiration and resources. *Journal of Business Venturing*, 22(4), pp. 566-591. Statista, 2018. *Statista.com*. [Online] Available at: <https://www.statista.com/statistics/527916/emerging-and-developing-asia-gross-domestic-product-forecast/> [Accessed 12 Sep 2018].

Stel, A. v., Storey, D. J. & Thurik, A. R., 2007. The effect of business regulations on nascent and young business entrepreneurship. *Small Business Economics*, 28(2), pp. 171- 186.

The World Bank, 2013. *Entrepreneurship*. s.l.:s.n. *theGlobalEconomy.com*, 2015. *theGlobalEconomy.com*. [Online] Available at: <https://www.theglobaleconomy.com/guide/article/66/> [Accessed 28 July 2018].

- Thurik, R. & Wennekers, S., 2004. Entrepreneurship, small business and economic growth. *Journal of Small Business and Enterprise Development*, 11(1), pp. 140-149.
- Tonoyan, V., Strohmeier, R., Habib, M. & Perlitz, M., 2010. Corruption and Entrepreneurship: How Formal and Informal Institutions Shape Small Firm Behavior in Transition and Mature Market Economies. *Entrepreneurship Theory and Practice* .
- Vidal-Sune, A. & Lopez-Panisello, M. B., 2013. Institutional and economic determinants of the perception of opportunities and entrepreneurial intention. *Investigaciones Regionales*, Volume 26, pp. 75-96.
- Vidal-Suñé, A. & López-Panisello, M.-B., 2013. Institutional and economic determinants of the perception of opportunities and entrepreneurial intention. *Investigaciones Regionales*, Volume 13, pp. 75-96.
- Vijverberg, W., Sluis, J. v. d. & Praag, M. v., 2008. EDUCATION AND ENTREPRENEURSHIP SELECTION AND PERFORMANCE: A REVIEW OF THE EMPIRICAL LITERATURE. *Journal of Economic Surveys*, 22(5), pp. 795-841.
- Vivarelli, M., 2013. Is entrepreneurship necessarily good? Microeconomic evidence from developed and developing countries. *Industrial and Corporate Change*, 22(6), pp. 1453-1495.
- Vivarelli, M., 2013. Is entrepreneurship necessarily good? Microeconomic evidence from developed and developing countries. *Industrial and Corporate Change*, 21(6), pp. 1453-1495.
- Volery, T., Mazzarol, T., Doss, N. & Thein, H. H., 1997. Triggers and Barriers Affecting Entrepreneurial Intentionality: The Case of Western Australian Nascent Entrepreneurs. *Journal of Enterprising Culture*, 5(2), pp. 273-291.
- Volkman, C. et al., 2009. *Educating the Next Wave of Entrepreneurs - Unlocking entrepreneurial capabilities to meet the global challenges of the 21st Century*. Geneva, World Economic Forum .
- Wennekers, S., Uhlaner, L. M. & Thurik, R., 2002. Entrepreneurship and its conditions: A macro perspective. *International Journal of Entrepreneurship Education* , Volume 1, pp. 25-64.
- Wennekers, S., Wennekers, A. v., Thurik, R. & Reynolds, P., 2005. Entrepreneurship and the Level of Economic Development. *Small Business Economics*, 24(3), pp. 293- 309.

Zhao, H. & Seibert, S. E., 2006. The Big Five personality dimensions and entrepreneurial status: A meta-analytical review. *Journal of Applied Psychology*, Volume 91, pp. 259-271.