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 influential 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 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 (Volkmann, 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 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 openess 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 crucial 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 growth 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 on 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
The relationship between inflation and entrepreneurship is unclear. Some scholars argue that inflation rate has a positive relationship with entrepreneurship because when the prices of goods and services remain at high levels due to inflation rate, it encourages individuals to open new enterprises and enter the market (Sayed & Slimane, 2014, Vidal-Suñé & López-Panisello, 2013). On the other hand, inflation increases the risk of doing business significantly. As a result, the increase in the cost of doing business will discourage individuals from entering the market. Moreover, high inflation rates will cause an increase in borrowing costs (borrowing interest rates), which, in turn, reduce the access to finance of enterprises. The harder access to finance one firm deals with, the more likely 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 the financial market, especially the capital market, is not as good as one in developed countries, small and medium enterprises (SMEs) face a lot of difficulties to raise enough funds for their business. Therefore, the main source of capital that entrepreneurs can lean on is bank credit. Bank credit is used as a proxy for access to finance in many researches (Sayed & Slimane, 2014) (Aghion, et al., 2007) (Arin, et al., 2015). On the other hand, a 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 the negative association is that at the early stage of enterprise, entrepreneurs do 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 unemployed workers over the total labor force. As a matter of fact, the association between unemployment and entrepreneurship has been studied for a very long time to address the question of what the relationship between entrepreneurship and unemployment is (Oxenfeldt, 1943) (Audretsch, et al., 2001) (Pfeifer & Reize, 2000) (Blanchflower & Meyer, 1994). Regardless of the 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 the regional level, to some extent, new firms are 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>
<thead>
<tr>
<th>Variable</th>
<th>Description</th>
<th>Source</th>
<th>Expected relationship</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dependent variable</strong></td>
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<tr>
<td>Entrepreneurship</td>
<td>New Density entry firm</td>
<td>Doing Business Dataset</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Independent variables</strong></td>
<td></td>
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<tr>
<td>Economic development</td>
<td>Log of Real GDP per Capita</td>
<td>WDI</td>
<td>Positive</td>
</tr>
<tr>
<td>Population Growth</td>
<td>Annual percentage growth rate of population</td>
<td>WDI</td>
<td>Positive</td>
</tr>
<tr>
<td>Unemployment</td>
<td>Unemployment rate</td>
<td>WDI</td>
<td>Positive</td>
</tr>
<tr>
<td>Education level</td>
<td>Secondary school enrolment rate</td>
<td>WDI</td>
<td>Positive</td>
</tr>
<tr>
<td>Macroeconomic volatility</td>
<td>Annual inflation rate</td>
<td>WDI</td>
<td>Positive/Negative</td>
</tr>
<tr>
<td>Financial development</td>
<td>Log of domestic credit to private sector % GDP</td>
<td>WDI</td>
<td>Positive</td>
</tr>
<tr>
<td>Technological Development</td>
<td>Access to internet per capita</td>
<td>WDI</td>
<td>Positive</td>
</tr>
<tr>
<td>Tax level</td>
<td>Total tax rate (% of commercial profit)</td>
<td>Doing Business Dataset</td>
<td>Negative</td>
</tr>
<tr>
<td>Corruption</td>
<td>Control of Corruption index</td>
<td>Worldwide Governance Indicators (World Bank)</td>
<td>Negative</td>
</tr>
<tr>
<td>Political stability</td>
<td>Political Stability and Absence of Violence/Terrorism</td>
<td>Worldwide Governance Indicators (World Bank)</td>
<td>Positive</td>
</tr>
<tr>
<td>Cost of doing business</td>
<td>Cost (% of income per capita)</td>
<td>Doing Business Dataset</td>
<td>Negative</td>
</tr>
<tr>
<td></td>
<td>Paid-in Min. Capital (% of income per capita)</td>
<td>Doing Business Dataset</td>
<td>Negative</td>
</tr>
</tbody>
</table>

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
\[ NDEF_{i} = \alpha + \alpha_{1} \log GDP_{i} + \alpha_{2} GROW_{i} + \alpha_{3} UNEMP_{i} + \alpha_{4} EDU_{i} + \alpha_{5} \log DOMES_{i} + \alpha_{6} \text{INTERNET}_{i} + \alpha_{7} TAX_{i} + \varepsilon_{i}, \]

Model 2: Institutional and Political determinants

\[ NDEF_{i} = \alpha + \alpha_{8} COST_{i} + \alpha_{9} PAIDIN_{i} + \alpha_{10} TAX_{i} + \alpha_{11} POLISTAB_{i} + \alpha_{12} CORR_{i} + \varepsilon_{i}, \]

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

<table>
<thead>
<tr>
<th>I</th>
<th>II</th>
<th>III</th>
<th>IV</th>
<th>V</th>
<th>VI</th>
<th>VII</th>
<th>VIII</th>
</tr>
</thead>
<tbody>
<tr>
<td>Log GDP per capita</td>
<td>0.49101</td>
<td>0.054675</td>
<td>0.04625</td>
<td>0.01308</td>
<td>0.36357</td>
<td>0.00805</td>
<td>-0.00805</td>
</tr>
<tr>
<td>(9.73)**</td>
<td>(-0.48)</td>
<td>4 (-1.84)*</td>
<td>5 (3.08)**</td>
<td>7 (4.74)*</td>
<td>1 (-0.49)</td>
<td>-3.87492 (-5.11)**</td>
<td></td>
</tr>
<tr>
<td>Population growth</td>
<td>-0.054675</td>
<td>0.39354</td>
<td>0.35131</td>
<td>0.06109</td>
<td>-0.01115</td>
<td>-3.87492 (-5.11)**</td>
<td></td>
</tr>
<tr>
<td>(2.10)**</td>
<td>1 (4.82)**</td>
<td>8 (2.10)**</td>
<td>7 (2.03)**</td>
<td>-2 (2.42)**</td>
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4.2 Model 2: Institutional and Political determinants

<table>
<thead>
<tr>
<th>I</th>
<th>II</th>
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<th>V</th>
<th>VI</th>
<th>VII</th>
<th>VIII</th>
</tr>
</thead>
<tbody>
<tr>
<td>Log GDP per capita</td>
<td>0.36357</td>
<td>0.37112</td>
<td>0.37112</td>
<td>0.37112</td>
<td>0.37112</td>
<td>0.37112</td>
<td>0.37112</td>
</tr>
<tr>
<td>(4.74)*</td>
<td>(3.27)**</td>
<td>(3.27)**</td>
<td>(3.27)**</td>
<td>(3.27)**</td>
<td>(3.27)**</td>
<td>(3.27)**</td>
<td>(3.27)**</td>
</tr>
<tr>
<td>Population growth</td>
<td>0.00805</td>
<td>-0.00805</td>
<td>-0.00805</td>
<td>-0.00805</td>
<td>-0.00805</td>
<td>-0.00805</td>
<td>-0.00805</td>
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<tr>
<td>(-0.49)</td>
<td>(-3.87492 (-5.11)**</td>
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</tbody>
</table>
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 entrepreneurship 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:

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

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

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

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


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74.


