

Examining the Entrepreneurial Conditions Improvement of Korea

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Abstract— Many countries have been endeavoring to promote more start-ups in order to avoid the limitations of national economy growth. To foster entrepreneurship, various promotions and barriers should be carefully considered. These entrepreneurial conditions focused on each country are critical in the eyes of entrepreneurs, venture capitals, investment bankers and so on. This research focuses on the entrepreneurial conditions improvement of Korea which has been making much effort on new venture start-up creations recently. In order to fulfill this objective, GEM data collected in 2002 and 2012 were used. Theoretical and practical implications are presented.

Keywords—entrepreneurship; start-ups; venture; economic growth; national economy

I. INTRODUCTION

Entrepreneurial activity is known to be an important factor influencing economic development and competitiveness of a country (Klyver, 2008). By creating employment, entrepreneurial entrepreneurs contribute to the health of the economy, drive innovation, produce better goods and services, and enhance the productivity and competitiveness of their industries. This series of activities of entrepreneurial entrepreneurs creates added value of society and contributes to strengthening national competitiveness by developing local and national economies to which they belong.

In contrast to the economic importance of entrepreneurial activities, entrepreneurial activities differ greatly in their characteristics and liveliness (Bosma et al., 2009; Kemelgor, 2002). Especially, the difference of entrepreneurial activity is found according to the development of the country. In low-growth countries, livelihood-type entrepreneurship activities are relatively active, which can be attributed to the fact that few people can participate in economic activities other than entrepreneurship. The level of these livelihood entrepreneurial activities is generally reduced with economic development, and also decreases as productivity increases and employment opportunities expand.

The decrease in living-based entrepreneurial activity leads to an increase in entrepreneurial activity. At this stage, economic development plays a role in

increasing entrepreneurial activity with more opportunities given by better environment and higher productivity. This relationship will show a 'U' shaped curve. In the early stage of entrepreneurial activity, it was high, but as the national economy developed, the number of entrepreneurial entrepreneurial activities decreased and that of entrepreneurial entrepreneurship increased.

Compared with other countries in the world, Korea's entrepreneurial activities are located at the bottom part of the 'U' shaped curve, so that it can be said that there is a transition period in which entrepreneurial activities based on opportunities are increasing with decrease in entrepreneurial entrepreneurship activities. Therefore, it is required to fundamentally change the policy direction along with the improvement of the conditions of entrepreneurial activities. This study aims to provide a policy implication by comparing the domestic start-up conditions and policies, which require radical changes, to the domestic start-up conditions and policy levels of the past.

For objective and consistent comparative analysis, we use Global Entrepreneurship Monitor (GEM) data, which is a global collaborative research in the field of founding. GEM is the world's largest single research on entrepreneurial activities and is a research project that widely disseminates information on the characteristics of the country in which it operates and collects useful data internationally through various surveys of its founding process and growth. Understanding and cooperating with entrepreneurial activities from information gathered through these surveys provide academic, policy, and practical implications.

The composition of this study is as follows. Section 2 explains the relationship between entrepreneurial activities and national competitiveness. Section 3 explains the methodology and data collection of GEM research. Section 4 presents the main research results, and finally Section 5 presents the conclusions and implications of this study.

II. LITERATURE REVIEW

A. Entrepreneurial Activities and National Competitiveness

In traditional economics, it is assumed that when technology is developed by science and technology, it

is automatically applied to production (Lee, 2005). That is, the role of entrepreneurs who commercialize innovative technologies has been ignored. The development of technology is not used directly in the production process. New and innovative technologies are not introduced automatically without the cost of tuning. Technology adoption comes at a high adjustment cost when viewed from an enterprise unit. And there are many risks involved in introducing unproven production methods or technologies. Entrepreneurial determination (entrepreneurship) is needed to boldly embrace these risks and opportunities. Therefore, the more entrepreneurial you are, the more likely you are to adopt innovative technologies and the more opportunities you have for start-ups.

Entrepreneurship plays a role of a nexus that links technology and production processes through entrepreneurial activities. This kind of entrepreneurial activity is a catalyst for the technological ripple effect. In this sense, we can deduce that there is a close relationship between entrepreneurial activity, economic growth, and national competitiveness.

Research on economic development and entrepreneurship, an important source of national competitiveness, was conducted by Schumpeter early on. He finds the driving force of economic development in entrepreneurship, which performs 'creative destruction'. It has been since the 1980s that the importance of entrepreneurship in economic growth has been reconsidered since the 1980s (Jeon & Kim, 2006). In other words, with the rapid development of IT technology and the rapid progress of globalization, the role of SMEs, especially new SMEs, has become more important and interest in the relationship between entrepreneurship and economic growth has increased.

Reflecting this situation, the Global Entrepreneurship Monitor (GEM) published a hypothesis that there was a high correlation between the entrepreneurship of the SMEs and the economic growth in 1999 (Park et al., 2001). According to the GEM research model, a country's economic growth is achieved by one-third of existing firms, one third by entrepreneurship (entrepreneurship), one-third by interactions and other factors. Since then, GEM has supported this hypothesis by conducting empirical studies on developed and developing countries each year. In the 2000 G7 countries, the coefficient of correlation between economic growth and entrepreneurial activity was 0.76, indicating a high correlation between entrepreneurship and economic growth. The recent study of GEM is characterized by the fact that there is a systematic relationship between the level of economic development of the country and the level of entrepreneurial activity.

Entrepreneurship is the most important factor in creating wealth, that is, economic growth. Entrepreneurial activity, which is a product of entrepreneurship, is an important factor that affects the

competitiveness of a country. The GEM model shows Entrepreneurial Framework Conditions (EFCs), which can have a significant impact on the willingness of individuals to start a business, which in turn can affect the nature and performance of the business. These structural conditions are factors that determine the national competitiveness related to the economic environment of a country.

B. National Competitiveness and Entrepreneurial Conditions

The concept of competitiveness has been used as a concept to evaluate a company's management ability and performance from a microscopic point of view. As companies compete internationally, competitiveness has been recognized as the international competitiveness of companies. However, there is a growing number of cases in which the concept of competitiveness is expanded and applied as a useful framework for diagnosing and evaluating the problems faced by individual countries, industries, and regions in recent years. In particular, since the International Business Development Institute (IMD) of Switzerland in 1987 published the rank of national competitiveness through the "The World Competitiveness Yearbook", the notion of national competitiveness has been used in various fields such as government, business and academia have.

The most general definition of the concept of national competitiveness is 'the ability of the state to achieve overall productivity improvement that can guarantee the continuous improvement of people's standard of living in a complex global economic environment' (Wang Yun-jong et al., 1999). In other words, national competitiveness refers to the effect of national economic factors that exist outside the microscopic enterprise environment on firm competitiveness. National competitiveness also refers to the overall ability of a country to win competitiveness by providing efficient social structures, institutions and policies when companies compete with companies in other countries on the world market.

National competitiveness is important because companies have to cope and cope with various sectors ranging from economic, political, cultural and educational areas. In GEM, economic, social, cultural and political environments are divided into eight categories: investment attraction, openness of international trade, government role and intervention level, finance, technology, infrastructure, management capacity, labor market structure, legal and social system. The historical context and the overall framework of the country also include funding, government policy, government support programs, education and training, transfer of research and development, business / professional infrastructure, the availability of public infrastructure, cultural and social norms, and so on. Conceptual explanations and practical indicators of the overall national regulatory environment are based on the annual 'Global Competitiveness Report.

III. RESEARCH METHOD

A. GEM(Global Entrepreneurship Monitor) Research

GEM was founded in 1999 by professors from Babson College and London Business School in the United States and started in 10 countries. In 2005, the Global Entrepreneurship Research Association (GERA), which manages the research project GEM, was established. In 2008, 43 countries, including the United States, the United Kingdom and Korea, participated. In 2009, more than 50 countries, including Korea, participated.

The GEM project is a comparative study of the impact of entrepreneurship on economic growth, with four main tasks: First, what is the impact of entrepreneurial activity on economic growth? Second, how do entrepreneurial activities affect economic stability, such as job creation and economic growth? Third, how does the domestic environment affect entrepreneurship activities? Fourth, what is needed to activate entrepreneurship activities? The primary data required for this study were collected through surveys conducted by general adults and by interviews with experts. In addition, various secondary data were obtained from IMD, IMF, OECD and World Bank.

In Korea, I participated in the GEM study for three years from 2000 to 2002, and since then I have participated in the GEM research since 2008. In the case of Korea in 2012, it was divided into the Adult Population Survey and the National Expert Survey. For the general adult survey, the average age, occupation, region, and sex 2000 experts were randomly selected and telephone interviews were conducted. In the case of national expert survey, experts from domestic SMEs and venture start-ups were recommended by academia, government, financial institutions, venture capital and related organizations. 60 persons were selected and the results of one-to-one interview and survey were analyzed and summarized.

The purpose of this study is to identify changes in the domestic situation and changes in the current status of Korean startups in the past and present. Therefore, we use GEM data from 2002 for the past time and use the latest GEM data for 2012 as the present time.

B. Data Collection

As noted above, the GEM research is largely divided into the General Adult Survey (APS) and the National Expert Survey (NES), and the National Expert Survey is intended to assess national conditions that affect entrepreneurial activity in the country. The National Expert Survey proposes nine aspects of entrepreneurial activity: financial environment, government policy, government programs, education and training, transfer of research and development, commercial and service infrastructure, market openness, and physical infrastructure.

National experts consist of people who have experience and insight into entrepreneurial activities in individual countries. Thus, the expert group may include experts working in the fields of politicians, scholars, entrepreneurs, government officials and entrepreneurs. For comparison of the results by country, the experts to be surveyed are selected using a standardized method. The specialist composition should be arranged appropriately as a specialist for each business field. It includes financial support, government policy, government programs, education and training, R & D transfer, commercial infrastructure and business, Market openness, access to physical infrastructure, and social and country norms. It consists of at least 4 people in each field, totaling at least 36 people.

IV. ANALYSIS RESULTS

In order to analyze the structural conditions related to the start-up of a country, the GEM study consists of questions on 9 topics including financial environment, government policy, government programs, education and training. In this study, we will analyze in detail the four themes related to domestic investment conditions for the activation of business start-ups. The questionnaires of the expert survey are '1. Not at all. 2. Slightly not. 3. It is normal. 4. Slightly. 5. It is very yes.' The analysis based on the results is as follows.

A. Government Programs

The government program sector consists of items that measure the existence and quality of programs that directly support new growth companies at various levels of government (central government, local government, etc.).

TABLE 1. SURVEY MEASURES IN THE DOMAIN OF GOVERNMENT PROGRAMS

Topic	Survey Measures
Government programs	<p>C1. A wide range of government support for start-ups and growth companies can be gained through contact with a single agency.</p> <p>C2 Science Park (Techno Park) and Incubator Center provide effective support for start-ups and growth companies.</p> <p>C3 There are enough government programs for startups and growth companies.</p> <p>C4. People working in government agencies have competent and effective skills in supporting start-ups and growth companies.</p> <p>C5. Most of the people who need the support of government programs for start-ups and growth companies can find the necessary support programs.</p>

C6. Government programs aimed at supporting start-ups and growth companies are effective.

Korea's government start-up support program has been recognized as a slight improvement over the past decade. In 2002, it was 2.2 points (out of 5 points), but in 2012 it was improved to 3 points (see Figure 1). Nevertheless, it is still on average. Therefore, it seems that there is ample room for improvement to the level of entrepreneurship support program at the level of advanced countries.

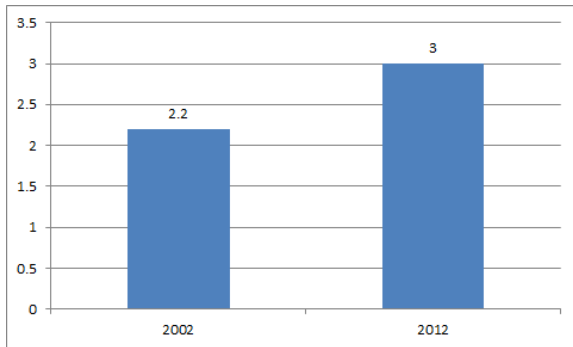


Fig. 1 Survey results in the domain of government programs

B. Public Infrastructure

In the field of public infrastructure, sufficient items such as roads, electricity, and water supply, the cost of using communication facilities, the rapid use of communication facilities, the burden of fees for public services, and the rapid access to public services were examined. Public infrastructure is the basic physical condition for investment, and Korea is known to have excellent information and communication infrastructure.

TABLE 2. SURVEY MEASURES IN THE DOMAIN OF PUBLIC INFRASTRUCTURE

Topic	Survey Measures
Public infrastructure	<p>H1. Support for physical infrastructure (roads, infrastructure, communications, waste disposal) is well served by start-ups and growth companies.</p> <p>H2. New and growing companies do not have to spend a lot of money on communication media (telephone, internet, etc.).</p> <p>H3. Startup companies and growth companies can use communication media (telephone, internet, etc.) in about one week.</p> <p>H4. Start-ups and growth companies have the ability to cover the costs associated with the use of basic infrastructure (gas, water, electricity, sewage).</p>

H5. Start-up companies and growth companies can use basic infrastructure (gas, water, electricity, sewage) in about one month.

The public infrastructure was rated at a high level above the average at the time of the 2002 survey, and the survey results for 2012 are also considered to be at a high level (see Figure 2). Since 2002, there has been continuous improvement. As of 2012, public infrastructure is not an obstacle to investment.

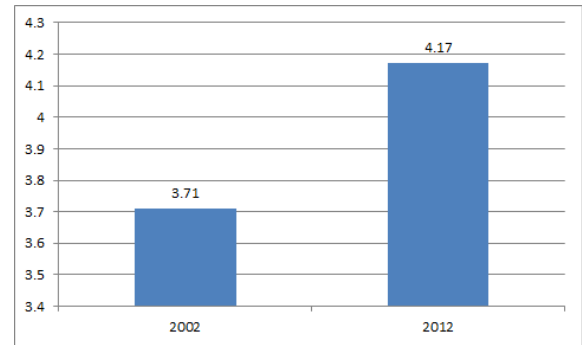


Fig. 2 Survey results in the domain of public infrastructure

C. Commercial Infrastructure

In the field of commercial infrastructure, the items such as the sufficiency of consulting, suppliers, contractors, and legal services, the burden of fees, ease of access, availability of quality services, and ease of banking services were examined. In Korea, the physical infrastructure such as information and communication is considerably superior, while the development of commercial services for business support is known to be insufficient.

TABLE 3. SURVEY MEASURES IN THE DOMAIN OF COMMERCIAL INFRASTRUCTURE

Topic	Survey Measures
Commercial infrastructure	<p>F1. There are enough subcontractors, suppliers and consultants to support startups and growth companies.</p> <p>F2. Start-ups and growing companies have the ability to finance the cost of utilizing subcontractors, suppliers and consultants.</p> <p>F3. It is easy for start-ups and growth companies to secure quality subcontractors, suppliers and consultants.</p> <p>F4. It is easy for startups and growth companies to acquire high quality professional legal and accounting services.</p> <p>F5. It is easy for start-ups and growth companies to secure high-quality financial services (checks, foreign</p>

exchange transactions, letters of credit, etc.)

As a result of the survey, the field of commercial infrastructure was lowered from 2.79 in 2002 to 2.43 in 2012, and it was found that the need for improvement is strongly demanded (see Figure 3).

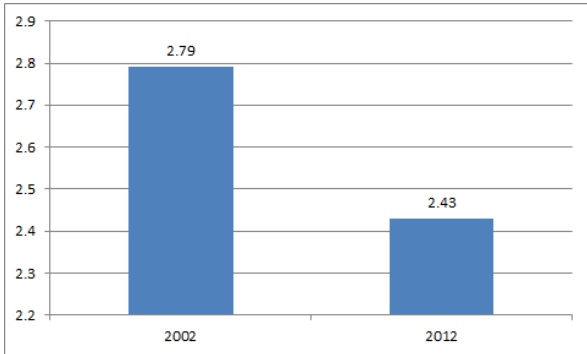


Fig. 3 Survey results in the domain of commercial infrastructure

D. Cultural and Social Norms

Cultural and social norms areas are focused on independence, most people prefer to maintain similar standard of living, young people prefer to be dependent on government support, young people prefer more jobs and careers, And preference for companies.

TABLE 4. SURVEY MEASURES IN THE DOMAIN OF CULTURAL AND SOCIAL NORMS

Topic	Survey Measures
Cultural and social norms	I1. Korean culture is very friendly to personal accomplishment achieved through effort. I2. Korean culture emphasizes self-esteem, autonomy, and individual initiative. I3. The culture of our country inspires the risks of founders. I4. Korean culture inspires creativity and innovation. I5. Our culture emphasizes that individuals are responsible for managing their own lives rather than groups.

As a result of the survey, it was found that the average level in 2002 was not much changed in 2012 (see Figure 4). In other words, the importance of independence and the degree to which young people prefer more diverse jobs and careers is still at a moderate level. In other words, cultural and social norms for investment are not improved much.

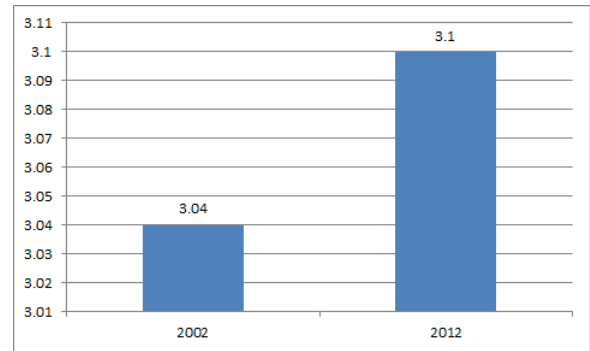


Fig. 4 Survey results in the domain of cultural and social norms

V. CONCLUSIONS AND IMPLICATIONS

The purpose of this study is to investigate the improvement of the domestic entrepreneurial environment for enhancing national competitiveness. In order to accomplish this research purpose, we use GEM data, which is a vast global database of startups. Since Korea participated in the GEM research project from 2000 to 2002 and 2012, data of 2002 and 2012 were used to compare the improvement of the domestic entrepreneurial environment. Among the GEM data, NES data, which is a survey result of experts who can professionally evaluate the entrepreneurial environment, was used.

In the analysis of changes in domestic investment conditions for the activation of business start-ups, all four survey results were used. These include market openness, public infrastructure, commercial infrastructure, cultural and social norms.

As a result, the overall improvement in the domestic investment environment was confirmed in 2012 compared to 2002. In other words, a small or major improvement in all four areas was confirmed through expert surveys. In terms of changes in domestic investment conditions for the activation of business start-ups, factors that impede and promote investment are clearly distinguished.

Among the factors that promote investment are the government-supported government programs and the excellent public infrastructure. On the other hand, factors that impede investment include continuous infrastructure improvement, cultural infrastructure, and social norms, which are still high. This was a result of almost no improvement compared to the past. There is little or no improvement in terms of quantitative sufficiency of consulting, suppliers, service providers, legal services, etc., as well as the burden of access fees and accessibility. In order to revitalize domestic business, active improvement in these fields is required.

Despite the main research results that may affect the start-up policy, this study has the following limitations. First of all, due to limitations of data, the time of data collected is limited to two years of 2002 and 2012. If Korea participated in the GEM research continuously, it would be possible to analyze the data

sequentially and obtain more detailed data every year. Secondly, if we compare the data of the countries participating in the GEM research not only in Korea but also in other countries of the world, we could have grasped the reality of Korea as compared with other countries not only in terms of improvement in our country. These limitations should be addressed in future studies and the policy implications of the study should be raised.

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