Report on Entrepreneurship Initiatives in APO Economies

ASIAN PRODUCTIVITY ORGANIZATION

First published in Japan
by the Asian Productivity Organization
Leaf Square Hongo Building, 2F
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Website: www.apo-tokyo.org

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INTRODUCTION

The Asian Productivity Organization (APO) Coordinating Meeting, held in Phnom Penh, Cambodia from 3 to 5 August 2013 (hereinafter called the "Academic Meeting on Entrepreneurship Development") sought to distinguish "entrepreneurship" from the start-up activities of entrepreneurs. Based on discussions at the Academic Meeting on Entrepreneurship Development, this report defines entrepreneurship as the mindset that stimulates a person towards the "doing of new things, or the doing of things that are already being done [but] in a new way (innovation)" [1]. Here, "things" covers any societal activity, including business. In the entrepreneurial process, existing things may have to be destroyed, as Schumpeter has described [2]. An entrepreneur, then, is defined as a person who has a strong entrepreneurial mindset and "gets things done" amid a set of risks and rewards that are defined by the entrepreneur [1]. As Becker et al. describe: "the will required to push innovation through, against all resistance, characterizes an entrepreneur" [3].

The Academic Meeting on Entrepreneurship Development agreed to base its research on the conceptual model of the Global Entrepreneurship Monitor (GEM) with respect to the relationship between the level or degree of entrepreneurship, and the level of economic development of a country [4]. GEM affiliates and many other researchers argue that entrepreneurship plays a critical role in the development of an economy, as well as society as a whole, for any given country. The Academic Meeting on Entrepreneurship Development confirmed that the enhancement of entrepreneurship is essential in the development of any society. Here, "development" is not necessarily limited to the economy.

Based on our discussions at the Academic Meeting on Entrepreneurship Development, and previous relevant research from GEM and elsewhere, we make the following assumptions throughout this report:

A1. There is a clear distinction between the start-up activities of entrepreneurs and entrepreneurship, the latter being the mindset that formulates the attitude, activity, and aspirations of entrepreneurs.

A2. There is a two-way cause–effect relationship between entrepreneurship and the level of economic development in a community.

A3. The ultimate objective of the Academic Meeting on Entrepreneurship Development was to provide a productive guideline for researchers and policy makers who have serious interests in the relationship between the degree of entrepreneurship and level of economic development of a country.

LEVEL OF ECONOMIC DEVELOPMENT

Classification of Economic Development

As described by Wennekers et al. [5], GEM has adopted the five-stage model (three major stages plus two transitional stages) model of economic development suggested by Porter et al. in 2002 [6]. The Academic Meeting on Entrepreneurship Development also agreed to adopt this model to utilize GEM data and refer to GEM research works in the future. Table 1 shows the three major stages and transitional stages between the major stages. Note that the names of the Academic Meeting on Entrepreneurship Development member countries are added to each category based on the classification made by Sala-i-Martin et al. [7] using the data reported in The Global Competitiveness Report 2013–14:

Table 1. The five-stage model of economic development

No	Stage	Stage Name	APO Member Countries
1	1st stage	Factor-driven economies	Cambodia, India, Pakistan
2	1st–2nd transitional stage	From factor-driven to efficiency-driven	Philippines
3	2nd stage	Efficiency-driven economies	Indonesia, Thailand
4	2nd–3rd transitional stage	From efficiency-driven to innovation-driven	None
5	3rd stage	Innovation-driven economies	Japan, Republic of China (ROC)

Source: Porter et al. [6]

For the first stage, factor-driven economies (FD), the foundations of a country's competitiveness are endowed natural resources and unskilled labor with low productivity. Since basic products and/or commodities are the main source of merchandise, price is the only tool for influencing competitiveness. Accordingly, to sustain competitiveness, wages must be kept as low as possible. Sala-i-Martin et al. [7] suggest adopting four basic requirements needed to maintain competitiveness:

1. Well-functioning public and private institutions;
2. Well-developed infrastructure;
3. A stable macroeconomic environment; and
4. A healthy workforce that has received at least a basic education.

If the productivity of a specific country starts improving, the country's wage level would increase without losing its price competitiveness. This is the 1st–2nd transitional stage from factor-driven to efficiency-driven (FD-ED), where the country is approaching an efficiency-driven (ED) economy. At the early stage of this economy, wages are rising but companies cannot increase prices, as the market is unable to perceive any significant improvement in the quality of products or services. Therefore, the country should develop: higher education and training systems, efficient markets for goods and services, well-functioning labor markets, efficient financial markets, an ability to fully utilize existing technologies, larger domestic markets, and easier access to foreign markets [7].

As businesses accumulate knowledge and technological and management know-how, they will start producing unique products and services with premium prices to cover the cost of higher wages. This is the 2nd–3rd transitional stage, i.e., from efficiency-driven to innovation-driven (ED-ID) economies.

At the third stage of economic development, innovation-driven (ID) economies, businesses seeking to sustain a competitive advantage must continue to offer products and/or services that provide unique value to customers through sophisticated inimitable value chains, as well as innovate products and/or services, and their management skills [8].

Measuring the Stages of Economic Development

Sala-i-Martin et al. [7] describe in detail the criteria to define each of the three stages of economic development. The major criterion is GDP per capita (USD) with systematic adjustments in key sub-indices specific to each stage, as follows:

1. Basic requirements sub-index (key FD economies)
    a. Institutions
    b. Infrastructure
    c. Macroeconomic environment
    d. Health and primary education

2. Efficiency enhancers sub-index (key ED economies)
    a. Higher education and training
    b. Goods market efficiency
    c. Labor market efficiency
    d. Financial market development
    e. Technological readiness
    f. Market size

3. Innovation and sophistication factors sub-index (key for ID economies)
    a. Business sophistication
    b. Innovation

DEGREE OF ENTREPRENEURIAL ACTIVITIES AND ENTREPRENEURSHIP

Before we test existing hypotheses regarding the relationship between the level of a nation's economic activities and (a) entrepreneurial activities and (b) entrepreneurship, let us briefly review how entrepreneurial activities and entrepreneurship are measured.

Measuring Entrepreneurial Activities

Discussions at the Academic Meeting on Entrepreneurship Development endorsed our adoption of the index developed by GEM to measure entrepreneurial activities. Every year, each GEM member country (of which there were 100 as of 2014) conducts a survey of entrepreneurs and entrepreneurial activities involving 2,000 adults in their respective countries. Among the various measurements developed by GEM, the degree of entrepreneurial activities or Total Entrepreneurial Activities (TEA) rate is of primary importance.

TEA is defined by GEM as "the percentage of individuals in an economy aged 18–64 years who are in the process of starting or are already running new businesses for up to 3.5 years" [9]. The TEA rate therefore includes both nascent and new entrepreneurs. GEM conducts a survey of a random representative sample of at least 2,000 adults (18–64 years old) called the "Adult Population Survey (ASP)."

Throughout the Academic Meeting on Entrepreneurship Development, the GEM 2012 Global Report was referenced for research data [9]. Accordingly, the data for this current report used the GEM data so far as they were available.

Measurement of Entrepreneurship

Although there is much benefit from the use of TEA and other indices developed by GEM, every member agreed that there should be a clear distinction made between the quantitative level of activities of entrepreneurs (e.g., number of start-ups) and the qualitative aspect of entrepreneurs that is defined in our report as "entrepreneurship," although measuring the latter is expected to be challenging.

While the GEM TEA has become a widely used measure of entrepreneurship, Acs and Autio [10] point out that it has five major shortcomings:

1. Despite the fact that entrepreneurship is multidimensional in nature, TEA only measures entrepreneurial activity levels;
2. TEA fails "to incorporate businesses differing impacts. A traditional agricultural business established in Uganda or Peru is given equal importance as an internet-related venture in Silicon Valley;"
3. "The most entrepreneurial nations are defined as those having the largest number of new businesses. These are generally developing countries in Africa or South America;"
4. TEA does "not take into account differences in environmental factors. In fact, the efficiency and sophistication of the institutional setting could have a major influence on the quality of entrepreneurship;" and
5. "Since self-employment and the business ownership ratio decline as a country develops," TEA may "show that higher levels of development are associated with decreasing levels of entrepreneurship. This phenomenon is inconsistent with mainstream economic theories, which posit a direct connection between entrepreneurship and development."

Based on the above perception concerning the limitations of GEM's TEA index, Acs and Szerb developed a new index, The Global Entrepreneurship and Development Index (GEDI), to capture multidimensional and qualitative aspects of entrepreneurship [11].

They define entrepreneurship as "a dynamic interaction of entrepreneurial attitudes, entrepreneurial activity, and entrepreneurial aspiration that vary across stages of economic development" [11]. This definition intentionally reflects the GEM conceptual model developed by Bygrave, Hay, Reynolds, and Yahagi at the time of founding GEM in 1998 and refined by Xavier et al. in the GEM 2012 Global Report [4, 9].

We strongly recommend referring to the works of Acs and Autio, and becoming familiar with GEDI's multidimensional index. The following brief summary of the three GEDI sub-indices should persuade us that we are now much closer to being able to measure "entrepreneurship" as we have conceptualized, rather than simply looking at TEA [10].

The first sub-index, entrepreneurial attitude (ATT) is defined as "the general disposition of a country's population toward entrepreneurs, entrepreneurship, and business start-ups [10]. The index involves measuring the population's opportunity perception potential, perceived start-up skills, fears of failure, networking prospects, and cultural respect for the entrepreneur" [10].

The second sub-index, entrepreneurial activity (ACT) is defined as "the start-up activity in the medium- or high-technology sector initiated by educated entrepreneurs in response to business opportunities in a somewhat competitive environment … Operating in the technology sector is important as high rates of start-ups in most factor-driven countries are mainly in the traditional sectors and do not represent high potential. The entrepreneur's level of education is another important feature of a venture with high growth potential. Additionally, cut-throat competition may hinder business existence and growth, giving a lower number of competitors improved chances of survival or future development prospects" [10].

The third sub-index, entrepreneurial aspiration (ASP), is defined as "the efforts of the early-stage entrepreneur to introduce new products and services, develop new production processes, penetrate foreign markets, substantially increase the number of firm employees, and finance the business with either formal or informal venture capital, or both. Product and process innovation, internationalization, as well as high growth are included in the measure. The capability to produce or sell products that customers consider to be new is one of Schumpeter's forms of creating 'new combinations.' Applying or creating new technology and production processes is another important feature of businesses with high growth potential" [10].

HYPOTHESES TESTING

Equipped with strong measurements of entrepreneurial activity and entrepreneurship, we are ready to test two hypotheses that describe the relationship between a nation's economic level and entrepreneurial activities measured by TEA and entrepreneurship measured by GEDI.

Test of U-curve Hypothesis

Wennekers et al. [5] established the U-curve relationship between the level of entrepreneurial activities and the level of economic development based on GEM 2002 data. We tested these findings by developing the multiple regression models M-1 and M-2 Using the GEM 2012 data provided in Table 5:

M-1 $TEA = \alpha + \beta * GDP + \gamma * GDP^2$

M-2 $GDP = a + b*TEA + c*TEA^2$

where

TEA = Total Entrepreneurial Activity (% of population aged 18–64 that are either nascent entrepreneurs or owner-managers of a new business)
GDP = Purchasing power parity (PPP) GDP per capita by the International Monetary Fund (IMF) 2012.

These models are estimated using three different sets of data:

1. World (62 samples);
2. Factor- and efficiency-driven (FD-ED) economies (39 samples); and
3. Innovation-driven (ID) economies (23 samples). The results of this estimation are presented in Tables 6–8 for model M-1 and Tables 9–11 for M-2.

The first step of our process to screen the estimated models is to list the adjR^2 values in order of their magnitude, and then look at the t-value of each coefficient. If the t-value is below 1, we drop the corresponding variable and run a model without the variable, while following the same steps. From the models at hand, we rank each in order of the magnitude of adjR^2. Details of the results are provided in Tables 6–11.

The adjR^2 of the models are:

M-1. TEA on GDP: (1) World = 0.4877 (2) FD-ED = 0.3542 (3) ID = 0.3305
M-2. GDP on TEA: (1) World = 0.3237 (2) FD-ED = 0.3092 (3) ID = 0.3039

The TEA coefficients in the model M-2 (2) and M-2 (3) above are below 1, i.e., 0.65 and 0.79 respectively. Dropping the corresponding variables did not improve adjR^2 for either M-2(2) or M-2(3). Accordingly, we decided to keep the models M-1 (1), (2) and (3) above because each one of these models outperforms the corresponding model of M-2, i.e., GDP on TEA in terms of both adjR^2 and the t-values of each coefficient.

The summary of adjR^2 and the inflection points of each model we selected are as follows:

M-1 (1) : Table 6
adjR^2 = 0.4877 and
Inflection point is GDP=35,419
M-1 (2) : Table 7
adjR^2 0.3542 and
Inflection point is GDP=16,507
M-1 (3) : Table 8
adjR^2= 0.3305
Inflection point is GDP = 28,196

As the above models indicate, a null hypothesis that there is no significant U-curve relationship between TEA and GDP per capita is rejected with a reasonable level of statistical significance. Analyzing the estimated models selected above, the following hypotheses are developed:

1. H1-1: At the first stage of economic development (FD economies), people are forced to start their own businesses because there are almost no employment opportunities.

2. H1-2: Until the country's GDP per capita reaches the inflection point of USD16,507, entrepreneurs continue searching for better income opportunities. Once they find one, they take the opportunity and terminate the self-employed status or start-up business operations.

3. H1-3: As the GDP per capita of a country at the ED stage grows beyond USD16,507, income opportunities are found to be preferentially better in starting up new

businesses, rather than in being employed by big companies. Consequently, entrepreneurial activities increase. (The highest GDP per capita among the Academic Meeting on Entrepreneurship Development member countries at the ED stage is Thailand's USD9,502.93. No country in our group has yet reached this inflection point. However, it is possible that a different inflection point might be found if we developed a model based only on data from ED economies and/or Asian countries.)

4. H1-4: Entrepreneurial activities at the ID economy stage are mixed. Until a country's GDP per capita reaches USD36,600, people prefer to work for large companies that provide good salaries with minimum risk of failure. Accordingly, entrepreneurial activities are minimal. However, once the country's per capita GDP goes beyond USD36,600, people become more enthusiastic about challenging opportunities that may bring about tremendous wealth albeit with high risk. Thus, entrepreneurial activities increase.

Test of S-curve Hypothesis

Acs and Szerb describe in detail their pioneering development of GEDI, an improved and powerful measure of entrepreneurship [10]. They also report the GEDI scores of 70 countries together with GDP per capita in purchasing power parity (PPP) in USD (as reported by the World Bank) as the measure of the level of development of each country. Their data reveal that the relationship between entrepreneurship and economic development appears to be mildly S-shaped.

We assumed the U-curve relationship between entrepreneurial activities (TEA) and the level of economic development. In order to develop reasonable hypotheses, we need to carefully divide our samples into two groups: the FD-ED economy group and the ID economy group. Our model M-1 (2) explains why TEA declines until economic development reaches the inflection point of USD16,507 among the FD-ED group.

It seems obvious that until a country's economy reaches the inflection point, the country's government plays a crucial role in developing industries so that people have job opportunities. Our model M-1 (3) indicates the reverse pattern of TEA of the ID group, i.e., TEA starts increasing once a country's GDP per capita goes beyond USD28,196.

Using GEDI, the measure of "entrepreneurship" rather than "entrepreneurial activity" reveals a mild S-shaped relationship [10]. This implies that "entrepreneurship" increases as the country's economy improves and rises to a high level, which seems quite intuitive.

Therefore, in this section, we test the S-curve hypothesis utilizing the database provided by Acs and Szerb [11], which is presented in Table 12. It is worthwhile to note here that GDP per capita in USD PPP (used by Acs and Szerb) is a mixture of the World Bank averages of GDP per capita for the periods of 2004–05, or 2006–07, or 2007–08 depending on the availability of data from the respective countries.

Our models are as follows:

M-3 $GEDI = \alpha + \beta * GDP + \gamma GDP^2 + \delta * GDP^3$ (Tables 13, 14)

M-4 $GDP = a + b*GEDI + c*GEDI^2 + d*GEDI^3$ (Tables 15, 16)

where

GEDI = Global Entrepreneurship and Development Index
GDP = GDP per capita PPP (USD, World Bank)

We took the same approach as in the U-curve hypothesis testing.

The adjR^2 of the models are shown in Table 2:

Table 2. S-curve models' adjR^2

No	Type	Variables	adjR^2	Tables
M-3 (1)	GEDI on GDP	All variables	0.7820	Table 13
M-3 (2)	GEDI on GDP	With deleted variable (GDP)	0.7839	Table 14
M-4 (1)	GDP on GEDI	All variables	0.8126	Table 15
M-4 (2)	GDP on GEDI	With deleted variable (GEDI)	0.8134	Table 16

As the t-values of the coefficient β in equation M-3 (1) and of b in equation M-4 (1) are below 1, i.e., 0.6366 and –0.8507 respectively, we drop these variables and hence the following are the models we selected:

M-3 (2) $GEDI = \alpha + \gamma * GDP^2 + \delta * GDP^3$ ---- Table 14

where

adjR^2 = 0.7839 (improved from 0.7820)
SE = 0.0819 (improved from 0.0823)

Inflection point is GDP = 22,790
Both coefficients are highly significant [p=1.84(E–10), 5.13(E–14), respectively]

M-4 (2) $GDP = a + c*GEDI^2 + d*GEDI^3$ ----Table 16

where

adjR^2 is 0.8134 (improved from 0.8126)
SE is 5785 (improved from 5796)

Inflection point is GEDI = 0.3378
Both coefficients are highly significant [p=2.17(E-12), 5.25(E-08), respectively]

Hence, a null hypothesis that there is no significant S-curve relationship between GEDI and GDP per capita is rejected with the high statistical significance.

The selected model analysis brought about the following hypotheses:

1. H2-1: A distinct contrast between the TEA behavior shown by the U-curve and GEDI shown by the S-curve, against per capita GDP, endorses our conclusion that start-up activities of entrepreneurs and entrepreneurship are not same. (Prerequisite assumption A1 of this report).

2. H2-2: Comparison of the U-curve hypothesis and the S-curve hypothesis urges us to conduct research on the two-way cause–effect relationship between entrepreneurship and level of economic development. (Prerequisite assumption A2 of this report.)

3. H2-3: The S-curve implies that the quality and strength of entrepreneurship increase until a country's economic level reaches a significantly high level.

4. H2-4: The S-curve implies that the cause–effect relationship reverses at a certain point on the curve, most likely somewhere around the inflection point (USD22,790 from the 2004–08 data period). It seems reasonable to assume that before the inflection point is reached, the development of a country's economy continues to stimulate entrepreneurship and, beyond the inflection point, the quality of entrepreneurship

reaches a level where entrepreneurs start leading the society with innovative ideas, not only in the business sector but also in the private and public sectors.

5. H2-5: The S-curve suggests that at the early stage of entrepreneurship development, a country's government should support entrepreneurs by providing education, infrastructure, financing mechanisms, and deregulation. However, the government's first priority should be to legislate and enforce a law to encourage entrepreneurs with high aspirations to exercise their innovative way of thinking to build a better society. The importance of a strong rule of law is fully discussed by Levie and Autio [12].

OUTLOOK FOR MEMBER COUNTRIES

The report from each National Expert (NE) describes the current status of each respective country in detail. In this section, we will focus on attributes that reflect the hypotheses we described in the previous section. Let us first revisit each country's position as discussed earlier (Table 1).

Factor-driven Economies

Cambodia

As the NE admits, there are serious limitations to the availability of relevant data and past research relevant to entrepreneurial activities in Cambodia (Cambodia NE report p. 89). After careful review of the GEM initial model (Bygrave and Hay) [4], the NE develops eight fundamental hypotheses with respect to relationships among five major variables, including Entrepreneurial Motivation (EM), Entrepreneurial Startups (ES), and National Economic Growth (NEG), for future testing. [4]

The NE's eight hypotheses point out a positive relationship among all the variables. Let us test two of the NE's hypotheses, i.e., the relationship between ES and NEG, and the relationship between EM and NEG utilizing the estimated U-curve model [M-1 (2)] and S-curve model [M-3 (2)].

Cambodia's GDP per capita (as measured by the IMF) in 2000, 2009, and 2013 was USD909, USD1,928, and USD2,576, respectively. The country's TEA, estimated by our model for each of those years, is 31.52%, 20.04%, and 27.53%, respectively. These figures

show that the country's entrepreneurial start-ups continue declining as our hypotheses H1-1 and H1-2 indicate. This trend seems to be quite consistent with the NE report that the government's Rectangular Strategy has been quite effective in promoting small and medium-sized enterprises (SMEs), together with development of the Association of Cambodian Local Economic Development Agencies (ACLEDA) and the Rural Development Bank (RDB) to improve the SME financing environment. Also, such a decline in the country's TEA is consistent with the NE observation that "many men seek waged employment" offered by increasing SMEs (Cambodia NE report p. 93).

To test the NE hypothesis on the positive relationship between EM and NEG, we use GDP per capita data for 2009 and 2013 from the World Bank: USD735 and USD1,008, respectively. Putting these figures in our estimated equation M-3 (2), we find that there is only a slight increase in the GEDI scores from 2009 to 2013, both being 0.187. This seems consistent with our hypothesis H2-3 that the quality and strength of entrepreneurship increases as a country's economic level improves to a significantly high level. Needless to say, as the NE reports, entrepreneur training and education is one of the most urgent policies for the government to implement. In particular, given the fact that 62% of start-ups are run by women, management education programs for female entrepreneurs are urgently required.

Together with Cambodia's 2013 low GDP per capita of USD1,008 (World Bank), the country's GEDI is 0.187, which is significantly low on the S-curve (note that according to the NE report, 2011 gross national income [GNI] per capita was USD820). However, we should not interpret this as indicative of a hopeless situation. From the NE report, it is clear that the country's young leaders are committed to building a better Cambodia to the extent that the government is committed to rigorously enforcing the rule of law. If the government can sustain a corruption-free status, Cambodia's potential entrepreneurs may aspire to higher levels of development. Their main challenge is improving their skills and knowledge through effective education programs and/or training, ultimately leading to better entrepreneurship and the building of a better Cambodia in the future.

India

As might be expected, India seems to encompass all levels of economic development.

The NE report describes an entrepreneurship pyramid composed of four layers:

1. Agriculture and primary sectors;
2. Services;

3. Manufacturing (traditional sectors); and
4. Emerging sectors including IT, finance, and insurance.

Looking at the top of the pyramid, it is hard to imagine that India is classified as a factor-driven country. As the NE explains in detail, the government has been offering highly effective and comprehensive policies to enhance entrepreneurs since its economy was liberalized in 1991. The NE report reveals that government policies have significantly assisted its emerging sectors. However, we can reasonably hypothesize that the country, because of its geographical size and large population, simultaneously experiences every one of the five stages of economic development, which inevitably leads to a varied overall result. The emerging sectors comprise the world's leading innovation-driven economy.

As the NE reports, India's TEA score was second among the GEM member countries in 2002, but recently the score has become close to the world average. This implies that our U-curve hypothesis still applies to the majority of societies, i.e., people cannot find good opportunities for earning income other than by starting up a new business. NE finds that India is "highest among 28 countries in necessity-based entrepreneurship, while fifth lowest in opportunity-based entrepreneurship." The recent decline in TEA score is clear evidence that people have started capturing higher income opportunities in large companies and are able to escape from the highly insecure status of self-employed "entrepreneurs," as described in H1-2 of the U-curve hypothesis.

Accordingly, the Indian government can play the key role in developing basic industries. In particular, it should make every effort to strengthen the manufacturing sectors that absorb more human resources of most kinds rather than only highly intellectual professionals, as in the case of fourth-layer sectors. For the government, however, we must draw attention to the report by Sala-i-Martin et al., in the Global Competitiveness Report 2013–14 of the World Economic Forum [7]. They point out, "public trust in politicians has been eroding since 2009 and has now reached an all-time low at 115th, while bribery remains deeply rooted (110th). Indeed, India has lost almost 30 ranking places on this indicator scale since 2010" [7].

Accordingly, we strongly suggest that Indian policy makers should reform their mindset and enforce strong rule of law immediately to enable entrepreneurs with high aspirations and levels of commitment to enhance their skills, mobilize their high-quality capabilities, and develop a better society.

Pakistan

The NE describes Pakistani society's historic and present conditions in detail, including interactions among the government, private sector institutions, SMEs, and even individuals, proposing practical measures to enhance entrepreneurship.

Our estimated U-curve model M-1 (2) shows that the country's TEA declined slightly from 27% in 2009 to 26% in 2013 based on a 2009 GDP per capita of USD2,790 and USD3,149 in 2013, as reported by the IMF. If we take into consideration that the country's per capita GDP is far below the inflection point of our U-curve, the declining TEA trend is inconsistent with hypothesis H1-1. As the NE observes, TEA would be expected to continue increasing rather than declining until the country's GDP reaches a certain threshold level, due to the fact that there are not enough opportunities for people to find jobs in established enterprises (Pakistan NE report p. 214).

The above observation may suggest that we should expand our data for the FD-stage countries (data from only 11 of our 39 FD-ED-stage countries of 2012 were used to test the U-curve hypothesis), and estimate an exclusive model for those FD-stage countries. The curve could be a reversed U-curve. The NE also suggests that there may be a two-way causal relationship between TEA and per capita GDP, which is consistent with our prerequisite assumption A2.

As the NE indicates, availability of financial resources and accessibility to such resources are the key to enhancing entrepreneurial activities. In this respect, Pakistan seems to be quite successful in developing a separate micro-finance sector. The micro-finance banks established under the Microfinance Institutions Ordinance 2001, Microfinance Institutions (MFI), and Rural Support Programs (RSP) have been effective. However, the NE points out that entrepreneurship is not admired in Pakistani society and consequently, "young people are not willing to opt for entrepreneurial activities" (Pakistan NE report p. 205). The GEDI scores calculated from our estimated model M-3 (2) (based on GDP per capita of USD987 for 2009 and USD1,299 for 2013 from the World Bank) are 0.187 and 0.186, respectively. Though the difference is very small, the declining trend of GEDI is nevertheless inconsistent with our hypothesis H2-3.

One point that the NE repeatedly focuses on is the rent-seeking attitude that seems to have penetrated deeply into the mindsets of individuals throughout the country, including businesses, bureaucrats, and politicians. To those who initially had high aspirations to be potential entrepreneurs, efforts to seek rent appear more rewarding than pursuing

entrepreneurial opportunities fraught with risks of failure. Hence, many abandon their initial aspirations and start seeking rents for money. A society where rent-seekers benefit implies that there is corruption in both public and private sectors.

Sala-i-Martin et al. explicitly state, "Pakistan's public institutions are crippled by inefficiencies, corruption, patronage, and lack of property rights protection" [7]. If the society wants to benefit from the innovative activities of entrepreneurs with high aspirations, i.e., a high GEDI score, the foremost task of the government is to enforce the strong rule of law.

Transitional Stage from Factor-driven to Efficiency-driven Economies

Philippines

The Philippines is the only country at the FD-ED stage among the member countries present at the Academic Meeting on Entrepreneurship Development. The NE reports, "Filipinos have a predominantly positive attitude towards entrepreneurship and entrepreneurs" (Philippines NE report p. 240). However, due to limited employment opportunities, the Philippines' TEA score in a 2006 GEM survey was 20.4%, which was the third highest after Peru (40.2%) and Colombia (22.5%). The country's TEA in 2013 dropped to 18.5%, which is the 14th highest among all 67 countries that participated in the survey and 8th among 13 FD-stage countries.

This declining trend in TEA score is consistent with our U-curve hypotheses H1-1 and H1-2, as the NE describes in the report that "to most native Filipinos, [the] bright future lay in employment with foreign business establishments or successful careers as doctors, lawyers, accountants, or other professions" (Philippines NE report p. 231).

In addition to establishing consistent hypotheses, we also need to pay attention to the actual performances of the country's entrepreneurs in the NE report. The NE first presents excellent social business cases where entrepreneurs aspire to help the poorest farmers, such as providing solar energy, water-purifiers, and adjustable eyeglasses that would not require doctor visits. Such services would benefit those who otherwise could not afford access to them, and to rescue poor working women from malicious profiteering middlemen who may take advantage of their ignorance. These entrepreneurs could have led easier and more affluent lives with much lower risk, but they chose to utilize their knowledge and skills, developed through previous job experience and/or through high-level management education, to the betterment of their society.

The NE also reports representative cases starting from the FD stage, the ED stage, and the ID stage. Every one of the entrepreneurs presented in the NE report seems to be equipped with a strong sense of entrepreneurship and high aspirations. This motivated us to calculate the change in GEDI for the country. Using GDP per capita reported by the World Bank in 2006 and 2013, the results are shown in Table 3:

Table 3. Global entrepreneurship development index calculations for the Philippines

GDP per capita PPP:	USD1,399 (2006)	USD2,765 (2013)
GEDI:	0.188 (2006)	0.192 (2013)

Notes: GEDI, global entrepreneurship development index; PPP, purchasing power parity.

The Philippines is still in the lowest GEDI group; the improvement in the figures seems to reflect the high-quality entrepreneurship from its successful entrepreneurs.

In spite of the society's highly positive attitude toward entrepreneurship and the fact that these entrepreneurs obviously contribute to society, there seems to be a lot for the government to do. The NE points out that the "national government has not prioritized promotion and development of entrepreneurship." Furthermore, the NE points out that "billions of government money has gone to the pockets of senators and congressmen in bogus projects purported to aid the poor."

According to Sala-i-Martin et al., the current government "has made the fight against corruption an absolute priority … these efforts are producing results: in the ethics and corruption category, the country has jumped from 135th in 2010 to 87th this year" [7]. Let us hope that this trend continues.

Efficiency-driven Economies

Indonesia

The NE reports that the country's TEA increased significantly to 25.5% in 2013 from 19.3% in 2006, while GDP per capita increased to USD3,592 in 2013 from USD1,643 in 2006 [13]. In the framework of our U-curve hypothesis, we can make a strong assumption that a country at this level of GDP, far below the inflection point of USD16,507 [Model M-1 (2)], has a government that is not functioning effectively in its economic policies, either for industrialization or stimulation of entrepreneurial activities. Accordingly, people do not have any options for earning income other than by starting up businesses by themselves, as stated in hypothesis H1-1. Once the country reaches the efficiency-driven

stage, people would find higher and more stable income opportunities working for larger companies and quit their own start-up businesses. As a result, TEA starts declining as indicated by H1-2 and H1-3.

These assumptions, however, do not seem to apply to Indonesia. The country's TEA in 2013 is 25.5%, which is a significant increase from 19.3% of 2006. Additionally, the NE reports that in 2006, the number of opportunity-driven entrepreneurs was over 61% as opposed to necessity-driven ones, around 14%; in 2013 the former was 44% and the latter was 25% (Figure 2 of the Indonesia NE report p. 154).

The NE attributes the significant increase in the country's TEA to the government's "massive promotion of entrepreneurship program in the last seven years" (Indonesia NE report p. 153). The NE report also indicates that the social attitude toward entrepreneurial activities is significantly positive and that entrepreneurs enjoy high social status, which is further stimulated by much attention from the media. These elements should ensure that the country maintains a high TEA rate, even after the economy becomes classified as efficiency-driven.

It may be noteworthy that the country's rate of nascent entrepreneurs in 2013 is 5.7%, a significant decrease from 9.6% of 2006. If we compare this trend with the seemingly contradictory trend of increasing TEA rates, we could conclude that the government's massive promotion program has been highly effective in improving operational environments, providing accessibility to early financial resources for entrepreneurs and also supporting the development of their management skills and knowledge, rather than merely stimulating people to start up businesses.

The above observation reminds us of hypothesis H2-3 that specifies that entrepreneurship, as measured by GEDI, is an increasing function of a country's economic development until it reaches a high level. Using our definition of "entrepreneurship" and "entrepreneur" introduced in this report, let us review the change in "entrepreneurship" of Indonesia between 2006–13, using the estimated model M-3 (2). We have used GDP per capita in USD, as provided by the IMF [13]. The input data and the results (estimated GEDI) are shown in Table 4 below.

Table 4. Global entrepreneurship development index calculations for Indonesia

GDP per capita:	USD3,415 (2006)	USD5,214 (2013)
Estimated GEDI:	0.193 (2006)	0.203 (2013)

Note: GEDI, global entrepreneurship development index; PPP, purchasing power parity.

Although the magnitude looks small, the results provide us with the strong indication that if the government moves successfully, quality and strength of entrepreneurship will continue increasing and, at some future point, entrepreneurs would reverse the cause–effect relationship and start contributing to further development (evolution) of the country's economy as we hypothesized in H2-4.

One important caution to the government is to focus on keeping the public sector clean and corruption-free. Sala-i-Martin et al., after praising the recent performance of Indonesia, point out that bribery and security are two concerns of the country, in which areas the country is ranked 106th and 104th, respectively, in the Global Competitiveness Report 2013–2014 of the World Economic Forum [7].

The estimated GEDI scores indicate that the quality of Indonesian entrepreneurship keeps improving. However, unless the government continues enforcing the rule of law, the entrepreneurs' fragile aspirations may be easily damaged [12].

Thailand

Among the ED economy countries at the Academic Meeting on Entrepreneurship Development, Thailand had the highest GDP per capita in 2012 (USD9,503), followed by Indonesia (USD4,923). As this is still quite far from the inflection point (USD16,507) of the U-curve of an FE-ED economy [Model M-1 (2)], the U-curve hypothesis would predict that the country's TEA should keep decreasing as people find better income opportunities than starting up businesses. The NE report, however, indicates that the country's TEA is among the highest in the world, i.e., the 2002–07 average is 20.5% and it is 19.5% in 2011 (Thailand NE report p. 265).

Taking the case of Indonesia into consideration along with our hypothesis H1-3, we should perhaps increase the data points of countries at the efficiency-driven stage and/or those of other Asian countries and estimate a new inflection point. Currently, with the limited data, the NE report provides enough information to explain why Thailand's TEA has remained significantly high during the last 10 years.

Basically, there seem to be two reasons for the high TEA scores of Thailand. Firstly, as the NE reports, the societal attitude is highly positive toward entrepreneurial activities, and successful entrepreneurs are granted very high status in society. The NE reports that in the 2011 GEM survey, 77% of Thai adults state entrepreneurship is a good career choice; 79% say that successful entrepreneurs have high social status; and 84% say that the media attention to entrepreneurship is significant. The same statistics for 2007 were 87%, 82%, and 82%, respectively.

The report also indicates that the perceived opportunities have increased significantly, from 18% in 2005 to 40% in 2011 (Table 4 of the Thailand NE report p.268). Accordingly, our analysis of TEA in Thailand, together with that of Indonesia, suggests that the inflection point of our model of FD-ED economies would be much lower if we estimated a new U-curve model based only on ED economy data. Both Thailand and Indonesia seem to be at a point beyond such an inflection point, meaning that as their economy continues to develop, the TEA will further increase.

The other factor influencing the high TEA of Thailand is the high priority given by the government to its policy of developing and supporting SMEs and entrepreneurial activities, which are listed in Table 7 of the NE report (p.288). The government also recognizes the importance of social entrepreneurship, and founded the Thailand Social Enterprise Office (TSEO) in 2010. TSEO has effectively implemented projects to enhance social entrepreneurship in six specified areas. Such activities certainly help improve the social attitude towards entrepreneurs, and potential entrepreneurs with high aspirations continue to surface and initiate activities.

To every entrepreneur, access to appropriate financial sources is a major concern. Unlike the USA's Silicon Valley, ordinary entrepreneurs find it hard to meet business angels or venture capitalists; this is the area where a government can be effective. The NE reports that the Thai government established an SME Bank in 2002 that seems to encourage Thai entrepreneurs, leading to a sustainably high TEA.

The estimated GEDI scores also endorse high TEA. Thailand's GEDI for 2006 is 0.22 and it increased to 0.24 in 2012. Again, Thailand offers strong evidence to support our hypotheses H2-1 and H2-3. Furthermore, as our hypothesis H2-4 states, the cause-effect relationship in Thailand is soon to be reversed, as the NE states at the report's introduction: "SMEs and entrepreneurs are the fundamental drivers of the national economy" in Thailand.

However, if the society expects entrepreneurs to continue playing a critical role to improve both the economic and social aspects of the country, our hypothesis H2-5 strongly suggests that the Thai government must rigorously enforce the rule of law. It may be worthwhile for the government to recognize that Sala-i-Martin et al. point out in the Global Competitive Report 2013–2014 that "Political and policy instability, excessive red tape, omnipresent corruption, and clientelism … undermine the quality of Thai public institutions" [7].

Innovation-driven Economies

Japan

The first report of GEM in 1999 ranked Japan ninth out of ten GEM member countries in terms of entrepreneurial activities [14]. Since then, the country has consistently been among the lowest three in TEA scores, with the average of 2001 through to 2012 being 3.33%, as calculated by the NE (Japan NE report p.165). The TEA for 2012 is 4%, the lowest among all 69 participating countries.

As the NE reports, Japan has produced a number of world famous entrepreneurs such as Konosuke Matsushita (Panasonic), Soichiro Honda (Honda), Akio Morita (Sony), and Kazuo Inamori (Kyocera). More recently, we have Masayoshi Son (Softbank) and Tadashi Yanai (UNIQLO). We could quickly extend this list if we were to include less world-renowned but domestically well-known entrepreneurs.

Nevertheless, Japan's TEA in 2013 dropped to 3.7%, the second lowest among 67 participating countries, followed by 3.4% of Italy. Reynolds et al., in their 1999 report point out that: (1) "Only 8% of adults believe that those starting a business are respected; entrepreneurship is not recognized as a legitimate career option in Japan," (2) "The motivation to pursue new business opportunities is further reduced by the practice of many larger established firms promoting 'lifetime' employment, and to base incentive pay on length of service and age," (3) "Those entrepreneurs who fail in their business are unlikely to be able to try again," (4) "The Japanese approach to education is encapsulated in the saying 'the nail that sticks up is hammered down'" [14]. This view "is a major inhibiting factor to the level of entrepreneurship activity in Japan." The NE describes in detail possible backgrounds for the inactive phenomenon of entrepreneurial activities and points out that "the problem seems to have its roots in cultural values towards entrepreneurship," which endorses what Reynolds et al. described 15 years ago.

If we look at past TEA scores of the member countries, we find that Germany and France have been among the lowest group since the beginning of the GEM survey. Such a finding may tell us that a low TEA does not necessarily mean that the country's economy is in trouble. For example, in Germany and Japan, people find enough working opportunities in existing large firms, which are more attractive than starting up their own businesses with an incomparably higher degree risk of failure.

The NE describes how social entrepreneurs have started attracting attention among young capable people. Among several successful social entrepreneurs, the NE introduces 24-year old Kiroki Komazaki who started the sick-childcare service in 2004 and was chosen among "Newsweek's Top 100 social entrepreneurs who change the world" in 2007. The NE reports, "the increase in social entrepreneurship has been further accelerated after the Great East Japan Earthquake in 2011." If this trend among young people who are not constrained by traditional Japanese values continues growing, society could change its attitude to entrepreneurs into one that is significantly positive.

The most urgent issue of present-day Japan is to develop true entrepreneurship not only in the business sector, but also in all other sectors of society, including education, government, and medicine. As the NE report concludes, "entrepreneurship is not just about making profit through business, but also the attitudes and mindsets that bring innovation to the society."

Based on our S-curve model M-3 (2), Japan's GEDI scores of 2002 and 2012 are 0.47 and 0.58, respectively. If we compare these figures with those of TEA calculated by our U-curve model M-1 (3), i.e., 6.03% for 2002 and 5.87% for 2012, respectively, we see that the quality and strength of entrepreneurship in Japan as defined by the NE continues improving in a healthy manner, although the number of start-ups measured by TEA further decreases even after reaching its lowest ever level. The key to the success of the third stage of the eponymous Abenomics of Japan's Primer Minister Abe is whether or not it can stimulate people with high aspirations to fully mobilize their entrepreneurship in every sector of society. As the NE says, "our goal should be not just to increase the number of start-ups, but to build an environment to encourage entrepreneurship."

Republic of China

The NE reports that the ROC has been successfully active in entrepreneurial activities from 2002 through 2012. Our U-curve model M-1(3) shows that the country's GDP per capita in 2002 (USD21,613) was close to the inflection point (USD28,196) and in 2012 it

went up to USD38,356. Accordingly, TEA went up from 4.3% in 2002 to 7.5% in 2012. Our U-curve model M-1(3) shows a more moderate increase from 6.26% in 2006 to 6.28% in 2012.

The slight decrease in the 2010 figures, compared to those of 2012, are explained by the NE as: "People tended to be conservative when the macro-economy was weak and unclear due to the unstable global economy of the last few years" (ROC NE report p. 107). On the other hand, the NE reports that the government has been implementing effective policies and programs to train and educate entrepreneurs. As a result, the World Bank ranked the ROC first in Asia on the Knowledge Economy Index (KEI). The report further points out that the entrepreneurial environment in the ROC will mature as the economy is stabilized.

The ROC's GEDI scores, calculated from our S-curve model M-3 (2) as 0.39 for 2002 and 0.6 for 2012, reveal a significant increase. Although social entrepreneurship has declined and young people would prefer to have jobs with large companies, we would see the ROC as a more active and entrepreneurial country than Japan if we compared the GEDI increase of both countries, i.e., from 0.39 in 2002 to 0.60 in 2012 for ROC and from 0.47 in 2002 to 0.58 in 2012 for Japan.

The ROC and Japan, the only innovation-driven economies among the Academic Meeting on Entrepreneurship Development members, now need strong and high-quality "entrepreneurship" in every sector of the society rather than just a larger number of start-ups. The ROC and Japan should be able to show evidence that stronger and higher-quality entrepreneurship is the key to creating a better society.

CONCLUSIONS

Hypotheses

By developing regression models to test the U-curve and S-curve hypotheses, we could induce two sets of hypotheses: H1-1 through H1-4, and H2-1 through H2-5. It is encouraging for our future research that we could come up with the regression models with significantly high adjR^2 and highly statistically significant coefficients although the sample size was quite limited.

As our report has shown, our review of NE reports is a deduction process involving referral to the two sets of hypotheses induced from the available data. In the process of deduction, we have come to realize that the prerequisite assumptions A1, "there is a clear distinction between start-up activities of entrepreneurs and entrepreneurship," and A2, "there is a two-way cause–effect relationship between entrepreneurship and level of economic development" are the results of our abduction process from the thorough discussion on "entrepreneurship" during this academic meeting.

Hence, A1 and A2 helped us to maintain the reliability and validity of our analyses at a high level and, accordingly, we now feel comfortable explaining the entrepreneurial activities and entrepreneurship of any country by referring to the models we estimated (i.e., models M-1 (1) through (3), M-3 (2) and M-4 (2)).

The Academic Meeting on Entrepreneurship Development and Quality of NE Reports

Throughout the discussions, we always kept in mind our objectives of developing a detailed analysis of each country's entrepreneurial situation, and also developing generalizable hypotheses, so that they could be applied outside our member countries. Thus, in addition to our discussion, we carefully prepared the research plan including the structure and format of the NE reports. A review of each NE report convinced us that the quality of every report was sufficiently high so that every NE report should be an integral part of this chief expert's final report (CE Report).

Future Research Direction

The basic policy of utilizing the data compiled by GEM as well as those from the World Economic Forum should be maintained. Accordingly, if we continue this APO project, we should make an official contract with such institutions. Also, data for calculating the GEDI index are crucial and, therefore, we should keep in close contact with Professor Zoltan J. Acs of George Mason University and Professor Laszlo Szerb of the University of Pecs.

As stated in A2 and H2-2, we should test the two-way cause-effect relationship between entrepreneurship and the level of economic development. In doing so, it seems necessary for us to develop simultaneous equation models. Needless to say, however, before we can conduct such tests, we have to accumulate enough data maintaining close contact with GEM and the World Economic Forum.

Table 5. Data for Models M-1 and M-2 (TEA & GDP) estimation

		Y	X1	X2
Stage of economy	**Country**	**GDP**	**TEA**	**TEA²**
Efficiency-driven economy	Argentina	17,917	18.9	357.21
Efficiency-driven economy	Bosnia & Herzegovina	8,127	7.8	60.84
Efficiency-driven economy	Brazil	11,747	15.4	237.16
Efficiency-driven economy	Chile	18,211	22.6	510.76
Efficiency-driven economy	PR China	9,055	12.8	163.84
Efficiency-driven economy	Colombia	10,671	20.1	404.01
Efficiency-driven economy	Costa Rica	12,545	15.0	225
Efficiency-driven economy	Croatia	17,618	8.3	68.89
Efficiency-driven economy	Ecuador	10,215	26.6	707.56
Efficiency-driven economy	El Salvador	7,316	15.3	234.09

	Y	X1	X2
Country	**TEA**	**GDP**	**GDP²**
Argentina	18.9	17,917	321,034,549
Bosnia & Herzegovina	7.8	8,127	66,055,606
Brazil	15.4	11,747	138,000,420
Chile	22.6	18,211	331,648,133
PR China	12.8	9,055	81,998,929
Colombia	20.1	10,671	113,873,421
Costa Rica	15.0	12,545	157,370,025
Croatia	8.3	17,618	310,405,341
Ecuador	26.6	10,215	104,338,400
El Salvador	15.3	7,316	53,523,666

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		Y	X1	X2
Stage of economy	**Country**	**GDP**	**TEA**	**TEA²**
Efficiency-driven economy	Estonia	21,714	14.3	204.49
Efficiency-driven economy	Hungary	19,497	9.2	84.64
Efficiency-driven economy	Latvia	18,058	13.4	179.56
Efficiency-driven economy	Lithuania	21,383	6.7	44.89
Efficiency-driven economy	Malaysia	16,794	7.0	49
Efficiency-driven economy	Mexico	15,363	12.1	146.41
Efficiency-driven economy	Namibia	7,800	18.2	331.24
Efficiency-driven economy	Panama	15,449	9.5	90.25
Efficiency-driven economy	Peru	10,596	20.2	408.04
Efficiency-driven economy	Poland	20,562	9.4	88.36
Efficiency-driven economy	Romania	12,722	9.2	84.64

	Y	X1	X2
Country	**TEA**	**GDP**	**GDP²**
Estonia	14.3	21,714	471,505,657
Hungary	9.2	19,497	380,116,242
Latvia	13.4	18,058	326,093,170
Lithuania	6.7	21,383	457,212,760
Malaysia	7.0	16,794	282,027,117
Mexico	12.1	15,363	236,031,448
Namibia	18.2	7,800	60,839,563
Panama	9.5	15,449	238,657,821
Peru	20.2	10,596	112,278,861
Poland	9.4	20,562	422,794,651
Romania	9.2	12,722	161,852,897

(continued on next page)

		Y	X1	X2
Stage of economy	**Country**	**GDP**	**TEA**	**TEA²**
Efficiency-driven economy	Russia	17,518	4.3	18.49
Efficiency-driven economy	South Africa	11,281	7.3	53.29
Efficiency-driven economy	Thailand	9,503	18.9	357.21
Efficiency-driven economy	Trinidad & Tobago	19,826	15.0	225
Efficiency-driven economy	Tunisia	9,650	4.8	23.04
Efficiency-driven economy	Turkey	14,812	12.2	148.84
Efficiency-driven economy	Uruguay	15,865	14.6	213.16
Factor-driven economy	Algeria	7,268	8.8	77.44
Factor-driven economy	Angola	6,092	32.4	1049.76
Factor-driven economy	Botswana	15,706	27.7	767.29
Factor-driven economy	Egypt	6,474	7.8	60.84

	Y	X1	X2
Country	**TEA**	**GDP**	**GDP²**
Russia	4.3	17,518	306,880,955
South Africa	7.3	11,281	127,264,571
Thailand	18.9	9,503	90,305,622
Trinidad & Tobago	15.0	19,826	393,086,890
Tunisia	4.8	9,650	93,131,899
Turkey	12.2	14,812	219,385,924
Uruguay	14.6	15,865	251,687,786
Algeria	8.8	7,268	52,822,051
Angola	32.4	6,092	37,112,720
Botswana	27.7	15,706	246,670,677
Egypt	7.8	6,474	41,917,648

(continued on next page)

		Y	X1	X2
Stage of economy	**Country**	**GDP**	**TEA**	**TEA²**
Factor-driven economy	Ethiopia	1,256	14.7	216.09
Factor-driven economy	Ghana	3,316	36.5	1332.25
Factor-driven economy	Malawi	848	35.6	1267.36
Factor-driven economy	Nigeria	2,697	35.0	1225
Factor-driven economy	Pakistan	3,056	11.6	134.56
Factor-driven economy	Uganda	1,424	35.8	1281.64
Factor-driven economy	Zambia	1,683	41.5	1722.25
Innovation-driven economy	Austria	41,908	9.6	92.16
Innovation-driven economy	Belgium	37,459	5.2	27.04
Innovation-driven economy	Denmark	37,324	5.4	29.16
Innovation-driven economy	Finland	35,771	6.0	36

	Y	X1	X2
Country	**TEA**	**GDP**	**GDP²**
Ethiopia	14.7	1,256	1,576,780
Ghana	36.5	3,316	10,995,783
Malawi	35.6	848	719,842
Nigeria	35.0	2,697	7,274,235
Pakistan	11.6	3,056	9,337,156
Uganda	35.8	1,424	2,028,411
Zambia	41.5	1,683	2,832,876
Austria	9.6	41,908	1,756,268,227
Belgium	5.2	37,459	1,403,176,231
Denmark	5.4	37,324	1,393,096,055
Finland	6.0	35,771	1,279,560,935

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		Y	X1	X2
Stage of economy	**Country**	**GDP**	**TEA**	**TEA²**
Innovation-driven economy	France	35,295	5.2	27.04
Innovation-driven economy	Germany	38,666	5.3	28.09
Innovation-driven economy	Greece	24,260	6.5	42.25
Innovation-driven economy	Ireland	40,716	6.2	38.44
Innovation-driven economy	Israel	33,878	6.5	42.25
Innovation-driven economy	Italy	29,812	4.3	18.49
Innovation-driven economy	Japan	35,855	4.0	16
Innovation-driven economy	Republic of Korea	31,950	6.6	43.56
Innovation-driven economy	Netherlands	41,527	10.3	106.09
Innovation-driven economy	Norway	54,397	6.8	46.24
Innovation-driven economy	Portugal	23,047	7.7	59.29

	Y	X1	X2
Country	**TEA**	**GDP**	**GDP²**
France	5.2	35,295	1,245,763,214
Germany	5.3	38,666	1,495,053,447
Greece	6.5	24,260	588,549,444
Ireland	6.2	40,716	1,657,806,825
Israel	6.5	33,878	1,147,715,496
Italy	4.3	29,812	888,744,015
Japan	4.0	35,855	1,285,611,574
Republic of Korea	6.6	31,950	1,020,793,490
Netherlands	10.3	41,527	1,724,532,177
Norway	6.8	54,397	2,959,046,229
Portugal	7.7	23,047	531,148,353

(continued on next page)

		Y	X1	X2
Stage of economy	**Country**	**GDP**	**TEA**	**TEA²**
Innovation-driven economy	Singapore	60,799	11.6	134.56
Innovation-driven economy	Slovenia	27,837	5.4	29.16
Innovation-driven economy	Spain	30,058	5.7	32.49
Innovation-driven economy	Sweden	40,304	6.4	40.96
Innovation-driven economy	Switzerland	44,864	5.9	34.81
Innovation-driven economy	Republic of China	38,357	7.5	56.25
Innovation-driven economy	United Kingdom	36,569	9.0	81
Innovation-driven economy	USA	51,704	12.8	163.84

Notes: PPP, purchasing power parity; TEA, total early-stage entrepreneurial activity.

	Y	X1	X2
Country	**TEA**	**GDP**	**GDP²**
Singapore	11.6	60,799	3,696,538,465
Slovenia	5.4	27,837	774,902,188
Spain	5.7	30,058	903,490,277
Sweden	6.4	40,304	1,624,435,712
Switzerland	5.9	44,864	2,012,783,431
Republic of China	7.5	38,357	1,471,226,462
United Kingdom	9.0	36,569	1,337,319,407
USA	12.8	51,704	2,673,298,342

Table 6. Model M-1 (1): TEA on GDP (all countries)

$TEA = 28.33 - 0.0012 * GDP + 1.69(E-08) * GDP^2$

SUMMARY	
R	0.7102768
R^2	0.5044932
adj R^2	0.4876963
SE	6.6901923
Sample	62

ANOVA

	d.f.	SS	Var	est Var. ratio	F
Regression	2	2688.65374	1344.32687	30.03500241	1.00917E–09
Residual	59	2640.761744	44.75867362		
Total	61	5329.415484			

	Coef.	SE	t	P	min 95% conf	max 95% conf
Intercept	28.327231	2.207419303	12.83273669	1.01119E–18	23.9101949	32.74426647
GDP	–0.0012421	0.000200252	–6.202731208	5.94488E–08	–0.001642813	–0.000841406
GDP^2	1.694E–08	3.68941E–09	4.591932024	2.35294E–05	9.55904E–09	2.4324E–08

		TEA	
	Country	**Estimated**	**Residual**
1	Argentina	11.51062347	7.389376529
2	Bosnia & Herzegovina	19.35111575	–11.55111575
3	Brazil	16.07366032	–0.673660317
4	Chile	11.32553679	11.27446321
5	PR China	18.4687086	–5.668708596
6	Colombia	17.00168173	3.098318268
7	Costa Rica	15.41139871	–0.411398713
8	Croatia	11.70207957	–3.402079575
9	Ecuador	17.40720675	9.192793252
10	El Salvador	20.14674406	–4.846744061
11	Estonia	9.343861892	4.956138108
12	Hungary	10.55010139	–1.350101387
13	Latvia	11.42166749	1.978332514
14	Lithuania	9.513660295	–2.813660295
15	Malaysia	12.24562846	–5.24562846
16	Mexico	13.24304057	–1.143040568
17	Namibia	19.66952405	–1.46952405
18	Panama	13.18165915	–3.681659154
19	Peru	17.06779711	3.13220289
20	Poland	9.949794082	–0.549794082
21	Romania	15.26696907	–6.066969074
22	Russia	11.76696214	–7.466962138
23	South Africa	16.47084769	–9.170847688
24	Thailand	18.0534671	0.846532898
25	Trinidad & Tobago	10.36013539	4.639864608
26	Tunisia	17.91806285	–13.11806285
27	Turkey	13.64622862	–1.446228625
28	Uruguay	12.88554374	1.71445626
29	Algeria	20.19461429	–11.39461429
30	Angola	21.38901769	11.01098231
31	Botswana	12.99793983	14.70206017

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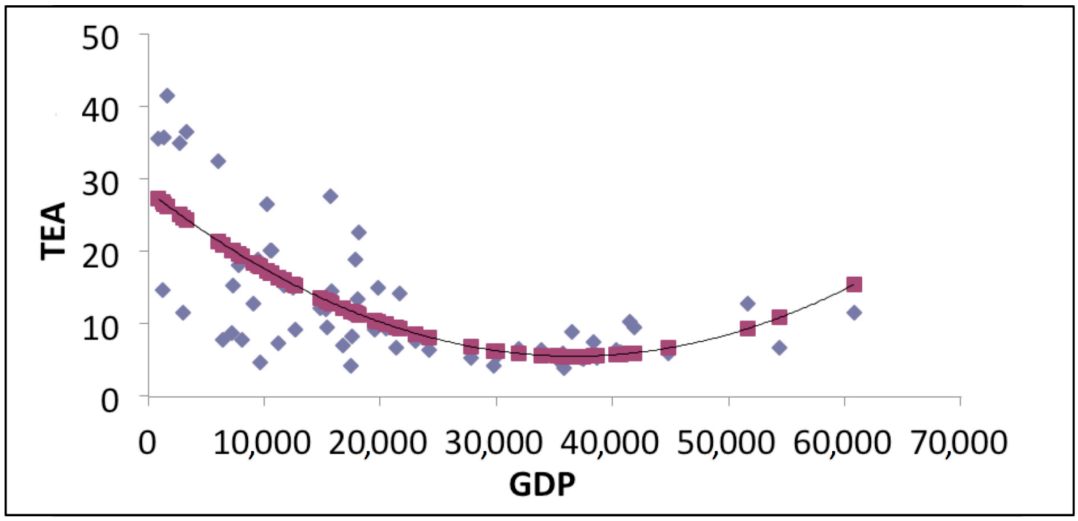
		TEA	
	Country	**Estimated**	**Residual**
32	Egypt	20.9954837	–13.1954837
33	Ethiopia	26.79422763	–12.09422763
34	Ghana	24.39469345	12.10530655
35	Malawi	27.28557642	8.314423579
36	Nigeria	25.10039893	9.899601067
37	Pakistan	24.6899311	–13.0899311
38	Uganda	26.59255363	9.20744637
39	Zambia	26.28461019	15.21538981
40	Austria	6.02695216	3.57304784
41	Belgium	5.57100446	–0.37100446
42	Denmark	5.567657264	–0.167657264
43	Finland	5.573506392	0.426493608
44	France	5.591643703	–0.391643703
45	Germany	5.628409636	–0.328409636
46	Greece	8.164529267	–1.664529267
47	Ireland	5.839062306	0.360937694
48	Israel	5.691157415	0.808842585
49	Italy	6.354375484	–2.054375484
50	Japan	5.571086263	–1.571086263
51	Republic of Korea	5.935804592	0.664195408
52	Netherlands	5.961752338	4.338247662
53	Norway	10.89082295	–4.090822947
54	Portugal	8.699220402	–0.999220402
55	Singapore	15.4330257	–3.833025696
56	Slovenia	6.878570366	–1.478570366
57	Spain	6.298261933	–0.598261933
58	Sweden	5.785310824	0.614689176
59	Switzerland	6.70078719	–0.80078719
60	Republic of China	5.608991858	1.891008142
61	United Kingdom	5.560289542	3.439710458
62	USA	9.395024248	3.404975752

Note: TEA, total early-stage entrepreneurship.



Inflection point: GDP = USD36,600.

Table 7. Model M-1 (2): TEA on GDP (FD–ED)

TEA = 33.91 – 0.0027 * GDP + 8.1(E–08)GDP^2

SUMMARY	
R	0.62307474
R2	0.388222132
adj R^2	0.354234472
SE	8.03944934
Sample	39

ANOVA

	d.f.	SS	Var	est Var. ratio	F
Regression	2	1476.527822	738.2639109	11.42244389	0.000144108
Residual	36	2326.778845	64.63274569		
Total	38	3803.306667			

	Coef.	SE	t	P	min 95% conf	max 95% conf
Intercept	33.91268611	4.104385247	8.26254946	7.82518E–10	25.58860707	42.23676514
GDP	–0.00268733	0.000826538	–3.251308104	0.002496079	–0.004363626	–0.001011033
GDP^2	8.14556E–08	3.59702E–08	2.264533906	0.029660743	8.50478E-09	1.54406E–07

		TEA	
	Country	**Estimated**	**Residual**
1	Argentina	11.91269541	6.987304592
2	Bosnia & Herzegovina	17.45212223	–9.65212223
3	Brazil	13.58457262	1.815427378
4	Chile	11.98776935	10.61223065
5	PR China	16.25731371	–3.457313708
6	Colombia	14.51142125	5.588578754
7	Costa Rica	13.01955863	1.980441368
8	Croatia	11.85070187	–3.550701871
9	Ecuador	14.96159219	11.63840781
10	El Salvador	18.61202069	–3.312020691
11	Estonia	13.9663106	0.333689403
12	Hungary	12.48158063	–3.281580625
13	Latvia	11.94687506	1.453124936
14	Lithuania	13.69331864	–6.993318637
15	Malaysia	11.75527193	–4.755271932
16	Mexico	11.85248262	0.24751738
17	Namibia	17.90731443	0.292685574
18	Panama	11.83735017	–2.337350169
19	Peru	14.58302329	5.616976711
20	Poland	13.0948934	–3.694893397
21	Romania	12.90792506	–3.707925058
22	Russia	11.83317611	–7.533176107
23	South Africa	13.96290506	–6.662905059
24	Thailand	15.73108909	3.168910913
25	Trinidad & Tobago	12.6516999	2.348300104
26	Tunisia	15.56476294	–10.76476294

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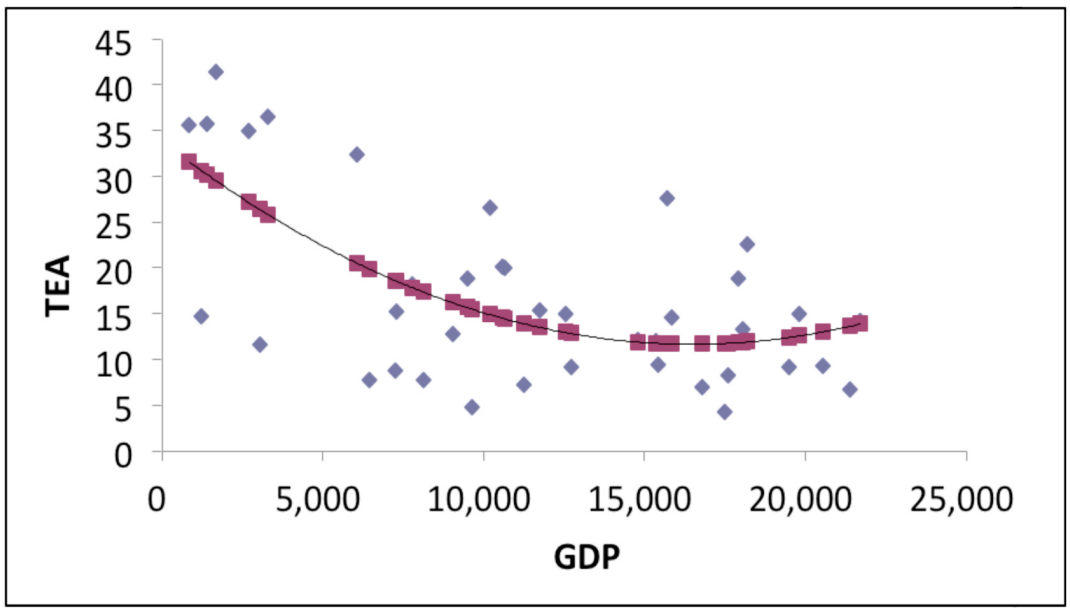
		GDP	
	Country	**Estimated**	**Residual**
27	Turkey	11.97903079	0.220969205
28	Uruguay	11.78047056	2.819529442
29	Algeria	18.68415493	–9.884154934
30	Angola	20.56445701	11.83554299
31	Botswana	11.7988639	15.9011361
32	Egypt	19.92831	–12.12831
33	Ethiopia	30.66664651	–15.96664651
34	Ghana	25.89719881	10.60280119
35	Malawi	31.69129672	3.90870328
36	Nigeria	27.25727301	7.742726986
37	Pakistan	26.46164114	–14.86164114
38	Uganda	30.25055486	5.549445142
39	Zambia	29.6203549	11.8796451

Notes: ED, efficiency-driven; FD, factor-driven; TEA, total early-stage entrepreneurship.



Inflection point: GDP = USD16,507

Table 8. Model M-1 (3): TEA on GDP (ID)

TEA = 10.40183 – 0.00031 * GDP + (5.51E–09) * GDP²

SUMMARY	
R	0.625567388
R²	0.391334557
adjR²	0.330468012
SE	1.858683853
Sample	23

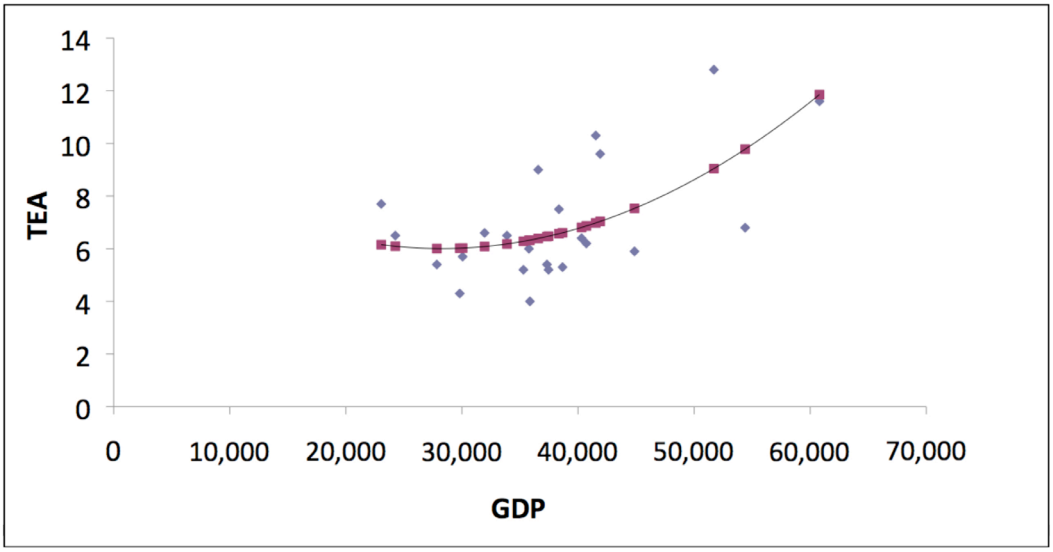
ANOVA

	d.f.	SS	Var	est Var. ratio	F
Regression	2	44.42327799	22.21163899	6.429386796	0.006978892
Residual	20	69.09411332	3.454705666		
Total	22	113.5173913			

	Coef.	SE	t	P	min 95% conf	max 95% conf
Intercept	10.40182742	5.878286494	1.769533933	0.09205128	–1.860063306	22.66371814
GDP	–0.000311386	0.000291944	–1.066593612	0.298862142	–0.000920371	0.000297599
GDP²	5.51458E-09	3.51129E-09	1.57052733	0.131979086	–1.80985E-09	1.2839E-08

		TEA	
	Country	**Estimated**	**Residual**
1	Austria	7.037390442	2.562609558
2	Belgium	6.475549546	–1.275549546
3	Denmark	6.461933959	–1.061933959
4	Finland	6.319496201	–0.319496201
5	France	6.281204952	–1.081204952
6	Germany	6.606393521	–1.306393521
7	Greece	6.093195698	0.406804302
8	Ireland	6.865489763	–0.665489763
9	Israel	6.181878122	0.318121878
10	Italy	6.019898461	–1.719898461
11	Japan	6.326558591	–2.326558591
12	Republic of Korea	6.082337225	0.517662775
13	Netherlands	6.980820454	3.319179546
14	Norway	9.781222771	–2.981222771
15	Portugal	6.154482964	1.545517036
16	Singapore	11.85467297	–0.254672974
17	Slovenia	6.007016613	–0.607016613
18	Spain	6.024521963	–0.324521963
19	Sweden	6.809717354	–0.409717354
20	Switzerland	7.531444096	–1.631444096
21	Republic of China	6.571325307	0.928674693
22	United Kingdom	6.389390862	2.610609138
23	USA	9.044058163	3.755941837

Notes: ID, innovation-driven; TEA, total early-stage entrepreneurship.



Inflection point: GDP = USD28,196

Table 9. Model M-2 (1): GDP on TEA (all countries)

GDP = 39107.93 – 177.59 * TEA + 21.75 * TEA²

SUMMARY	
R	0.588118146
R²	0.345882953
adj R²	0.323709494
SE	12152.15616
Sample	62

ANOVA

	d.f.	SS	Var	est Var. ratio	F
Regression	2	4607150362	2303575181	15.59896225	3.64616E–06
Residual	59	8712819064	147674899.4		
Total	61	13319969425			

	Coef.	SE	t	P	min 95% conf	max 95% conf
Intercept	39107.93024	5259.462488	7.435727572	4.94243E–10	28583.7702	49632.09027
TEA	–1776.586721	695.6569188	–2.553825993	0.013258068	–3168.592989	–384.5804536
TEA²	21.74863289	16.84657859	1.290982189	0.201745495	–11.96129271	55.4585585

		GDP	
	Country	**Estimated**	**Residual**
1	Argentina	13299.27	4618.17
2	Bosnia & Herzegovina	26573.74	–18446.28
3	Brazil	16906.40	–5159.04
4	Chile	10065.40	8145.81
5	PR China	19930.92	–10875.59
6	Colombia	12185.20	–1514.05
7	Costa Rica	17352.57	–4807.85
8	Croatia	25860.52	–8242.20
9	Ecuador	7239.19	2975.43
10	El Salvador	17017.29	–9701.30
11	Estonia	18150.12	3564.06
12	Hungary	24604.14	–5107.57
13	Latvia	19206.85	–1148.80
14	Lithuania	28181.10	–6798.56
15	Malaysia	27737.51	–10943.84
16	Mexico	20795.45	–5432.13
17	Namibia	13978.07	–6178.10
18	Panama	24193.17	–8744.62
19	Peru	12095.19	–1499.02
20	Poland	24329.72	–3767.75
21	Romania	24604.14	–11881.99
22	Russia	31870.74	–14352.72
23	South Africa	27297.83	–16016.67
24	Thailand	13299.27	–3796.34
25	Trinidad & Tobago	17352.57	2473.85
26	Tunisia	31081.40	–21430.92
27	Turkey	20670.64	–5858.96
28	Uruguay	17805.70	–1941.03
29	Algeria	25158.18	–17890.30
30	Angola	4377.37	1714.66
31	Botswana	6583.99	9121.77
32	Egypt	26573.74	–20099.36

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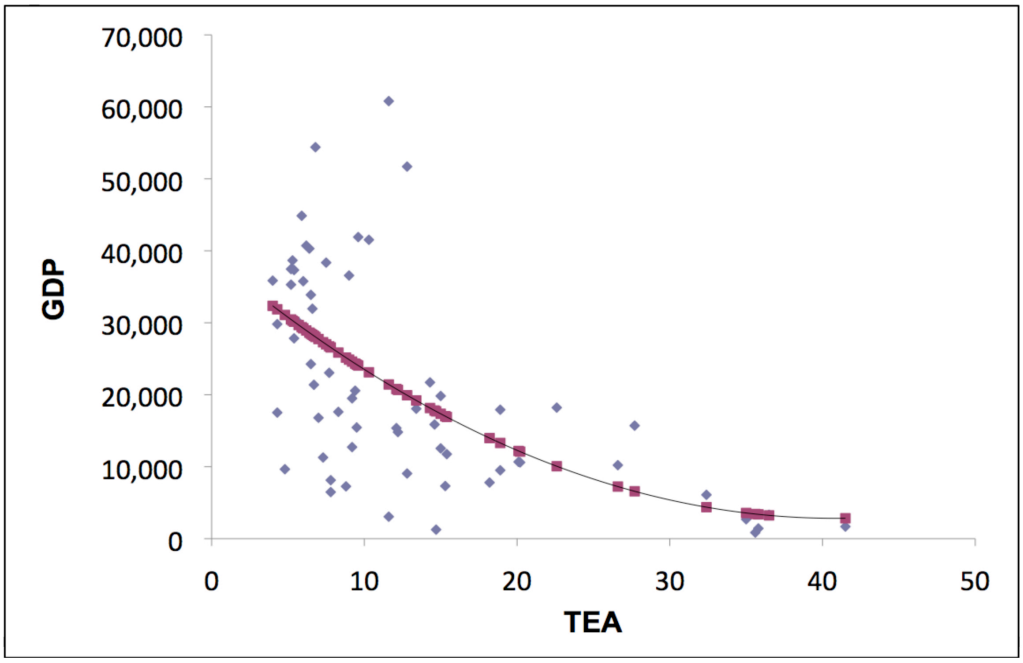
		GDP	
	Country	**Estimated**	**Residual**
33	Ethiopia	17691.77	–16436.07
34	Ghana	3237.13	78.86
35	Malawi	3424.79	–2576.36
36	Nigeria	3569.47	–872.39
37	Pakistan	21426.02	–18370.34
38	Uganda	3380.04	–1955.82
39	Zambia	2836.16	–1153.05
40	Austria	24057.05	17850.80
41	Belgium	30457.76	7001.23
42	Denmark	30148.55	7175.65
43	Finland	29231.36	6539.59
44	France	30457.76	4837.61
45	Germany	30302.94	8362.98
46	Greece	28479.00	–4218.96
47	Ireland	28929.11	11787.06
48	Israel	28479.00	5398.95
49	Italy	31870.74	–2058.93
50	Japan	32349.56	3505.86
51	Republic of Korea	28329.83	3620.03
52	Netherlands	23116.40	18411.09
53	Norway	28032.80	26364.32
54	Portugal	26717.69	–3671.03
55	Singapore	21426.02	39373.14
56	Slovenia	30148.55	–2311.49
57	Spain	29688.00	370.12
58	Sweden	28628.60	11675.69
59	Switzerland	29383.14	15480.92
60	Republic of China	27006.89	11349.68
61	United Kingdom	24880.29	11689.09
62	USA	19930.92	31773.03

Note: TEA, total early-stage entrepreneurship.



Inflection point: TEA = 40.84.

Table 10: Model M-2 (2): GDP on TEA (FD-ED)

GDP = 12,537 + 256 * TEA – 14 * TEA²

SUMMARY	
R	0.587869813
R²	0.345590917
adj R²	0.309234857
SE	5208.806828
Sample	39

ANOVA

	d.f.	SS	Var	est Var. ratio	F
Regression	2	515812669.9	257906334.9	9.505730702	0.000484493
Residual	36	976740068.6	27131668.57		
Total	38	1492552738			

	Coef.	SE	t	P	min 95% conf	max 95% conf
Intercept	12536.72485	3499.018328	3.582926317	0.000997816	5440.38682	19633.06288
TEA	256.078345	392.492076	0.652442076	0.518260718	–539.9324742	1052.089164
TEA²	–13.82832783	8.836687681	–1.564876833	0.126360882	–31.74996098	4.093305316

		GDP	
	Country	**Estimated**	**Residual**
1	Argentina	12436.98859	5480.448414
2	Bosnia & Herzegovina	13692.82048	–5565.360476
3	Brazil	13200.80513	–1453.447135
4	Chile	11261.13872	6950.070276
5	PR China	13548.89443	–4493.568435
6	Colombia	12097.11686	–1425.967858
7	Costa Rica	13266.52626	–721.8052634
8	Croatia	13709.54161	3908.78239
9	Ecuador	9564.037187	650.5798132
10	El Salvador	13217.65027	–5901.663267
11	Estonia	13370.89043	8343.290574
12	Hungary	13722.21596	5774.354043
13	Latvia	13485.16013	4572.889872
14	Lithuania	13631.69613	7750.837874
15	Malaysia	13651.6852	3141.977798
16	Mexico	13610.66735	1752.647653
17	Namibia	12616.85542	–4816.883419
18	Panama	13721.46254	1727.091459
19	Peru	12066.99653	–1470.824531
20	Poland	13721.99025	6839.980754
21	Romania	13722.21596	–1000.073957
22	Russia	13382.17595	4135.842048
23	South Africa	13669.18518	–2388.025179
24	Thailand	12436.98859	–2934.061586
25	Trinidad & Tobago	13266.52626	6559.892737
26	Tunisia	13447.29623	–3796.809233
27	Turkey	13602.67235	1209.009655

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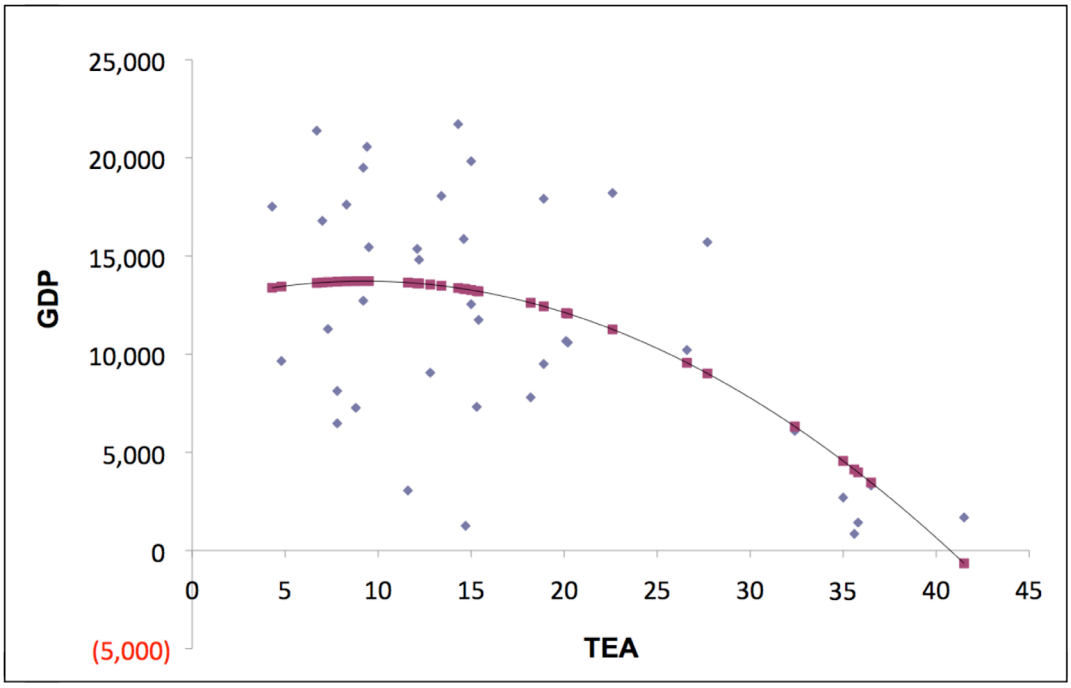
		GDP	
	Country	**Estimated**	**Residual**
28	Uruguay	13327.82233	2536.848673
29	Algeria	13719.34858	–6451.470579
30	Angola	6317.237804	–225.2168037
31	Botswana	9019.757345	6685.995655
32	Egypt	13692.82048	–7218.436476
33	Ethiopia	13312.91316	–12057.21416
34	Ghana	3460.794689	–144.8056889
35	Malawi	4127.644371	–3279.209371
36	Nigeria	4559.765331	–1862.686331
37	Pakistan	13646.49386	–10590.81786
38	Uganda	3981.391519	–2557.168519
39	Zambia	–651.8614407	2334.976441

Notes: ED, efficiency driven; FD, factor driven; TEA; total early-stage entrepreneurship activities.



Inflection point: TEA = 9.26

Table 11: Model M-2 (3): GDP on TEA (ID)

GDP = 44,918 – 3,812 * TEA + 366 * TEA²

SUMMARY	
R	0.605987153
R²	0.36722043
adj²	0.303942473
SE	7511.875287
Sample	23

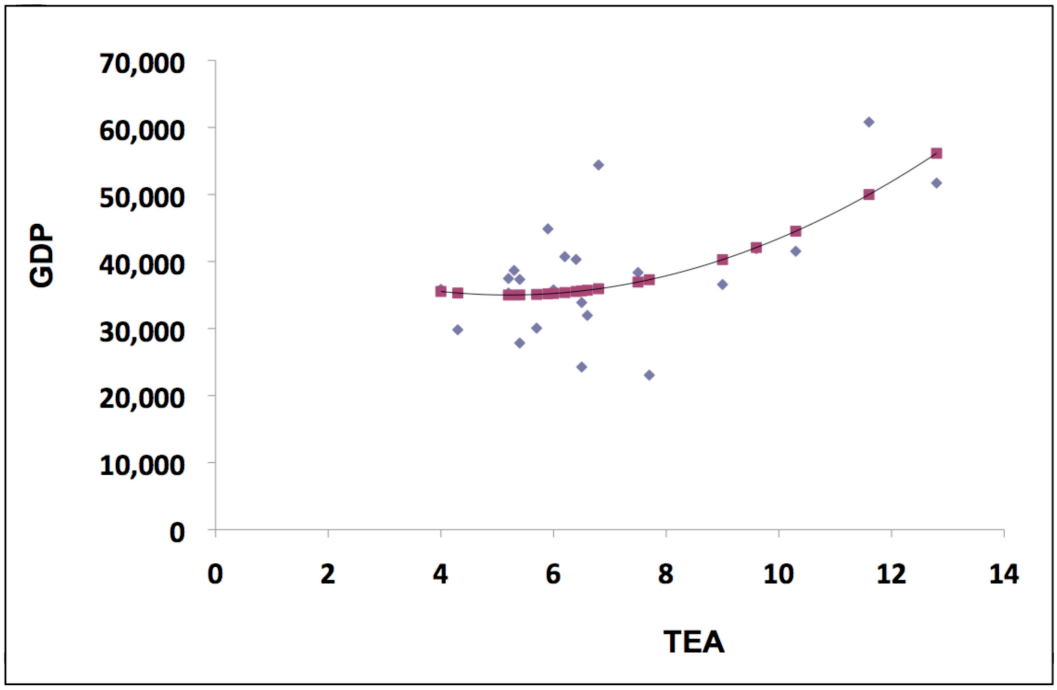
ANOVA

	d.f.	SS	Var	est Var. ratio	F
Regression	2	654939402	327469701.0	5.80329149	0.010292586
Residual	20	1128565407	56428270.33		
Total	22	1783504809			

	Coef.	SE	t	P	min 95% conf	max 95% conf
Intercept	44918.32253	18452.06506	2.43432496	0.024414583	6427.989403	83408.65566
TEA	–3812.291189	4812.643351	–0.792140807	0.437574016	–13851.28928	6226.706898
TEA²	366.3347437	288.676833	1.269013311	0.219006769	–235.8345763	968.5040636

		GDP	
	Country	**Estimated**	**Residual**
1	Austria	42081.73709	–173.8830923
2	Belgium	35000.09982	2458.894182
3	Denmark	35014.27124	2309.930763
4	Finland	35232.62617	538.3248302
5	France	35000.09982	295.2711819
6	Germany	35003.52218	3662.39882
7	Greece	35616.07272	–11356.03472
8	Ireland	35364.02471	5352.149293
9	Israel	35616.07272	–1738.122723
10	Italy	35298.99983	–5487.18983
11	Japan	35530.51368	324.9123248
12	Republic of Korea	35714.74212	–3764.883118
13	Netherlands	44516.17624	–2988.689239
14	Norway	35934.06099	18463.05501
15	Portugal	37283.66733	–14237.01133
16	Singapore	49989.74784	10809.41716
17	Slovenia	35014.27124	–7177.206237
18	Spain	35090.47858	–5032.363576
19	Sweden	35524.73002	4779.558977
20	Switzerland	35177.91694	9686.138056
21	Republic of China	36932.46795	1424.102055
22	United Kingdom	40280.81607	–3711.438067
23	USA	56141.27971	–4437.330712

Notes: ID, innovation driven; TEA, total early-stage entrepreneurial activities.



Inflection point: TEA = 5.20

Table 12: Data for Models M-3 and M-4 (GDP & GEDI)

Data
70 Countries provided by Acs and Szerb [11]
GEDI: estimated by Acs and Szerb [11]
GDP: GDP per capita in USD PPP by World Bank

			M-4 (1) Table 15					M-3 (1) Table 13			
	Country		**GDP**	**GEDI**	**GEDI²**	**GEDI³**		**GEDI**	**GDP**	**GDP²**	**GDP³**
1	**Denmark**	DEN	35890	0.763	0.582169	0.444194947		0.763	35890	1288092100	4.62296E+13
2	**Canada**	CA	34926	0.737	0.543169	0.400315553		0.737	34926	1219825476	4.26036E+13
3	**United States**	USA	44474	0.717	0.514089	0.368601813		0.717	44474	1977936676	8.79668E+13
4	**Sweden**	SWE	36358	0.685	0.469225	0.321419125		0.685	36358	1321904164	4.80618E+13
5	**New Zealand**	NEW	26773	0.679	0.461041	0.313046839		0.679	26773	716793529	1.91907E+13
6	**Ireland**	IRE	44402	0.631	0.398161	0.251239591		0.631	44402	1971537604	8.75402E+13
7	**Switzerland**	SWT	40183	0.63	0.3969	0.250047		0.63	40183	1614673489	6.48824E+13
8	**Norway**	NOR	49014	0.623	0.388129	0.241804367		0.623	49014	2402372196	1.1775E+14
9	**Iceland**	ICE	35490	0.617	0.380689	0.234885113		0.617	35490	1259540100	4.47011E+13
10	**Netherlands**	NET	38083	0.616	0.379456	0.233744896		0.616	38083	1450314889	5.52323E+13
11	**Australia**	AUS	34073	0.598	0.357604	0.213847192		0.598	34073	1160969329	3.95577E+13
12	**Belgium**	BEL	34584	0.576	0.331776	0.191102976		0.576	34584	1196053056	4.13643E+13

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			M-4 (1) Table 15					M-3 (1) Table 13			
	Country		**GDP**	**GEDI**	**GEDI²**	**GEDI³**		**GEDI**	**GDP**	**GDP²**	**GDP³**
13	**Finland**	FIN	33869	0.564	0.318096	0.179406144		0.564	33869	1147109161	3.88514E+13
14	**United Kingdom**	UKI	34726	0.561	0.314721	0.176558481		0.561	34726	1205895076	4.18759E+13
15	**Singapore**	SIG	39508	0.558	0.311364	0.173741112		0.558	39508	1560882064	6.16673E+13
16	**Germany**	GER	34512	0.544	0.295936	0.160989184		0.544	34512	1191078144	4.11065E+13
17	**Puerto Rico**	PUE	20223	0.541	0.292681	0.158340421		0.541	20223	408969729	8.27059E+12
18	**France**	FRA	33412	0.498	0.248004	0.123505992		0.498	33412	1116361744	3.72999E+13
19	**Slovenia**	SLO	24913	0.489	0.239121	0.116930169		0.489	24913	620657569	1.54624E+13
20	**Korea**	KOR	25481	0.488	0.238144	0.116214272		0.488	25481	649281361	1.65443E+13
21	**Israel**	ISR	25868	0.472	0.222784	0.105154048		0.472	25868	669153424	1.73097E+13
22	**Austria**	AUR	36836	0.454	0.206116	0.093576664		0.454	36836	1356890896	4.99824E+13
23	**Hong Kong**	HOK	39089	0.446	0.198916	0.088716536		0.446	39089	1527949921	5.9726E+13
24	**United Arab Emirates**	UAE	39900	0.417	0.173889	0.072511713		0.417	39900	1592010000	6.35212E+13
25	**Czech Republic**	CZR	22110	0.415	0.172225	0.071473375		0.415	22110	488852100	1.08085E+13
26	**Chile**	CHI	13609	0.414	0.171396	0.070957944		0.414	13609	185204881	2.52045E+12

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			M-4 (1) Table 15					M-3 (1) Table 13			
	Country		**GDP**	**GEDI**	**GEDI²**	**GEDI³**		**GEDI**	**GDP**	**GDP²**	**GDP³**
27	**Italy**	ITA	30248	0.407	0.165649	0.067419143		0.407	30248	914941504	2.76752E+13
28	**Spain**	SPA	31241	0.401	0.160801	0.064481201		0.401	31241	976000081	3.04912E+13
29	**Japan**	JAP	33288	0.397	0.157609	0.062570773		0.397	33288	1108090944	3.68861E+13
30	**Saudi Arabia**	SAU	23428	0.381	0.145161	0.055306341		0.381	23428	548871184	1.2859E+13
31	**Malaysia**	MAL	12681	0.364	0.132496	0.048228544		0.364	12681	160807761	2.0392E+12
32	**Latvia**	LAT	15574	0.361	0.130321	0.047045881		0.361	15574	242549476	3.77747E+12
33	**Portugal**	POR	22595	0.35	0.1225	0.042875		0.35	22595	510534025	1.15355E+13
34	**Greece**	GREE	28024	0.318	0.101124	0.032157432		0.318	28024	785344576	2.20085E+13
35	**Uruguay**	URG	10844	0.304	0.092416	0.028094464		0.304	10844	117592336	1.27517E+12
36	**Poland**	POL	14095	0.286	0.081796	0.023393656		0.286	14095	198669025	2.80024E+12
37	**Croatia**	CRO	15599	0.284	0.080656	0.022906304		0.284	15599	243328801	3.79569E+12
38	**Peru**	PER	7558	0.284	0.080656	0.022906304		0.284	7558	57123364	4.31738E+11
39	**PR China**	CHN	5087	0.281	0.078961	0.022188041		0.281	5087	25877569	1.31639E+11
40	**Colombia**	COL	8336	0.279	0.077841	0.021717639		0.279	8336	69488896	5.79259E+11
41	**South Africa**	SAF	9565	0.277	0.076729	0.021253933		0.277	9565	91489225	8.75094E+11

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			M-4 (1) Table 15					M-3 (1) Table 13			
	Country		**GDP**	**GEDI**	**GEDI²**	**GEDI³**		**GEDI**	**GDP**	**GDP²**	**GDP³**
42	**Turkey**	TUR	12747	0.272	0.073984	0.020123648		0.272	12747	162486009	2.07121E+12
43	**Mexico**	MEX	14135	0.27	0.0729	0.019683		0.27	14135	199798225	2.82415E+12
44	**Dominican Republic**	DOM	7709	0.261	0.068121	0.017779581		0.261	7709	59428681	4.58136E+11
45	**Indonesia**	IDN	3459	0.256	0.065536	0.016777216		0.256	3459	11964681	41385831579
46	**Hungary**	HUN	18639	0.253	0.064009	0.016194277		0.253	18639	347412321	6.47542E+12
47	**Romania**	ROM	13217	0.246	0.060516	0.014886936		0.246	13217	174689089	2.30887E+12
48	**Macedonia**	MAC	9632	0.242	0.058564	0.014172488		0.242	9632	92775424	8.93613E+11
49	**Egypt**	EGP	5383	0.237	0.056169	0.013312053		0.237	5383	28976689	1.55982E+11
50	**Morocco**	MOR	4248	0.235	0.055225	0.012977875		0.235	4248	18045504	76657300992
51	**Jordan**	JOR	5092	0.234	0.054756	0.012812904		0.234	5092	25928464	1.32028E+11
52	**India**	IND	2656	0.227	0.051529	0.011697083		0.227	2656	7054336	18736316416
53	**Panama**	PAN	11947	0.227	0.051529	0.011697083		0.227	11947	142730809	1.7052E+12
54	**Brazil**	BR	10844	0.304	0.092416	0.028094464		0.304	10844	117592336	1.27517E+12
55	**Venezuela**	VEN	11333	0.224	0.050176	0.011239424		0.224	11333	128436889	1.45558E+12

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			M-4 (1) Table 15					M-3 (1) Table 13			
	Country		**GDP**	**GEDI**	**GEDI²**	**GEDI³**		**GEDI**	**GDP**	**GDP²**	**GDP³**
56	**Thailand**	THA	7974	0.221	0.048841	0.010793861		0.221	7974	63584676	5.07024E+11
57	**Russia**	RUS	14121	0.218	0.047524	0.010360232		0.218	14121	199402641	2.81576E+12
58	**Tunisia**	TUN	7758	0.218	0.047524	0.010360232		0.218	7758	60186564	4.66927E+11
59	**Jamaica**	JAM	6848	0.207	0.042849	0.008869743		0.207	6848	46895104	3.21138E+11
60	**Algeria**	ALG	7887	0.189	0.035721	0.006751269		0.189	7887	62204769	4.90609E+11
61	**Serbia**	SER	10853	0.183	0.033489	0.006128487		0.183	10853	117787609	1.27835E+12
62	**Kazakhstan**	KAZ	10477	0.179	0.032041	0.005735339		0.179	10477	109767529	1.15003E+12
63	**Bosnia and Herzegovina**	BAH	8077	0.177	0.031329	0.005545233		0.177	8077	65237929	5.26927E+11
64	**Ecuador**	ECU	7597	0.166	0.027556	0.004574296		0.166	7597	57714409	4.38456E+11
65	**Bolivia**	BOL	4242	0.163	0.026569	0.004330747		0.163	4242	17994564	76332940488
66	**Syria**	SYR	4476	0.163	0.026569	0.004330747		0.163	4476	20034576	89674762176
67	**Guatemala**	GUA	4661	0.149	0.022201	0.003307949		0.149	4661	21724921	1.0126E+11
68	**Islamic Republic of Iran**	IRN	10625	0.145	0.021025	0.003048625		0.145	10625	112890625	1.19946E+12
69	**Philippines**	PHI	3186	0.125	0.015625	0.001953125		0.125	3186	10150596	32339798856
70	**Uganda**	UGA	918	0.1	0.01	0.001		0.1	918	842724	773620632

Notes: GEDI, global entrepreneurship development index; PPP, purchasing power parity.

Table 13: Model M-3 (1): GEDI on GDP (S-Curve)

GEDI = 0.16143 + 4.98(E–06)*GDP + 4.03(E–10) * GDP^2 – 6.3(E–15) * GDP^3

SUMMARY	
R	0.889651804
R2	0.791480332
adj R2	0.782002166
SE	0.082292901
Sample	70

ANOVA

	d.f.	SS	Var	est Var. ratio	F
Regression	3	1.696530958	0.565510319	83.50563528	1.99225E-22
Residual	66	0.446960028	0.006772122		
Total	69	2.143490986			

	Coef.	SE	t	P	min 95% conf	max 95% conf
Intercept	0.161429741	0.043745693	3.690185921	0.000455822	0.074088648	0.248770835
GED	4.98148E–06	7.82538E–06	0.636580727	0.526599715	–1.06424E-05	2.06054E–05
GED^2	4.02612E–10	3.66387E–10	1.098870112	0.275817154	–3.28904E-10	1.13413E–09
GED^3	–6.32195E–15	5.02411E–15	–1.258321689	0.212708726	–1.63529E-14	3.70901E–15

Residual		GEDI				Data		Estimated
	Country	Estimated	Residual		GDP = x	GEDI = y	GDP	GEDI
1	Denmark	0.566555084	0.196444916		35890	0.763	0.566555084	35890
2	Canada	0.557191371	0.179808629		34926	0.737	0.557191371	34926
3	United States	0.623195773	0.093804227		44474	0.717	0.623195773	44474
4	Sweden	0.570916697	0.114083303		36358	0.685	0.570916697	36358
5	New Zealand	0.462065912	0.216934088		26773	0.679	0.462065912	26773
6	Ireland	0.622957347	0.008042653		44402	0.631	0.622957347	44402
7	Switzerland	0.601504104	0.028495896		40183	0.63	0.601504104	40183
8	Norway	0.628407168	−0.005407168		49014	0.623	0.628407168	49014
9	Iceland	0.562730514	0.054269486		35490	0.617	0.562730514	35490
10	Netherlands	0.585877591	0.030122409		38083	0.616	0.585877591	38083
11	Australia	0.548502109	0.049497891		34073	0.598	0.548502109	34073
12	Belgium	0.553751598	0.022248402		34584	0.576	0.553751598	34584

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Residual		GEDI				Data		Estimated
	Country	Estimated	Residual		GDP = x	GEDI = y	GDP	GEDI
13	Finland	0.546370606	0.017629394		33869	0.564	0.546370606	33869
14	United Kingdom	0.555187088	0.005812912		34726	0.561	0.555187088	34726
15	Singapore	0.596810209	−0.038810209		39508	0.558	0.596810209	39508
16	Germany	0.553019833	−0.009019833		34512	0.544	0.553019833	34512
17	Puerto Rico	0.374540095	0.166459905		20223	0.541	0.374540095	20223
18	France	0.541523685	−0.043523685		33412	0.498	0.541523685	33412
19	Slovenia	0.437664809	0.051335191		24913	0.489	0.437664809	24913
20	Korea	0.445178878	0.042821122		25481	0.488	0.445178878	25481
21	Israel	0.450269112	0.021730888		25868	0.472	0.450269112	25868
22	Austria	0.575241724	−0.121241724		36836	0.454	0.575241724	36836
23	Hong Kong	0.593736857	−0.147736857		39089	0.446	0.593736857	39089
24	United Arab Emirates	0.599575354	−0.182575354		39900	0.417	0.599575354	39900

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Residual		GEDI			Data			Estimated
	Country	Estimated	Residual		GDP = x	GEDI = y	GDP	GEDI
25	Czech Republic	0.400057116	0.014942884		22110	0.415	0.400057116	22110
26	Chile	0.287854269	0.126145731		13609	0.414	0.287854269	13609
27	ltaly	0.505515122	−0.098515122		30248	0.407	0.505515122	30248
28	Spain	0.517241608	−0.116241608		31241	0.401	0.517241608	31241
29	Japan	0.540191747	−0.143191747		33288	0.397	0.540191747	33288
30	Saudi Arabia	0.41782437	−0.03682437		23428	0.381	0.41782437	23428
31	Malaysia	0.276451319	0.087548681		12681	0.364	0.276451319	12681
32	Latvia	0.312783734	0.048216266		15574	0.361	0.312783734	15574
33	Portugal	0.406606503	−0.056606503		22595	0.35	0.406606503	POR
34	Greece	0.478083334	−0.160083334		28024	0.318	0.478083334	GREE
35	Uruguay	0.254731459	0.049268541		10844	0.304	0.254731459	URG
36	Poland	0.293927298	−0.007927298		14095	0.286	0.293927298	POL

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Residual		GEDI			Data			Estimated
	Country	Estimated	Residual		GDP = x	GEDI = y	GDP	GEDI
37	Croatia	0.313106848	−0.029106848		15599	0.284	0.313106848	CRO
38	Peru	0.219348914	0.064651086		7558	0.284	0.219348914	PER
39	PR China	0.19635695	0.08464305		5087	0.281	0.19635695	CHN
40	Colombia	0.227270399	0.051729601		8336	0.279	0.227270399	COL
41	South Africa	0.240379983	0.036620017		9565	0.277	0.240379983	SAF
42	Turkey	0.277253439	−0.005253439		12747	0.272	0.277253439	TUR
43	Mexico	0.294430041	−0.024430041		14135	0.27	0.294430041	MEX
44	Dominican Republic	0.220862384	0.040137616		7709	0.261	0.220862384	DOM
45	Indonesia	0.183216177	0.072783823		3459	0.256	0.183216177	IDN
46	Hungary	0.353214693	−0.100214693		18639	0.253	0.353214693	HUN
47	Romania	0.28300539	−0.03700539		13217	0.246	0.28300539	ROM
48	Macedonia	0.241114509	0.000885491		9632	0.242	0.241114509	MAC

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Residual		GEDI				Data		Estimated
	Country	Estimated	Residual		GDP = x	GEDI = y	GDP	GEDI
49	Egypt	0.198925321	0.038074679		5383	0.237	0.198925321	EGP
50	Morocco	0.189371796	0.045628204		4248	0.235	0.189371796	MOR
51	Jordan	0.196399892	0.037600108		5092	0.234	0.196399892	JOR
52	India	0.177382272	0.049617728		2656	0.227	0.177382272	IND
53	Panama	0.267628433	−0.040628433		11947	0.227	0.267628433	PAN
54	Brazil	0.238318702	−0.013318702		9376	0.225	0.238318702	BR
55	Venezuela	0.260393046	−0.036393046		11333	0.224	0.260393046	VEN
56	Thailand	0.22354666	−0.00254666		7974	0.221	0.22354666	THA
57	Russia	0.294254032	−0.076254032		14121	0.218	0.294254032	RUS
58	Tunisia	0.221356029	−0.003356029		7758	0.218	0.221356029	TUN
59	Jamaica	0.212393253	−0.005393253		6848	0.207	0.212393253	JAM
60	Algeria	0.222661479	−0.033661479		7887	0.189	0.222661479	ALG

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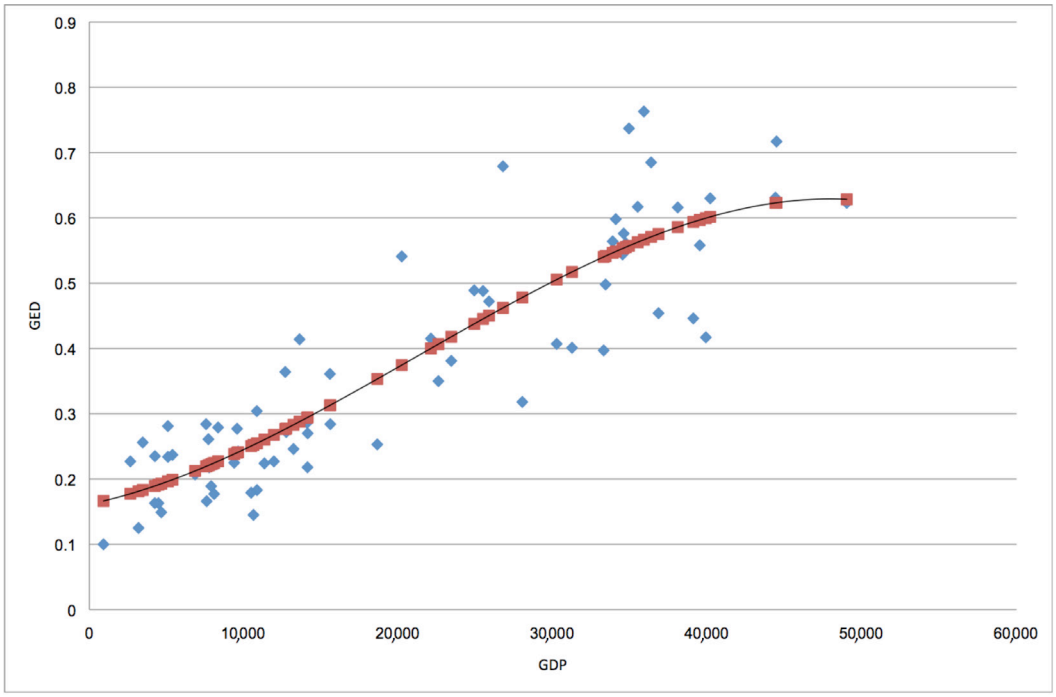
Residual		GEDI			Data			Estimated
	Country	Estimated	Residual		GDP = x	GEDI = y	GDP	GEDI
61	Serbia	0.254834823	−0.071834823		10853	0.183	0.254834823	SER
62	Kazakhstan	0.250544003	−0.071544003		10477	0.179	0.250544003	KAZ
63	Bosnia and Herzegovina	0.224599549	−0.047599549		8077	0.177	0.224599549	BAH
64	Ecuador	0.219738683	−0.053738683		7597	0.166	0.219738683	ECU
65	Bolivia	0.189323448	−0.026323448		4242	0.163	0.189323448	BOL
66	Syria	0.191226102	−0.028226102		4476	0.163	0.191226102	SYR
67	Guatemala	0.192754989	−0.043754989		4661	0.149	0.192754989	GUA
68	Islamic Republic of Iran	0.252226174	−0.107226174		10625	0.145	0.252226174	IRN
69	Philippines	0.181183049	−0.056183049		3186	0.125	0.181183049	PHI
70	Uganda	0.166337143	−0.066337143		918	0.1	0.166337143	UGA

Note: GEDI, global entrepreneurship and development index.

Table 12: Data for Models M-3 and M-4 (GDP & GEDI)



Inflection point: GDP = USD21,140

Table 14: Model M-3 (2): GEDI on GDP (S-curve)

GEDI = 0.187209 + 6.29(E–10)*GDP^2 – 9.2(E–15) * GDP^3

SUMMARY	
R	0.888931964
R^2	0.790200037
adj R^2	0.783937352
SE	0.081926827
Sample	70

ANOVA

	d.f.	SS	Var	est Var. ratio	F
Regression	2	1.693786657	0.846893328	126.1759102	1.90757E–23
Residual	67	0.449704329	0.006712005		
Total	69	2.143490986			

	Coef.	SE	t	P	min 95% conf	max 95% conf
Intercept	0.187209183	0.01647029	11.36647756	2.77409E–17	0.154334346	0.220084019
GED^2	6.28568E–10	9.04134E–11	6.952162358	1.84467E–09	4.48102E–10	8.09034E–10
GED^3	–9.21598E–15	2.12911E–15	–4.328551953	5.1262E–05	–1.34657E–14	–4.96625E–15

Residual		GEDI			Data		Estimated	
	Country	Estimated	Residual		GDP = x	GEDI = y	GDP	GEDI
1	Denmark	0.570811934	0.192188066		35,890	0.763	DEN	0.570811934
2	Canada	0.561318835	0.175681165		34,926	0.737	CA	0.561318835
3	USA	0.619777984	0.097222016		44,474	0.717	USA	0.619777984
4	Sweden	0.575179927	0.109820073		36,358	0.685	SWE	0.575179927
5	New Zealand	0.460901724	0.218098276		26,773	0.679	NEW	0.460901724
6	Ireland	0.61968674	0.01131326		44,402	0.631	IRE	0.61968674
7	Switzerland	0.604186895	0.025813105		40,183	0.63	SWT	0.604186895
8	Norway	0.612084229	0.010915771		49,014	0.623	NOR	0.612084229
9	Iceland	0.566952107	0.050047893		35,490	0.617	ICE	0.566952107
10	Netherlands	0.58981122	0.02618878		38,083	0.616	NET	0.58981122
11	Australia	0.55239482	0.04560518		34,073	0.598	AUS	0.55239482
12	Belgium	0.55779784	0.01820216		34,584	0.576	BEL	0.55779784
13	Finland	0.550191705	0.013808295		33,869	0.564	FIN	0.550191705
14	United Kingdom	0.559269204	0.001730796		34,726	0.561	UKI	0.559269204
15	Singapore	0.600005559	–0.042005559		39,508	0.558	SIG	0.600005559
16	Germany	0.557046739	–0.013046739		34,512	0.544	GER	0.557046739
17	Puerto Rico	0.368052988	0.172947012		20,223	0.541	PUE	0.368052988
18	France	0.545164007	–0.047164007		33,412	0.498	FRA	0.545164007
19	Slovenia	0.434833364	0.054166636		24,913	0.489	SLO	0.434833364
20	Korea	0.442854641	0.045145359		25,481	0.488	KOR	0.442854641
21	Israel	0.448292397	0.023707603		25,868	0.472	ISR	0.448292397
22	Austria	0.579470892	–0.125470892		36,836	0.454	AUR	0.579470892
23	Hong Kong	0.597196378	–0.151196378		39,089	0.446	HOK	0.597196378
24	United Arab Emirates	0.602486368	–0.185486368		39,900	0.417	UAE	0.602486368
25	Czech Republic	0.394875058	0.020124942		22,110	0.415	CZR	0.394875058

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Residual		GEDI			Data		Estimated	
	Country	Estimated	Residual		GDP = x	GEDI = y	GDP	GEDI
26	Chile	0.280394664	0.133605336		13,609	0.414	CHI	0.280394664
27	Italy	0.507258889	–0.100258889		30,248	0.407	ITA	0.507258889
28	Spain	0.519685562	–0.118685562		31,241	0.401	SPA	0.519685562
29	Japan	0.543778329	–0.146778329		33,288	0.397	JAP	0.543778329
30	Saudi Arabia	0.413704399	–0.032704399		23,428	0.381	SAU	0.413704399
31	Malaysia	0.269494596	0.094505404		12,681	0.364	MAL	0.269494596
32	Latvia	0.304855063	0.056144937		15,574	0.361	LAT	0.304855063
33	Portugal	0.401803647	–0.051803647		22,595	0.35	POR	0.401803647
34	Greece	0.478022117	–0.160022117		28,024	0.318	GREE	0.478022117
35	Uruguay	0.249372049	0.054627951		10,844	0.304	URG	0.249372049
36	Poland	0.286279291	–0.000279291		14,095	0.286	POL	0.286279291
37	Croatia	0.305177003	–0.021177003		15,599	0.284	CRO	0.305177003
38	Peru	0.219136228	0.064863772		7,558	0.284	PER	0.219136228
39	PR China	0.202261819	0.078738181		5,087	0.281	CHN	0.202261819
40	Colombia	0.225549259	0.053450741		8,336	0.279	COL	0.225549259
41	South Africa	0.23665156	0.04034844		9,565	0.277	SAF	0.23665156
42	Turkey	0.270254523	0.001745477		12,747	0.272	TUR	0.270254523
43	Mexico	0.286768734	–0.016768734		14,135	0.27	MEX	0.286768734
44	Dominican Republic	0.220342	0.040658		7,709	0.261	DOM	0.220342
45	Indonesia	0.194348391	0.061651609		3,459	0.256	IDN	0.194348391
46	Hungary	0.345904256	–0.092904256		18,639	0.253	HUN	0.345904256
47	Romania	0.275734756	–0.029734756		13,217	0.246	ROM	0.275734756
48	Macedonia	0.237289358	0.004710642		9,632	0.242	MAC	0.237289358
49	Egypt	0.203985489	0.033014511		5,383	0.237	EGP	0.203985489
50	Morocco	0.197845543	0.037154457		4,248	0.235	MOR	0.197845543

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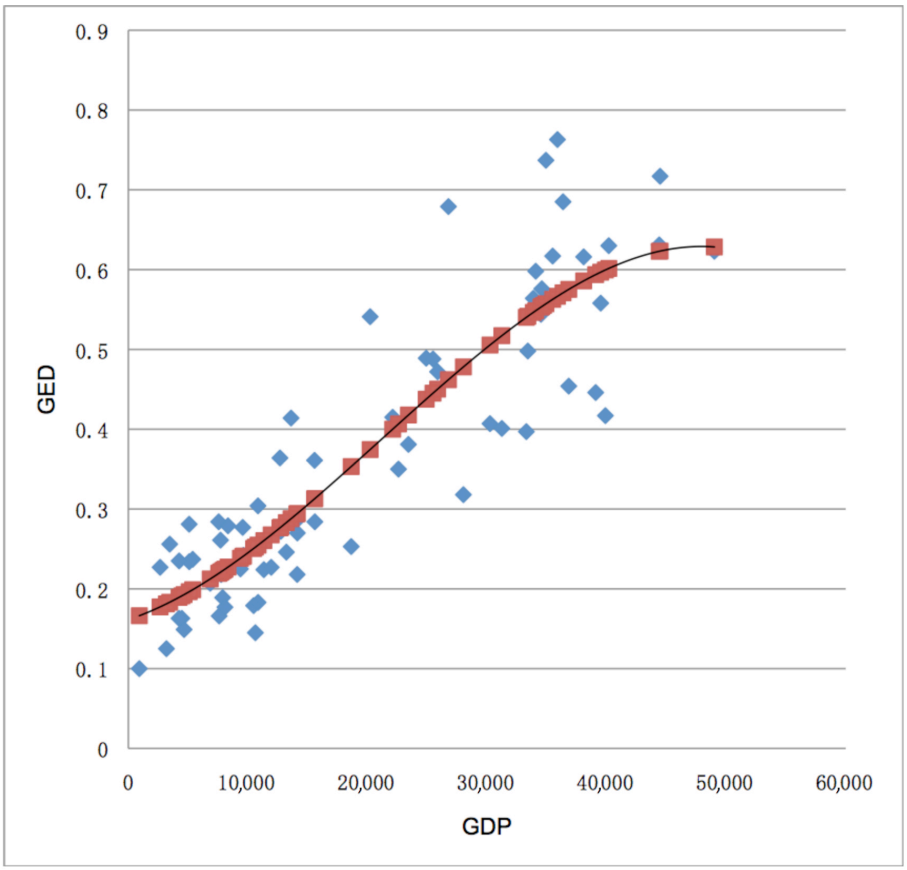
Residual		GEDI			Data		Estimated	
	Country	Estimated	Residual		GDP = x	GEDI = y	GDP	GEDI
51	Jordan	0.202290229	0.031709771		5,092	0.234	JOR	0.202290229
52	India	0.191470641	0.035529359		2,656	0.227	IND	0.191470641
53	Panama	0.261210117	–0.034210117		11,947	0.227	PAN	0.261210117
54	Brazil	0.234870069	–0.009870069		9,376	0.225	BR	0.234870069
55	Venezuela	0.254525993	–0.030525993		11,333	0.224	VEN	0.254525993
56	Thailand	0.222503771	–0.001503771		7,974	0.221	THA	0.222503771
57	Russia	0.286597342	–0.068597342		14,121	0.218	RUS	0.286597342
58	Tunisia	0.220737358	–0.002737358		7,758	0.218	TUN	0.220737358
59	Jamaica	0.213726361	–0.006726361		6,848	0.207	JAM	0.213726361
60	Algeria	0.221787688	–0.032787688		7,887	0.189	ALG	0.221787688
61	Serbia	0.249465507	–0.066465507		10,853	0.183	SER	0.249465507
62	Kazakhstan	0.245606882	–0.066606882		10,477	0.179	KAZ	0.245606882
63	Bosnia and Herzegovina	0.223359532	–0.046359532		8,077	0.177	BAH	0.223359532
64	Ecuador	0.219445827	–0.053445827		7,597	0.166	ECU	0.219445827
65	Bolivia	0.197816513	–0.034816513		4,242	0.163	BOL	0.197816513
66	Syria	0.198975842	–0.035975842		4,476	0.163	SYR	0.198975842
67	Guatemala	0.199931571	–0.050931571		4,661	0.149	GUA	0.199931571
68	Islamic Republic of Iran	0.24711443	–0.10211443		10,625	0.145	IRN	0.24711443
69	Philippines	0.193291483	–0.068291483		3,186	0.125	PHI	0.193291483
70	Uganda	0.187731763	–0.087731763		918	0.1	UGA	0.187731763

Note: GEDI, global entrepreneurship and development index.



Inflection point: GDP = USD22,790

Table 15: Model M-4(1): GDP on GEDI (S-curve)

$GDP = 5892 - 58742 * GEDI + 404014 * GEDI^2 - 363780 * GEDI^3$

SUMMARY	
R	0.905953648
R^2	0.820752013
adj R^2	0.812604377
SE	5796.738569
Sample	70

ANOVA

	d.f.	SS	Var	est Var. ratio	F
Regression	3	10154745277	3384915092	100.7349907	1.38E–24
Residual	66	2217743750	33602178.03		
Total	69	12372489027			

	Coef.	SE	t	P	min 95% conf	max 95% conf
Intercept	5892.269195	8183.011083	0.720061251	0.474029682	–10445.63939	22230.17778
GEDI	–58742.04823	69050.29281	–0.850713963	0.398004135	–196605.4044	79121.30795
$GEDI^2$	404013.7884	174527.6369	2.314898635	0.023737909	55558.12246	752469.4544
$GEDI^3$	–363780.00	135143.4	–2.69181	0.008996	–93957.4	–633602.4391

Residual		GEDI			Data		Estimated	
	Country	Estimated	Residual		GDP = x	GEDI = y	GDP	GEDI
1	Denmark	34687.18288	1202.817115		0.763	35890	DEN	34687.18288
2	Canada	36420.38127	−1494.381266		0.737	34926	CA	36420.38127
3	USA	37383.32338	7090.676621		0.717	44474	USA	37383.32338
4	Sweden	38301.50925	−1943.509254		0.685	36358	SWE	38301.50925
5	New Zealand	38393.18231	−11620.18231		0.679	26773	NEW	38393.18231
6	Ireland	38292.64996	6109.35004		0.631	44402	IRE	38292.64996
7	Switzerland	38275.77129	1907.228709		0.63	40183	SWT	38275.77129
8	Norway	38141.86515	10872.13485		0.623	49014	NOR	38141.86515
9	Iceland	38005.54058	−2515.540585		0.617	35490	ICE	38005.54058
10	Netherlands	37980.92169	102.0783076		0.616	38083	NET	37980.92169
11	Australia	37448.15462	−3375.154623		0.598	34073	AUS	37448.15462
12	Belgium	36579.50086	−1995.50086		0.576	34584	BEL	36579.50086
13	Finland	36012.56954	−2143.569539		0.564	33869	FIN	36012.56954
14	United Kingdom	35861.17179	−1135.171794		0.561	34726	UKI	35861.17179
15	Singapore	35706.02595	3801.974051		0.558	39508	SIG	35706.02595

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Residual		GEDI			Data		Estimated	
	Country	Estimated	Residual		GDP = x	GEDI = y	GDP	GEDI
16	Germany	34934.18537	−422.1853705		0.544	34512	GER	34934.18537
17	Puerto Rico	34758.91345	−14535.91345		0.541	20223	PUE	34758.91345
18	France	31906.76364	1505.236358		0.498	33412	FRA	31906.76364
19	Slovenia	31238.74002	−6325.740024		0.489	24913	SLO	31238.74002
20	Republic of Korea	31163.18956	−5682.189562		0.488	25481	KOR	31163.18956
21	Israel	29920.89806	−4052.898055		0.472	25868	ISR	29920.89806
22	Austria	28455.77304	8380.226962		0.454	36836	AUR	28455.77304
23	Hong Kong	27784.82717	11304.17283		0.446	39089	HOK	27784.82717
24	United Arab Emirates	25272.08286	14627.91714		0.417	39900	UAE	25272.08286
25	Czech Republic	25095.01454	−2985.01454		0.415	22110	CZR	25095.01454
26	Chile	25006.33261	−11397.33261		0.414	13609	CHI	25006.33261
27	Italy	24383.00449	5864.995514		0.407	30248	ITA	24383.00449
28	Spain	23845.56226	7395.437736		0.401	31241	SPA	23845.56226
29	Japan	23485.89381	9802.106192		0.397	33288	JAP	23485.89381
30	Saudi Arabia	22039.25751	1388.742494		0.381	23428	SAU	22039.25751

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Residual		GEDI			Data		Estimated	
	Country	Estimated	Residual		GDP = x	GEDI = y	GDP	GEDI
31	Malaysia	20495.79819	−7814.798192		0.364	12681	MAL	20495.79819
32	Latvia	20223.52341	−4649.52341		0.361	15574	LAT	20223.52341
33	Portugal	19227.1769	3367.8231		0.35	22595	POR	19227.1769
34	Greece	16369.55984	11654.44016		0.318	28024	GREE	16369.55984
35	Uruguay	15151.82266	−4307.822658		0.304	10844	URG	15151.82266
36	Poland	13628.6127	466.3873021		0.286	14095	POL	13628.6127
37	Croatia	13462.80995	2136.190048		0.284	15599	CRO	13462.80995
38	Peru	13462.80995	−5904.809952		0.284	7558	PER	13462.80995
39	PR China	13215.52239	−8128.522389		0.281	5087	CHN	13215.52239
40	Colombia	13051.63385	−4715.633849		0.279	8336	COL	13051.63385
41	South Africa	12888.54155	−3323.541549		0.277	9565	SAF	12888.54155
42	Turkey	12484.40894	262.5910609		0.272	12747	TUR	12484.40894
43	Mexico	12324.24099	1810.759013		0.27	14135	MEX	12324.24099
44	Dominican Republic	11614.56316	−3905.563157		0.261	7709	DOM	11614.56316
45	Indonesia	11228.53802	−7769.538025		0.256	3459	IDN	11228.53802
46	Hungary	10999.89662	7639.103377		0.253	18639	HUN	10999.89662

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Residual		GEDI			Data		Estimated	
	Country	Estimated	Residual		GDP = x	GEDI = y	GDP	GEDI
47	Romania	10475.45522	2741.544785		0.246	13217	ROM	10475.45522
48	Macedonia	10181.69034	−549.6903364		0.242	9632	MAC	10181.69034
49	Egypt	9820.796538	−4437.796538		0.237	5383	EGP	9820.796538
50	Morocco	9678.458868	−5430.458868		0.235	4248	MOR	9678.458868
51	Jordan	9607.731588	−4515.731588		0.234	5092	JOR	9607.731588
52	lndia	9121.086716	−6465.086716		0.227	2656	IND	9121.086716
53	Panama	9121.086716	2825.913284		0.227	11947	PAN	9121.086716
54	Brazil	8984.825617	391.1743827		0.225	9376	BR	8984.825617
55	Venezuela	8917.169364	2415.830636		0.224	11333	VEN	8917.169364
56	Thailand	8716.123978	−742.1239778		0.221	7974	THA	8716.123978
57	Russia	8518.00949	5602.99051		0.218	14121	RUS	8518.00949
58	Tunisia	8518.00949	−760.0094904		0.218	7758	TUN	8518.00949
59	Jamaica	7817.617544	−969.6175441		0.207	6848	JAM	7817.617544
60	Algeria	6765.822452	1121.177548		0.189	7887	ALG	6765.822452
61	Serbia	6443.071558	4409.928442		0.183	10853	SER	6443.071558
62	Kazakhstan	6236.047137	4240.952863		0.179	10477	KAZ	6236.047137

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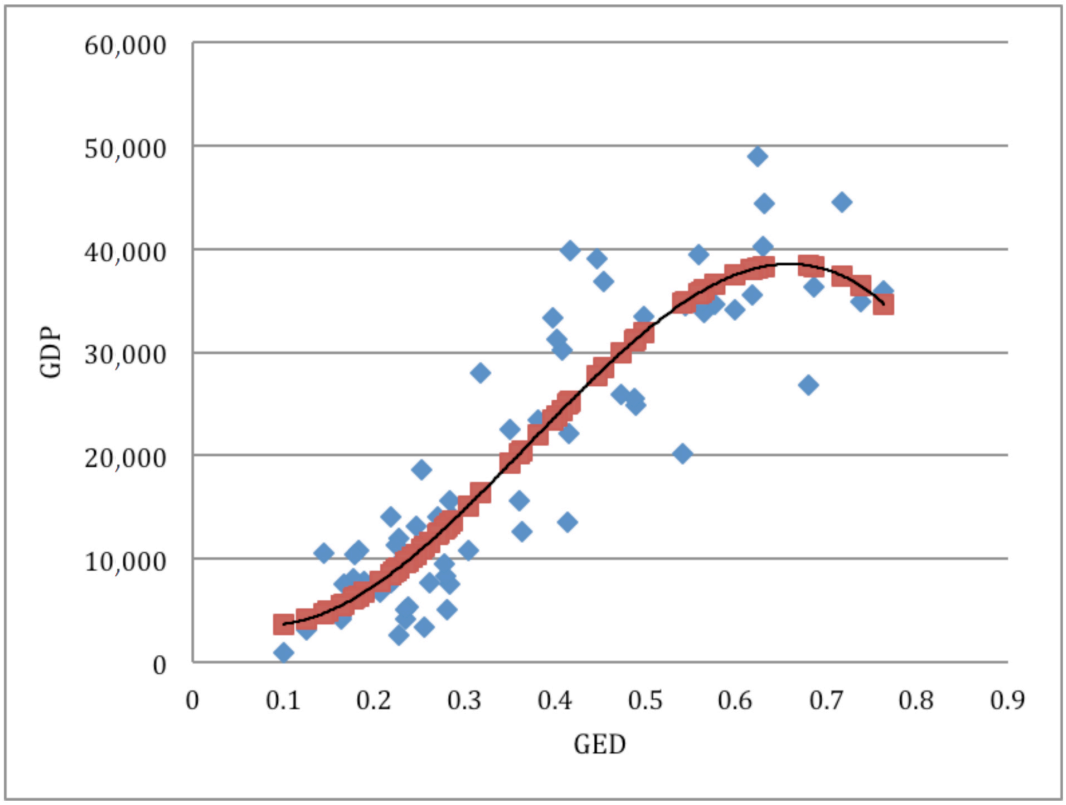
Residual		GEDI			Data		Estimated	
	Country	Estimated	Residual		GDP = x	GEDI = y	GDP	GEDI
63	Bosnia and Herzegovina	6135.030163	1941.969837		0.177	8077	BAH	6135.030163
64	Ecuador	5610.056064	1986.943936		0.166	7597	ECU	5610.056064
65	Bolivia	5476.118838	−1234.118838		0.163	4242	BOL	5476.118838
66	Syria	5476.118838	−1000.118838		0.163	4476	SYR	5476.118838
67	Guatemala	4905.84867	−244.8486698		0.149	4661	GUA	4905.84867
68	Islamic Republic of lran	4760.033514	5864.966486		0.145	10625	IRN	4760.033514
69	Philippines	4151.720935	−965.7209345		0.125	3186	PHI	4151.720935
70	Uganda	3694.422326	−2776.422326		0.1	918	UGA	3694.422326



Inflection point: GEDI = 0.32

Table 16: Model M-4 (2): GDP on GEDI (S-Curve)

$GDP = -919.05 + 257766.3 * GEDI^2 - 254388.9 * GEDI^3$

SUMMARY	
R	0.904868219
R^2	0.818786493
adj R^2	0.813377135
SE	5784.774309
Sample	70

ANOVA

	d.f.	SS	Var	est Var. ratio	F
Regression	2	10130426902	5065213451	151.3648072	1.41054E–25
Residual	67	2242062125	33463613.81		
Total	69	12372489027			

	Coef.	SE	t	P	min 95% conf	max 95% conf
Intercept	–919.0530148	1686.513669	–0.544942524	0.58760247	–4285.348347	2447.242318
$GEDI^2$	257766.3201	30043.5177	8.579764949	2.1726E–12	197799.2085	317733.4318
$GEDI^3$	–254388.8513	41495.73187	–6.130482338	5.25424E–08	–337214.6778	–171563.0248

Residual		GDP			Data	
	Country	Estimated	Residual		GEDI = x	GDP = y
1	Denmark	36146.26549	−256.2654893		0.763	0.763
2	Canada	37255.80764	−2329.80764		0.737	0.737
3	USA	37827.58494	6646.415061		0.717	0.717
4	Sweden	38265.90655	−1907.906555		0.685	0.685
5	New Zealand	38286.16321	−11513.16321		0.679	0.679
6	Ireland	37800.89182	6601.10818		0.631	0.631
7	Switzerland	37779.23035	2403.769655		0.63	0.63
8	Norway	37615.19589	11398.80411		0.623	0.623
9	Iceland	37457.59555	−1967.595547		0.617	0.617
10	Netherlands	37429.82817	653.1718329		0.616	0.616
11	Australia	36858.8726	−2785.872604		0.598	0.598
12	Belgium	35987.15907	−1403.159069		0.576	0.576
13	Finland	35436.45947	−1567.459466		0.564	0.564
14	United Kingdom	35290.91186	−564.9118553		0.561	0.561
15	Singapore	35142.29758	4365.702418		0.558	0.558
16	Germany	34409.42711	102.572889		0.544	0.544
17	Puerto Rico	34244.21352	−14021.21352		0.541	0.541
18	France	31589.47801	1822.52199		0.498	0.498

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Residual		GDP			Data	
	Country	Estimated	Residual		GEDI = x	GDP = y
19	Slovenia	30972.55585	−6059.555848		0.489	0.489
20	Republic of Korea	30902.83437	−5421.834369		0.488	0.488
21	Israel	29757.14137	−3889.14137		0.472	0.472
22	Austria	28405.84976	8430.150237		0.454	0.454
23	Hong Kong	27786.29464	11302.70536		0.446	0.446
24	United Arab Emirates	25457.50325	14442.49675		0.417	0.417
25	Czech Republic	25292.72171	−3182.721706		0.415	0.415
26	Chile	25210.15333	−11601.15333		0.414	0.414
27	Italy	24629.00181	5618.998194		0.407	0.407
28	Spain	24126.73038	7114.269623		0.401	0.401
29	Japan	23789.93187	9498.068133		0.397	0.397
30	Saudi Arabia	22429.24723	998.7527741		0.381	0.381
31	Malaysia	20965.14943	−8284.14943		0.364	0.364
32	Latvia	20705.36397	−5131.363966		0.361	0.361
33	Portugal	19750.3992	2844.600798		0.35	0.35
34	Greece	16966.81616	11057.18384		0.318	0.318
35	Uruguay	15755.7608	−4911.760802		0.304	0.304
36	Poland	14214.11563	−119.1156296		0.286	0.286

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Residual		GDP			Data	
	Country	Estimated	Residual		GEDI = x	GDP = y
37	Croatia	14044.23894	1554.76106		0.284	0.284
38	Peru	14044.23894	−6486.23894		0.284	0.284
39	PR China	13790.04313	−8703.043127		0.281	0.281
40	Colombia	13621.00987	−5285.009873		0.279	0.279
41	South Africa	13452.33536	−3887.335362		0.277	0.277
42	Turkey	13032.29872	−285.2987156		0.272	0.272
43	Mexico	12864.97596	1270.024037		0.27	0.27
44	Dominican Republic	12117.31929	−4408.319292		0.261	0.261
45	Indonesia	11705.98384	−8246.983835		0.256	0.256
46	Hungary	11460.66785	7178.332153		0.253	0.253
47	Romania	10892.86307	2324.136934		0.246	0.246
48	Macedonia	10571.45082	−939.4508154		0.242	0.242
49	Egypt	10172.98555	−4789.98555		0.237	0.237
50	Morocco	10014.6653	−5766.665301		0.235	0.235
51	Jordan	9935.73968	−4843.73968		0.234	0.234
52	India	9387.780188	−6731.780188		0.227	0.227
53	Panama	9387.780188	2559.219812		0.227	0.227
54	Brazil	9232.718933	143.2810672		0.225	0.225

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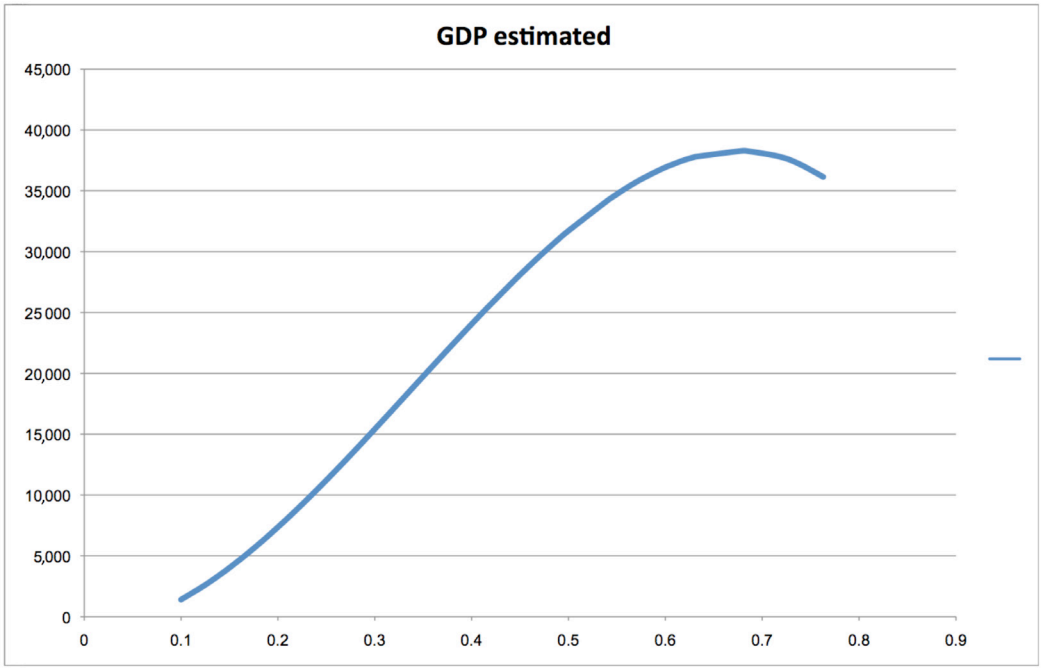
Residual		GDP			Data	
	Country	Estimated	Residual		GEDI = x	GDP = y
55	Venezuela	9155.445704	2177.554296		0.224	0.224
56	Thailand	8924.673926	−950.6739262		0.221	0.221
57	Russia	8695.506066	5425.493934		0.218	0.218
58	Tunisia	8695.506066	−937.5060657		0.218	0.218
59	Jamaica	7869.612304	−1021.612304		0.207	0.207
60	Algeria	6571.170141	1315.829859		0.189	0.189
61	Serbia	6154.264512	4698.735488		0.183	0.183
62	Kazakhstan	5881.031349	4595.968651		0.179	0.179
63	Bosnia and Herzegovina	5745.862576	2331.137424		0.177	0.177
64	Ecuador	5020.305798	2576.694202		0.166	0.166
65	Bolivia	4827.84659	−585.8465903		0.163	0.163
66	Syria	4827.84659	−351.8465903		0.163	0.163
67	Guatemala	3962.111712	698.8882877		0.149	0.149
68	Islamic Republic of Iran	3724.947654	6900.052346		0.145	0.145
69	Philippines	2611.692512	574.3074878		0.125	0.125
70	Uganda	1404.221335	−486.2213353		0.1	0.1

Note: GEDI, global entrepreneurship and development index.



Inflection point: GEDI = 0.34

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CAMBODIA

Dr. Chea Peou

INTRODUCTION

Radical changes brought about by the genocidal Cambodian regime of the late 1970s cost the country many things, including people's lives [1] as well as social and economic infrastructure [2]. However, the introduction of the free-market economy to Cambodia in the early 1990s once again opened up opportunities for entrepreneurial start-ups [3].

The general population census in 2008 revealed a total estimated population of 13,868,227, which rose to an estimated 15,184,116 in 2014 [4]. The employment rate among the total population in 2009 was around 64.8% [5]. This ratio increased in 2011 to 87.3%, with 30.1% of the total population living below the poverty line [6]. According to the ADB and Cambodian sources, the total population in 2012 was 14,740,000, with a GDP growth of 7.2%. Income per capita (2011) was USD820 (Table 1) [7], while the unemployment rate for adults in 2008 was more than 3.3% (Table 2) [8]. These data show that Cambodia is still reliant on strengthening its social and economic factors, perhaps through leveraging small and medium enterprise (SME) entrepreneurship, to foster economic growth focused on employment, equity, and efficiency [9].

Table 1. Cambodian economic and population indicators (2008–12)

	2008	2009	2010	2011	2012
Population (millions)	–	–	–	–	14.74
GDP growth (percentage change per year)	6.7	0.1	6.0	7.1	7.2
GNI per capita	670	700	760	820	–
Adult literacy rate (%)	–	73.9	–	–	–
Population living on less than USD1.25 PPP per day (%)	–	18.6	–	–	–
Population living below NPL (%)	30.1	–	–	–	–
Unemployment rate	–	–	–	–	–

Source: Asian Development Bank Fact Sheet (2012) [7].
Notes: GDP, gross domestic product; GNI, gross national income; PPP, purchasing power parity; NPL, national poverty line.

Table 2. Unemployment rates (%)

Age Group	1998	2008
Both Sexes		
15+	5.3	1.6
15–24	12.2	3.3
25–64	2.9	1.1
65+	2.9	1.0
Male		
15+	4.6	1.5
15–24	12.3	3.4
25–64	2.3	0.8
65+	2.0	0.8
Female		
15+	5.8	1.8
15–24	12.0	3.3
25–64	3.6	1.3
65+	3.9	1.3

Source: Royal Government of Cambodia [8, 10, 11].

SME ENTREPRENEURSHIP ROLES AND ISSUES

The role of SME entrepreneurs has been recognized around the world as a tool for poverty reduction, economic growth through job creation and income generation [12–14], domestic production and export [15], entrepreneurial skills and industrial linkages [16–17] as well as individual collective initiatives and social values [18]. However, the start-up growth process faces many difficulties [19–20]. Theorists and practitioners alike have discussed numerous strategies for growth and overcoming these difficulties. Some suggest analyzing the problems [20–22], while others promote the creation of friendly business environments [14, 23–25].

According to Chico [26] and Khan [27], SMEs are key to Cambodia where there is surplus labor capital scarcity, and a rapidly growing population. Encouraging an environment for SME entrepreneurs in private-sector development is an effective and strategic solution for job creation, income generation, and growth [25]. However, literature and other guidance exploring start-ups and the growth of SME entrepreneurs in Cambodia remain limited.

RESEARCH METHODOLOGY

Objectives

This research paper is a result of a collaboration with the APO and focuses on entrepreneurship initiatives in Cambodia. Its main objective is adapting the original Global Entrepreneurship Monitoring (GEM) model into a new GEM model for the next research paper on Cambodia. The sub-objectives are:

- To analyze Cambodia's GEM data in terms of start-ups and business discontinuance, with that of other countries;

- To analyze Cambodian social entrepreneurship in terms of social perception and the social trend, for businesses; and

- To explore the research hypotheses, for the collaborative GEM model with a view to the next research testing.

Therefore, the overall research objectives of this research are to seek input and constructive ideas from the APO seminar, and to identify scholars who can contribute their professional knowledge towards the next research paper.

Research Constraints

There are some indications that the objectives of this research will be difficult to achieve within the time period. Firstly, data from previous research are not available for comparison with the GEM data of the other countries. Secondly, data collection is difficult to conduct within the present research circle due to limited time and finance. Thirdly, SME entrepreneur registration data are still not complete. Finally, the documents, papers, materials, and other resources for scientific research of this topic are still in progress.

Research Design and Conceptual Model

To overcome the above research constraints, we chose an exploratory research approach. We incorporated the GEM model (Figure 1) for Cambodia from the original GEM model by Hay et al. in 1997, which was published in the first GEM executive report in 1999 [28].

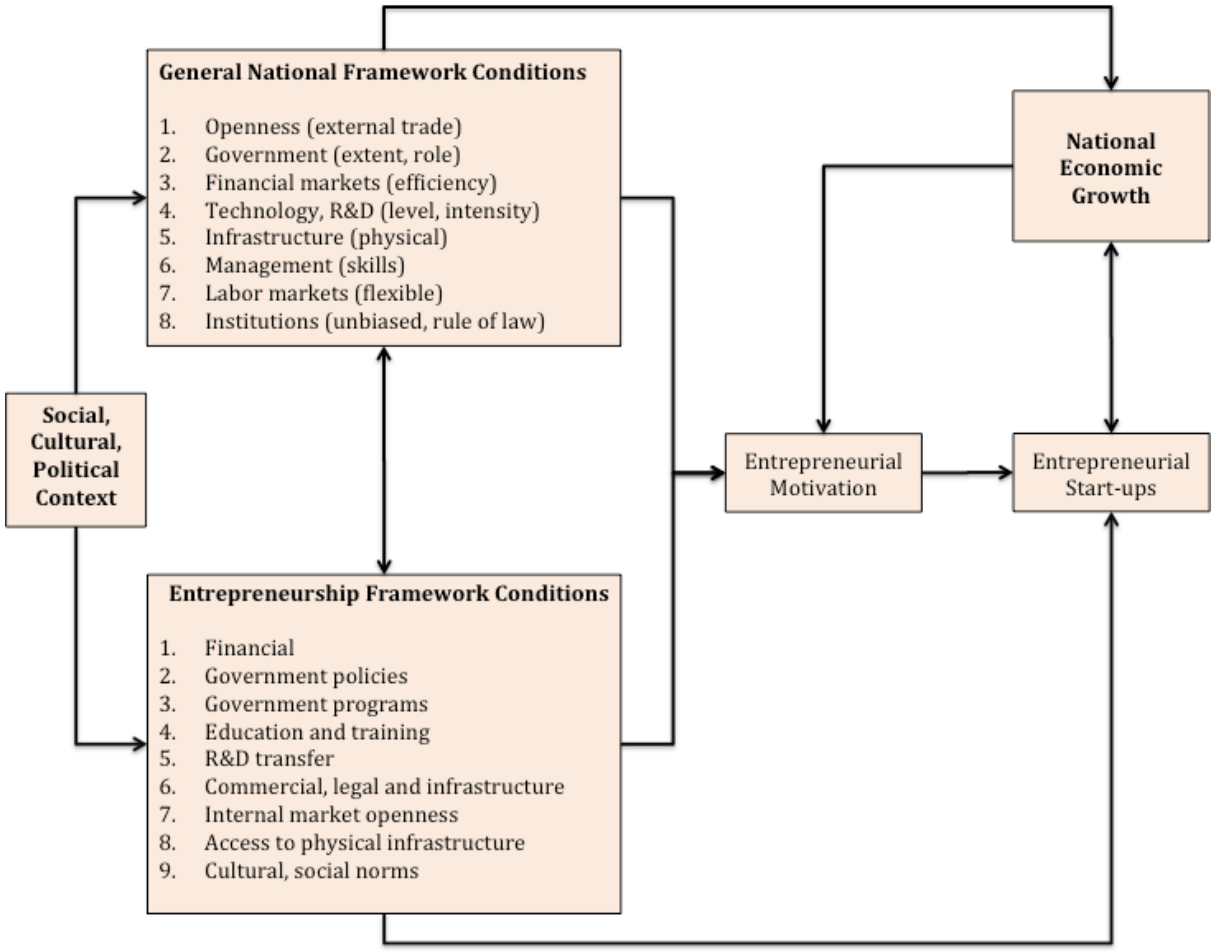

Figure 1. Conceptual model and framework.
Source: Global Entrepreneurship Monitor [28].

The five variables included in the new research's GEM model are the following:

1. General National Framework Condition (GNFC);
2. Entrepreneurial Framework Condition (EFC);
3. Entrepreneurial Motivation (EM);
4. Entrepreneurial Startup (ES); and
5. National Economic Growth (NEG).

Operationalized Variables and Hypotheses

The constraints of this research do not allow us to define the operationalized variables in this paper. However, various hypotheses, according to the model, are proposed in order to anchor the scholarly inputs; they are not for testing in this research paper. The eight direct and indirect hypotheses proposed by this research are as follows:

1. There is a positive relationship between GNFC and ES;
2. There is a positive relationship between EFC and ES;
3. There is a positive combined relationship between GNFC, EFC, and ES;
4. There is a positive combined relationship between GNFC, EFC mediated by EM, and ES;
5. There is a positive combined relationship between GNFC, EFC mediated by NEG, and ES;
6. There is a positive combined relationship between GNFC, EFC moderated by NEG, and ES;
7. There is a positive combined relationship between GNFC, EFC moderated by NEG then mediated by EM, and ES; and
8. There is a positive combined relationship between GNFC, EFC mediated by EM and ES, and NEG.

CAMBODIAN SME ENTREPRENEURSHIP REVIEW

SME Entrepreneurship Situation

The growth of the garment industry, tourism activity, construction work, and agricultural business has significantly affected the growth of SMEs in Cambodia. The Royal Government of Cambodia (RGC) recognizes SMEs among local entrepreneurs and private sectors as a major engine for job creation, raising income for the poor [25, 29], reducing poverty, maintaining social stability and peace, and fostering economic growth. This spirit is clearly reflected in the governmental rectangular strategy for growth, employment, equity, and efficiency [9, 29].

SME entrepreneurs, including micro-enterprises in rural areas, have dominated the economy, making up 99% of firms and 45% of employment in Cambodia [29]. In 2006, there were 31,149 small industrial establishments representing a growth of 26% since

1999, but it is difficult to estimate the actual number of enterprises as almost all of them are in the informal sector and not registered [30]. At the last count, there were 32,460 SMEs with operating licenses from the Ministry of Commerce – an estimated 21,568 of the licensed enterprises are food processors, 5,352 are manufacturers, 4,811 are service providers, and 729 are in the forestry and fisheries sectors. However, many remain unlicensed, and are normally regulated informally by local authorities [30].

The RGC SME sub-committee aims to establish an environment conducive to SME development by enhancing various support programs available to SMEs [29]. However, studies have identified several challenges facing entrepreneurs, such as high regulatory compliance costs, lack of clear and market-orientated frameworks for SMEs, limited access to finance, an uneven playing field, low productivity, lack of access to information and customer markets, and weak entrepreneurship values [9].

Entrepreneurship Social Values

Acharya et al. [31] and Rooney [32] have mentioned the architecture of Angkor in their studies of Cambodia, including the knowledge of astronomy, geometry, and other branches of mathematics that must have flourished during the period to build the megacity. This knowledge has influenced the entrepreneurial social values in Cambodia such as intelligence, hard work, and innovation.

The conflict and instability of the 1970s and 1980s cost Cambodia many qualified and experienced people, as well as entrepreneurs [2]. The World Bank, International Finance Corporation (IFC), and Mekong Project Development Facility (MPDF) [33] have shown that Cambodian entrepreneurs fear starting and pushing their SME's growth because of past experiences, which has led to the younger generation facing difficulty in setting up their businesses.

Acharya et al. [31] have indicated that many entrepreneurs or owners of businesses in Cambodia have been educated to the secondary-school level. SME owners obtain skills or experience through their families, or from short-term technical training in vocational school. Their lack of knowledge, skills, and experience has resulted in low innovation and invention concepts for SME start-up and development.

Webster and Boring [34] have identified the main reasons that SMEs are started in Cambodia: the entrepreneur's ability to see market opportunities (92%), the profitability of business (68%), and existing low salaries in the market (17%). Many Cambodian

entrepreneurs owe their success to their parents; children follow in their parents' footsteps and gain experience from the family business [31]. Thus, Cambodian entrepreneurs learn their entrepreneurship skills from their family through job apprenticeship, enabling these skills to pass to the next generation [9].

Female Entrepreneurship

According to the Ministry of Women's Affairs (2010) [35], there has been some progress towards gender equality (defined as women's participation in social and economic life) in Cambodia. This ministry also clarifies that "the growth of the industrial sectors has significantly increased the participation of women in waged employment in the formal sector of the economy." However, it has been argued that the low level of literacy and education amongst adult women, particularly in rural areas, has limited their opportunities to obtain higher pay.

The most important source of income for women, outside of subsistence agriculture, comes from the informal sector of the economy, employing around 80% of working women in Cambodia. The ministry [35] claims that even micro- and small enterprises are a critically important source of jobs and income for women, but there has been little support to promote the development of micro- and small enterprises in Cambodia as a whole, particularly for women.

Some projects by the Ministry of Women's Affairs have aimed to promote female participation in micro- and small entrepreneurship by providing adequate information, building entrepreneurial capability, facilitating access to credit, enabling links to various organizations, and resources for promoting a women-friendly entrepreneurial environment [36]. Many men seek waged employment, while women tend to be engaged in self-employment or unpaid labor in their family businesses. The study jointly conducted by IFC and the Asia Foundation has shown that out of 62% of entrepreneurship firms run by women, these female entrepreneurs are mainly concentrated in commerce (66%) and service industries (61%) for the domestic market [9].

Firm Financing of Entrepreneurs

Most SME owners in Cambodia rely on self-financing or informal borrowing from relatives, friends, and moneylenders for start-up and working capital. This means that for large amounts of money, entrepreneurs have to borrow with collateral and incur high interest rates [37].

The IFC, World Bank Group-SME [25], Development Consulting International and ADB [3] have shown that SME entrepreneurs in Cambodia are prevented from being successful because of their need to have easy access to capital from the financial markets. The World Bank Group [14] has also shown that as the firms start to grow, they are quickly confronted with challenges such as finance, human capital, technology, and infrastructure that impede the growth of their operations. SMEs in Cambodia receive little external finance except through informal networks [14].

Banks in Cambodia require collateral such as land and buildings from SME owners to avoid insolvency; however, most SME entrepreneurs lack this collateral [38]. Cambodian SME entrepreneurs operate without financial statements or other detailed documentation [31]. The lack of formal documentation and security means that most banks in the country are reluctant to lend money to SME entrepreneurs [33].

In other cases, SME entrepreneurs have difficulty approaching banks because the banks' branches and offices are not available in the locations where the SMEs operate [3]. Furthermore, informal sources of financing compound the problems by burdening borrowers with high interest rates that range from 3% to 5% per month. This has led to the insignificant use of capital for starting up and expanding businesses in Cambodia [3].

Firm Management of Entrepreneurs

SME entrepreneurs in Cambodia operate without any professional staff; their spouses and relatives form the bulk of employees in the firms and decision-making is traditionally in the hands of family members [31]. The World Bank Group [14] has shown that as firms grow in size in terms of larger transactions, these firms are quickly confronted with limitations such as the lack of human resource skills and difficulty in hiring skilled workers; skilled labor remains one of the main problems for business growth in Cambodia [39].

Many SMEs in Cambodia produce products such as pottery, bricks, milled rice, and silk with traditional technology in cottage or home-based industries [39–40]. The transfer of modern technologies is difficult to implement due to the lack of human skills and shortage of capital [31].

Limited knowledge, the lack of basic educational and vocational training facilities, and the tragedy of the past continue to inhibit the promotion of SME development [40].

Market Practices of Entrepreneurs

Cambodia opened itself to free market competition after the peace accords were signed in 1991, but has faced challenges due to its small population compared to its neighboring countries [2, 33]. Entrepreneurial growth is further slowed due to poor road infrastructure, and a lack of facilities [3]. SME products are thus of lower quality and sold at higher prices, as a result of low technology and a lack of skills, compared to imported products [31].

Local SME entrepreneurs in Cambodia depend on foreign imports for equipment and raw materials. Furthermore, expensive electricity and fuel costs impede start-ups and growth [3]. Development Consulting International reports that local entrepreneurs face unfair competition from smuggled higher-quality products that are sold at lower prices [3]. Acharya, et. al. [31] have lamented that the SME market in Cambodia may be negatively viewed for its low market integration and control, despite the country's potential.

GOVERNMENT POLICY FOR ENTREPRENEURS

Environmental Impact on SME Entrepreneurs

The Cambodian government has clearly recognized that the creation of a vibrant environment for private sector development is a precondition for promoting economic growth, creating employment, reducing poverty, and sustaining economic development [29]. In general, ADB [30] indicates that government policies are directed towards a business-friendly environment. The Cambodian government also recognizes that public services, social work, and other legal frameworks have a positive impact on the business growth performance in Cambodia [41].

A strategy that hinges on macroeconomic stability is key for sustaining economic growth in Cambodia [3]. Maintaining macroeconomic stability and progress in structural reforms, along with strong implementation, is crucial to achieve national development objectives [42]. The government recognizes the need for the development of an infrastructure system that also helps to facilitate market access and other essential public services within the needs of communities [41]. The government has put significant effort into attracting the needed investments through improving basic economic infrastructure, the delivery of public services, and strengthening the legal and regulatory framework [43].

Recognition of SME Entrepreneurs

Cambodia's policy opened the door to a team of donors and non-profit organizations to cooperate in assisting SME entrepreneurs in Cambodia. The Association of Cambodian Local Economic Development Agencies (ACLEDA) has also acted as a commercial bank and provided a full range of credit to SME entrepreneurs and the poor [25]. The government has also set up the Rural Development Bank (RDB) to cater to the needs of SME entrepreneurs; this bank receives funds from the government budget and also from other donor grants in running financial schemes for SME entrepreneurs in Cambodia [44]. Capital alone is not enough in terms of assistance to SME entrepreneurs in Cambodia, therefore the MPDF brought individual technical assistance packages, group training classes, and inexpensive self-study and management workbooks written in the Khmer language [25]. This spirit of entrepreneurship is clearly reflected in the RGC's Rectangular Strategy for growth, employment, equity, and efficiency. SME entrepreneurship development is an important area in the strategy for private-sector development and job creation [29]. An SME sub-committee was set up for the SME Development Framework to identify critical issues and priority policies for assisting SME entrepreneurship development. The SME sub-committee recognized the definition of SMEs as an important area for policy development and assistance programs [29]. This definition is based on full-time employees and the financial figures are based on total assets (Table 3).

Table 3. Cambodian SME definitions

SME definition based on number of employees		
Micro-business	Less than	10 employees
Small business	Between	11–50 employees
Medium business	Between	51–100 employees
Large business	More than	100 employees
SME definition based on finance		
Micro-business	Less than	USD50,000
Small business	Between	USD50,000–250,000
Medium business	Between	USD250,000–500,000
Large business	More than	USD500,000

Source: Royal Government of Cambodia [29].
Note: SME, small and medium enterprises.

Policies for SME Development

The strategic frameworks of the Rectangular Strategy are:

1. Strengthening the private sector, attracting investment, creating jobs, and improving working conditions;
2. Promoting SMEs; and
3. Ensuring the existence of social safety nets.

In promoting SMEs through the Rectangular Strategy, the SME development policy was set up in 2004 [29, 45]. Under the Rectangular Strategy, the RGC has identified these 13 policies for the development of SMEs:

1. To encourage the development of SMEs through the provision of medium- and long-term finance;
2. To suppress product smuggling;
3. To reduce registration procedures and start-up processes for companies;
4. To facilitate export–import activities by simplifying procedures such as licensing and letters of permission;
5. To support newly established industries for an appropriate period;
6. To promote linkages between SMEs and LEs (large enterprises);
7. To assist SMEs to enhance their productivity and reduce production costs;
8. To ensure the quality of domestic products meets regional and international standards;
9. To establish national laboratories to test the quality and criteria of products;
10. To strengthen mechanisms for the protection of industrial intellectual property rights;
11. To promote vocational/skills training both domestically and overseas;
12. To expand and accelerate the "one village one product" program; and
13. To strengthen the legal framework by creating laws.

These policies have not yet been operationalized or incorporated into actions. As a consequence, various agencies and ministries are developing their own SME programs that are at times redundant and even lead to contradictions when implementing the policies for SMEs [29].

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

History has shown that the Cambodian people have a vast array of skills, behaviors, and attitudes toward social and economic development [31–32], but these qualities and potentials were mainly lost during the 1970s as a result of the Killing Fields [2, 40]. A full free-market economy was developed in the early 1990s [1–3] and this changing market structure also encouraged the growth of SMEs in Cambodia [2]. However, the unfair market competition [31], the small market population [33], and the poor social and economic infrastructure [3] have negatively impacted the start-up and growth of SMEs.

As of 2012, the total population was 14,740,000, with a GDP growth rate of 7.2%. The gross national income (GNI) per capita was USD820 [7], and the unemployment rate for adults was more than 3.3% [8]. It has been shown that Cambodia still needs to strengthen its social and economic factors, perhaps through leveraging on SME entrepreneurship start-ups to foster economic growth [9]. To promote start-ups and growth for general businesses and SMEs, numerous policies have been put forward under a variety of government initiatives [45]. In conclusion, this is the optimum time, within a vibrant environment, for the RGC to foster SME entrepreneurship development in Cambodia.

Recommendations

To foster SME start-ups and economic growth in Cambodia, entrepreneurs should recognize and build excellent values, seek joint ventures, and use a proper financial accounting system. Furthermore, entrepreneurs should improve their skills in human resource management, communication, problem solving, value chain management, quality control, waste production, and cost–benefit analysis. SME entrepreneurs should also focus on market knowledge and accept the flexible behavior of the market conditions in Cambodia, and adopt different marketing approaches. In overcoming the start-up and growth challenges of their SMEs, entrepreneurs are required to respect government policies and to be flexible in building a relationship with local officers. To achieve these conditions, entrepreneurs should strive to learn new approaches through role models, theories, and practice.

To assist SME start-up and growth in Cambodia, the government should strengthen its policy implementation. All policies that have been created for businesses, including SMEs,

must be put into action. For example, the government should be faster in implementing its policies toward business cost reduction. It is also suggested that a specific SME authority be established to deal with all SME policies and implementation.

Thus, for exploiting the potential SME start-up and growth performance in Cambodia, the combination of an active commitment on the part of the entrepreneurs and also a strong government playing a role in creating and implementing the policies is required.

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REPUBLIC OF CHINA

Dr. Chih-Yen Huang

INTRODUCTION

The Global Entrepreneurship Research Association started conducting the Global Entrepreneurship Monitor (GEM) survey in 1999, publishing an annual report of the then-10 participating economies. There were 68 participating economies in 2012, which represents an estimated 74% of the world's population and 87% of the world's GDP. The Republic of China (ROC) became a member in 2002 and rejoined in 2010.

Due to the absence of survey data from 2003 to 2009, entrepreneurship outcomes during that period are not addressed in this report. Instead, most analyses concern entrepreneurial activities in 2010, 2011, and 2012.

ENTREPRENEURIAL SITUATION

Start-up Rate (TEA)

According to the GEM report, the total early-stage entrepreneurship activity (TEA) was 4.3% in 2002, and grew to 8.4% in 2010, 7.9% in 2011, and 7.5% in 2012 [1–4]. At present, there are about 16 million people between the ages of 18–64 in the ROC, of which an estimated 1.2 million are engaged in early-stage entrepreneurship activities (Table 1).

Table 1. Total early-stage entrepreneurial activity in the Republic of China

Year	2002	2010	2011	2012
TEA (%) for females	3.3	6.3	5.6	6.0
TEA (%) for males	5.2	10.5	10.2	9.1
TEA (%)	4.3	8.4	7.9	7.5
Ratio of male/female	100/63	100/60	100/55	100/66

Source: Global Entrepreneurship Monitor (GEM) Report 2002, 2010, 2011, and 2012 [1–4].
Note: TEA, total entrepreneurship activity.

Start-up Rate by Gender (TEA by Gender)

According to GEM reports, the TEA for working-age adults in the ROC is decreasing. However, trends for male and female entrepreneurs have changed slightly, as male

entrepreneurs decreased significantly from 10.5% in 2010 to 9.1% in 2012, while female entrepreneurs decreased slightly from 6.3% in 2010 to 6.0% in 2012. The ratio of male to female entrepreneurship activity is about 100 to 66 for 2012, compared with 100 to 60 for 2010 (Table 1) [2–4].

Ownership Rate

The data in the GEM reports show that the ownership rate in the ROC is quite different for start-ups depending on the life-cycle followed. The number of new businesses has steadily grown, from 3.8% in 2010 to 4.2% in 2012. However, nascent enterprises decreased from 4.7% in 2010 to 3.3% in 2012. People tended to be conservative when the macro-economy was weak and unpredictable due to the unstable global economy of the last few years. Businesses that survived the economic crisis have become stronger, and the established business ownership rate (EB) grew from 7.2% in 2010 to 10.4% in 2012 (Table 2) [2, 4].

Table 2. Ownership rate for total early-stage entrepreneurial activity

Year	2010	2011	2012
New business ownership rate	3.8%	4.4%	4.2%
Nascent entrepreneurship rate	4.7%	3.6%	3.3%
Established business ownership rate	7.2%	6.3%	10.4%

Source: Global Entrepreneurship Monitor Reports 2010, 2011, and 2012 [2–4].

Entrepreneurship Environment

The comprehensive entrepreneurship environment has changed in recent years (Table 3). The global economic crisis made investors hesitant, while the informal investor rate remained stable (between 5.1%–5.3%).

People aged 18–64 preferred to stay in existing jobs instead of becoming starters, unless there was no other option (30% in 2010 versus 18% in 2012). The number of those who gave up their old jobs and became entrepreneurs in order to pursue a better life or earn a better income decreased slightly (48% in 2010 versus 43% in 2012) [2–4]. Entrepreneurship opportunities during periods of economic disorder may not be easily found and accepted.

Table 3. Entrepreneurship environment for total early-stage entrepreneurial activity

Year	2010	2011	2012
Informal investors rate	5.1%	5.0%	5.3%
Necessity-driven entrepreneurial activity: relative prevalence	30%	17%	18%
Improvement-driven opportunity entrepreneurial activity: relative prevalence	48%	50%	43%

Source: Global Entrepreneurship Monitor Reports 2010, 2011 and 2012 [2–4].

Business Discontinuance Rate

The business discontinuance rate (BDR) is closely related to the stabilization of the economic environment and the management ability of entrepreneurs. Generally speaking, business life is shorter in countries without strong economies. The BDR in the ROC was 3.7% in 2010 [2]. This shows that the competitiveness of enterprises was low compared to other countries. Such a situation might build up a wall for starters who are afraid of failing in the entrepreneurial period.

SOCIAL ASPECTS OF ENTREPRENEURSHIP

There are three major perspectives related to the social expectations for entrepreneurship: growth expectation, innovation on products, and internationalization. In 2012, 48% of TEA expected to employ at least five employees within five years. In the same year, 63% of TEA indicated that their products were new to customers. More and more entrepreneurs indicated that they have expanded their business to the global market, from 12% in 2010 to 15% in 2012 (Table 4).

When enterprises are productive and innovative, they would be expected to create more job opportunities and bring newer and better products to society. Although entrepreneurs' expectations tend to be optimistic, the data nevertheless show the potential for entrepreneurship growth. Due to conservative investments from entrepreneurs during the global financial crisis, R&D and innovation input may have slowed slightly due to decreased global demand. Along with frequent interaction with global businesses, entrepreneurs have become more internationalized.

Table 4. Entrepreneurial aspirations in the Republic of China

	2010	2011	2012
Growth expectation early-stage entrepreneurial activity	43%	54%	48%
New product-market oriented early-stage entrepreneurial activity	66%	70%	63%
International orientation early-stage entrepreneurial activity	12%	13%	15%

Source: Global Entrepreneurship Monitor Reports 2010, 2011 and 2012 [2–4].

Analyzing Perceptions of Entrepreneurship in Society

Generally speaking, perceived opportunities might be different for people of different education, social class, and economic development levels. Entrepreneurial intention represents people aged 18–64 who intend to start a business. The numbers of the above indicators showed that entrepreneurship perceptions in the ROC have remained the same in the last three years (Table 5). Only 31% of the population are personally acquainted someone who started a business in the past two years. That figure is fewer than the 39% for 2010. Risk and uncertainty during start-up can cause failure during the setting up of a business. However, the fear of failure is decreasing (44% in 2012 versus 38% in 2012). Entrepreneurship education has become popular in the last few years in the ROC, and a higher social acceptance rate for entrepreneurship among younger people would also help lower the fear of failure.

Table 5. Entrepreneurial attitudes in the Republic of China

	2010	2011	2012
Entrepreneurial intention	25.1%	28.2%	25.5%
Know start-up entrepreneur rate	39%	33%	31%
Perceived opportunities	30%	30%	39%
Perceived capabilities	26%	29%	26%
Fear of failure	44%	40%	38%

Source: Global Entrepreneurship Monitor Reports 2010, 2011 and 2012 [2–4].

Entrepreneurship has to be perceived positively by a society to be adopted into its culture. According to the data, media attention to entrepreneurship has grown in the last three years, from 78% in 2010 to 83% in 2012. This shows that entrepreneurship promotion has often been reported and discussed. Hence, young people are willing to choose

entrepreneurship as a career choice (70% in 2012). However, only 63% of the population believes that they would earn respect and social status as an entrepreneur (Table 6).

Table 6. Entrepreneurial perceptions in the Republic of China

	2010	2011	2012
Media attention for entrepreneurship	78%	86%	83%
Entrepreneurship as desirable career choice	68%	69%	70%
High-status successful entrepreneurship	58%	63%	63%

Source: Global Entrepreneurship Monitor Reports 2010, 2011 and 2012 [2–4].

TEA COMPARED TO OTHER ASIAN COUNTRIES BASED ON THE DATA

Compared to other countries in Asia, TEA in the ROC (7.5% in 2012) is higher than other countries such as Japan and the Republic of Korea (ROK). TEA in some emerging countries such as Singapore and PR China is higher than the ROC (Table 7).

Table 7. Total early-stage entrepreneurial activity in some Asian countries (%)

Year	ROC	Hong Kong	Japan	ROK	Singapore	Malaysia	PR China	India
2002	4.3	3.4	1.7	14	5.9	–	12.3	16.0
2003	–	3.2	2.8	–	4.9	–	12.0	–
2004	–	3.0	1.5	–	5.7	–	–	–
2005	–	–	2.2	–	7.2	–	13.7	–
2006	–	–	2.9	–	4.8	11.1	16.2	10.1
2007	–	9.9	4.3	–	–	–	16.4	8.5
2008	–	–	5.4	10.0	–	–	–	11.5
2009	–	3.6	3.3	7.0	–	4.4	18.8	–
2010	8.4	–	3.3	6.6	–	5.0	14.4	–
2011	7.9	–	5.2	7.8	6.6	4.9	24.0	–
2012	7.5	–	4.0	6.6	11.6	7.0	12.8	–

Source: Global Entrepreneurship Monitor Reports, 2002–2012 [1–11].
Notes: ROC, Republic of China; ROK, Republic of Korea.

ENTREPRENEURSHIP SUPPORT POLICY

Government ministries in the ROC have developed many entrepreneurship programs to help people to create businesses. The Ministry of Economic Affairs, for example, has developed assistance projects for start-ups. Many sectors also have similar programs under their basic policies and these are available in different life cycles of various businesses (Table 8) [12–15].

Table 8. Entrepreneurship government support policies

Government sectors	Program	Potential business	Purpose	Business life cycles
Ministry of Economic Affairs	Entrepreneurship ROC	Start-ups	Training; award; club; incubator	Early or pre-entrepreneurs
	SBIR	Manufacturing and service industry	R&D; technology innovation	Mature enterprises
	CITD	Manufacturing	R&D; technology innovation	Mature enterprises
	SIIR	Nine service industries	R&D; service innovation; new business models	New or mature enterprises
	Leading New Product Development Program	14 cutting-edge industries	R&D loans; market application; product prototype development	International companies
	Youth Entrepreneurs Loan	Micro-enterprises	Financial aid for start-ups	Pre-entrepreneurs
Ministry of Labor	Entrepreneur Loan for Micro-Enterprises	Micro-enterprises	Training; financial aid; loan guarantee; award	New start-ups
Ministry of Education	U-Start Entrepreneurs Program (for graduate college students)	Technology-driven or creativity-driven industry	From technology to commercialization	New business with college technology
Ministry of Culture	Culture Creativity Program	Culture-creativity industry	Loan; training; consultant aid	New start-ups

Source: Government websites in the ROC (2015) [12–15].
Notes: CITD, Conventional Industry Technology Development; SBIR, Small Business Innovation Research Program; SIIR, Service Industry Innovation Research.

ENTREPRENEURSHIP AND GEM ECONOMIC LEVEL ANALYSIS

According to the 2012 GEM report; the ROC has been categorized as one of the innovation-driven economies in Asia-Pacific and the South Asia Region, along with Japan, the ROK, and Singapore. Economic growth was highly related to opportunity-driven entrepreneurship activities, especially those equipped with innovation, high-added value, and high growth. Entrepreneurship and high-ratio start-ups have played an important role in national economic growth since the 1960s. Large enterprises took their place as the developing engine to stimulate the economy in the 1980s, while social entrepreneurship has declined and young professionals decided to obtain jobs in large companies. Entrepreneurship subsequently declined in the next two decades.

ANALYSIS OF THE CONCEPTUAL MODEL FOR THE POTENTIAL SYNERGY BETWEEN ENTREPRENEURIAL ACTIVITIES AND THE NATIONAL ECONOMY

Figure 1 below outlines the basic relationships between entrepreneurship and the national economy.

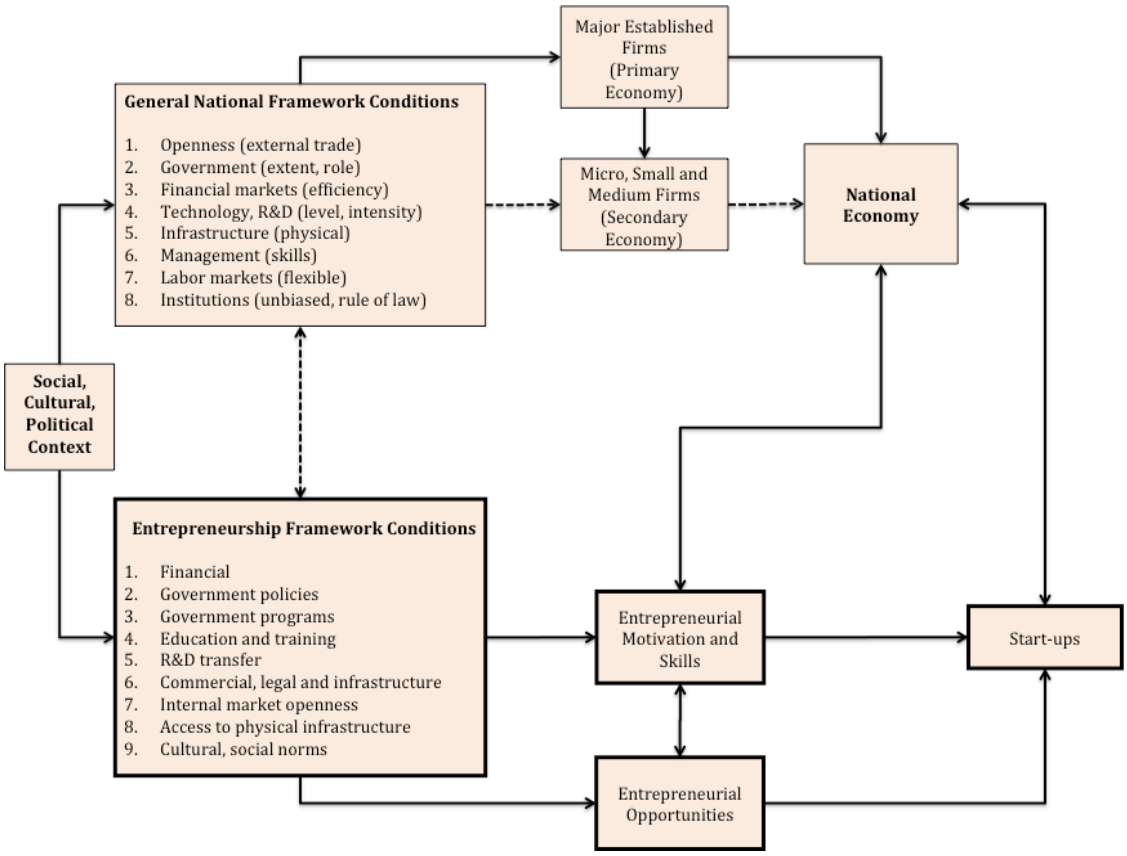

Figure 1. Conceptual model of the study.

THE PHILOSOPHY OF NATIONAL ECONOMIC GROWTH OBJECTIVES IN RELATION TO ENTREPRENEURSHIP ENHANCEMENT POLICY

Entrepreneurship development has been implemented and promoted for many years in the ROC. The World Bank ranked the ROC 13th in the world (first in Asia) on the Knowledge Economy Index (KEI) in 2012 [16]. Knowledge advantages turn into innovation when people set up new businesses. Assisted with good entrepreneurship policies or programs supported by the government, people in the ROC received better training and had higher participation in entrepreneurship activities. The ROC's entrepreneurship environment will mature as the economy gradually stabilizes.

ANALYSIS OF ISSUES AND CHALLENGES IN THE NATIONAL PROCESS OF ENHANCING ENTREPRENEURSHIP

The financial storm and stress of the late 2000s worsened the entrepreneurial environment of the society. Start-ups continued decreasing as the media covered bankruptcies and the closing down of businesses. Medium and large enterprises also moved to other countries. More entrepreneurship development faces its biggest challenge ever in the ROC. Compared to other developed countries, the ROC has to maintain a higher TEA while pursuing GDP growth. In order to become an innovation-driven economy, high growth and innovation-driven entrepreneurship activities should be encouraged by the government. Stimulating new high growth companies with new technology, cutting-age products, and innovative business models will be the major challenge to economic development in the ROC.

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INDIA

Dr. Sudipto Bhattacharya

INTRODUCTION

The government of India has often encouraged Indians to be entrepreneurial to overcome their basic constraints and succeed with limited resources. Prior to 1991, Indian business success was a function of ambition, licenses, government contacts, and an understanding of the bureaucratic system. Decisions were based on connections, rather than on the market or competition. Business goals reflected a continuation of the "Swadeshi" movement (which has its roots from India's independence movement). The movement promoted import substitution to attain economic freedom from the West. These pre-1991 policies looked inward and were geared towards attaining self-reliance. During that era, entrepreneurship was subdued, capital was limited, and India had very few success stories. Additionally, society was risk averse and most individuals primarily looked for employment stability.

After the Indian Government liberalized the economy in 1991, the competitive landscape began to change. Multinationals with their superior technology, financial strength, and deeper managerial resources started to pose formidable competition to family businesses, which had previously dominated Indian markets. Thus, Indian businesses were forced to change their focus and re-orient their outlook outwards. While some existing Indian business families adapted to new economic policies, the rest continued to struggle. More notably, new breeds of businesses were born, focusing on ICT, and created wealth for both owners and employees.

Older businesses attribute their success to close-knit joint-family structures that fostered family values, teamwork, tenacity, and continuity. Under this structure, generations lived and worked together under one roof, reaffirming the values and trust that gave them success. Wealth from these businesses supported the family by providing a social safety net for members. In this structure, businesses and families were intertwined, though both remained as distinct entities with separate rules. Hence, the family's survival became synonymous with business survival. The very nature of the joint-family business structure saw a vast change post-liberalization. If large Indian businesses were to succeed, families would have to re-orient themselves to compete in a global and competitive environment.

Post-liberalization, IT businesses succeeded because they were customer-centric and professionally managed. To extend their life cycle, these old family-managed businesses, which formed the backbone of the economy, evolved and become more institutional.

ENTREPRENEURIAL SITUATIONS: START-UP RATE CLASSIFIED BY GENDER AND AGE/BUSINESS DISCONTINUANCE RATE/GEM DATA

India was second among all nations in terms of total early-stage entrepreneurial activities (TEA) as per the Global Entrepreneurship Monitor (GEM) report of 2002 [1]. However, several years later, India's TEA level was closer to the world average [2]. India comes in ninth place in the GEM survey of entrepreneurial countries. It is the highest among 28 countries in necessity-based entrepreneurship, and fifth lowest in opportunity-based entrepreneurship [3].

The entrepreneurship "pyramid" in India (Figure 1), in terms of sectors and numbers of people engaged, is made up of the following (from the fourth Central Statistical Organization [CSO] Economic Census) [4]:

Level 1 – Primary sectors: Crop production, plantation, forestry, livestock, fishing, mining and quarrying;

Level 2 – Trading services: Wholesale and retail trade, hotels and restaurants;

Level 3 – Traditional sectors: Manufacturing, electricity, gas, and water supply; and

Level 4 – Emerging sectors (including knowledge-intensive sectors): IT, finance, insurance and business services, construction, community, social and personal services, supply chain, and transport-storage-communications.

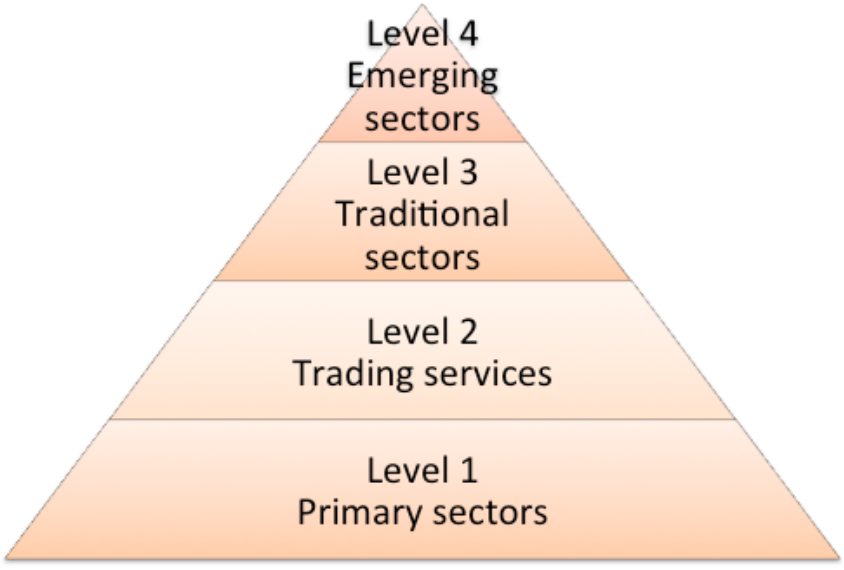

Figure 1. Entrepreneurship pyramid.

Table 1 below shows the performance of small-scale industries over a time period from 2001 to 2012. In accordance with the provision of the Micro, Small and Medium Enterprises Development (MSMED) Act of 2006, micro-, small and medium enterprises (MSME) are classified into two classes:

1. *Manufacturing*: Enterprises engaged in the manufacture or production of goods pertaining to any sector specified in the first schedule of the Industries (development and regulation) Act, 1951 or employing production plants/machinery towards enhancing a final product with a distinct name or character or use. Manufacturing enterprises are defined in terms of investment in plant and machinery.

2. *Service*: Enterprises engaged in providing or rendering services. The enterprises are defined in terms of investment in equipment.

Table 1. Performance of small-scale industries / micro-, small and medium enterprises

Sl. No.	Year*	Total working enterprise (units in 1 million)	Employment (in 1 million)	Market value of fixed assets (in 10 millions)	Gross output (in 10 millions/INR)
1	2001–02	105.21	249.33	154349.00	282270.00
2	2002–03	109.49	260.21	162317.00	314850.00
3	2003–04	113.95	271.42	170219.00	364547.00
4	2004–05	118.59	282.57	178699.00	429796.00
5	2005–06	123.42	294.91	188113.00	497842.00
6	2006–07	361.76†	805.23†	868543.79††	1351383.45††
7	2007–08	377.37	842.23	917437.46	1435179.26
8	2008–09	393.70	881.14	971407.49	1524234.83
9	2009–10	410.82	922.19	1029331.46	1619355.53
10	2010–11	428.77	965.69	1094893.42	1721553.42
11	2011–12	447.73	1012.59	1176939.36	1834332.05

Source: Ministry of Micro, Small and Medium Enterprises (MSME), Government of India [5].
Notes:
* 2007 onwards are projected.
† Figure includes wholesale/retail trade, legal, education and social services, hotels and restaurants, transport and storage, and warehousing (except cold storage) services (data taken from the Central Statistics Office Economic Census 2005).
†† Figure is estimated based on enterprise value obtained from a sample survey of unregistered sectors for wholesale/retail trade, legal, education and social services, hotels and restaurants, transport and storage, and warehousing (except cold storage), which were excluded from the fourth All India Census of MSME.

Tables 2–5 below show further rules and statistics for SMEs in India.

Table 2. Limits on investment in plant and machinery/equipment for manufacturing/service enterprises

Manufacturing Sector	
Enterprises	**Investment in plant and machinery**
Micro	INR2,500,000 or less
Small	INR2,500,000 to INR50,000,000
Medium	INR50,000,000 to INR100,000,000
	Service Sector
Enterprises	**Investment in equipment**
Micro	INR1,000,000 or less
Small	INR1,000,000 to INR20,000,000
Medium	INR20,000,000 to INR50,000,000

Source: Development Commissioner, Ministry of Micro, Small and Medium Enterprises, Government of India [6].

Table 3. Statistics for the registered manufacturing MSME sector

Variable		**Third Census 2001–02**	**Fourth Census 2006–07**
Average age (years)		13.15	13
Rural enterprises (%)		45.92	45
Average no. of employees		4.42	6.42
Proportion of enterprises	Female-managed	9.56	11.54
	Female-owned	11.32	14.7
Proportion of rural enterprises	Female-managed	11.75	13.72
	Female-owned	13.21	16.91
Proportion of urban enterprises	Female-managed	7.69	8.89
	Female-owned	9.72	12.86

Source: Ministry of Micro, Small and Medium Enterprises, Government of India [5].
Note: MSME, micro-, small and medium enterprises.

Table 4. Owner-operated enterprises (single employee)

Parameters	Third Census 2001–02	Fourth Census 2006–07
% Registered MSMEs	19.2	22.6
% Rural MSMEs	27.42	30.3
% Urban MSMEs	12.28	16.03
% Female-owned	33.61	41.04
% Female-managed	39.3	49.57
% Male-owned	17.62	19.4
% Male-managed	17.33	19.07

Source: Ministry of Micro, Small and Medium Enterprises, Government of India [7–8].
Notes: MSME, micro-, small and medium enterprises.

Table 5. Data for India from the Global Entrepreneurship Monitor

	2001	2002	2003	2004	2005	2006	2007	2008
Established business ownership rate (%)	8.8	12.1	10.48	8.85	7.22	5.6	5.5	16.5
Nascent entrepreneurship rate (%)	6.9	9.0	8.05	7.1	6.15	5.2	6.0	6.9
New business ownership rate (%)	3.6	7.5	6.93	6.35	5.77	5.2	2.6	4.9
Total early-stage entrepreneurial activity (%)	10.8	16.0	14.53	13.05	11.57	10.1	8.5	11.5
Total early-stage entrepreneurial (female working population) (%)	4.9	12.3	11.45	10.6	9.75	8.9	7.5	7.1
Total early-stage entrepreneurial (male working population) (%)	15.7	19.6	17.5	15.4	13.3	11.2	9.5	15.7

Source: Global Entrepreneurship Monitor Adult Population Survey Measures [3].

ANALYSIS OF SOCIAL ASPECTS AND CASE STUDIES

Trends in Social Entrepreneurship

The Indian economy witnessed rapid growth following liberalization in 1991. Unfortunately, the country's social and environmental issues increase year after year, which calls for extensive energy to be dedicated to both social and environmental sectors. India is therefore experiencing an increase in social entrepreneurship, with entrepreneurs seeking affordable solutions to various social issues.

Changes in technology and increasing competition have forced social entrepreneurs to become more dynamic. In India, a social entrepreneur can be a founder, co-founder or a chief functionary (president, secretary, treasurer, chief executive officer, or chairman) of a social-enterprise, which raises funds through certain services (often fundraising events and community activities) and products. Today, non-profits and non-governmental organizations, foundations, governments, and individuals play a role in promoting, funding, and advising social entrepreneurs globally. Moreover, a growing number of colleges and universities are establishing programs that focus on educating and training social entrepreneurs. In the current economic climate, it is likely that social needs will only increase, requiring more people who are committed to addressing these needs. The definition of social entrepreneurship has changed over time. From corporate philanthropy to non-profit, and now to self-sustainability, social entrepreneurship has evolved and will continue to do so to respond to the world's needs. Social entrepreneurship is expected to be the next major movement to influence India as the country juggles GDP growth while addressing issues ranging from education to energy efficiency and climate change.

The involvement of mainstream financial institutions in social entrepreneurship is another prominent and welcome change. Various venture capital firms are investing in for-profit entities with social objectives. Interestingly, specialized social investors provide capital, networking, marketing, and business expertise to these ventures. Social enterprises, which focus on the social impact of their business activities, traditionally lean towards a non-profit business model. Specialized investors obviously affect the perception and opportunities of social enterprises.

Areas of Business with Potential for Social Entrepreneurship

Indian social entrepreneurship is highly focused on sectors that impact the economically disadvantaged, while contributing to financial profits. Sectors that have seen a significant presence of social entrepreneurs include agriculture, education, energy, health, livelihood development, water, and sanitation. Some notable points about these sectors are listed below and specific examples are given (Table 6):

- Energy-focused social enterprises that work with renewable energy technologies (such as solar and biomass) to manufacture devices related to lighting, cooking, household energy systems, and power generation.

- Agriculture, on which more than 70% of the Indian population depends for its livelihood, presents a clear opportunity for entrepreneurs.

- Healthcare services are in major demand in India. Hospitals such as Shankar Nethralaya have set a great example for social entrepreneurs.

- Education represents a small portion of social entrepreneurship in India but is likely to grow substantially in the future.

- More sectors, such as sports, have a potential growth opportunity.

Table 6. Examples of social entrepreneurial initiatives in India

Company	**Activity**	**Impact**	**Future plan**
Narayan Hospital India	Delivers affordable healthcare to the masses nationwide	5,000-bed facility completed in phase 1	Build a health city with 30,000 beds by 2016
A little world	Empower micro-business through micro banking	Customer base exceeds 3 million	Reach a billion people
Barefoot College	Solar energy, water, education, healthcare, rural handicrafts, people's action, communication, women's empowerment, and wasteland development	1,000 experts in 1,000 villages provided 50,000 people with basic services such as drinking water, healthcare, and education	Serve a million people by the end of 2016
Childline	Country's first toll-free helpline for street children in distress	9.6 million calls, 3 million children, and 73 cities in 10 years	Set up a national database on child protection services, and provide need-based services for children
Arvind Eye Hospital	Eliminate needless blindness by taking services to rural India	Treated more than 2.5 million patients and performed more than 300,000 surgeries	To spread to all states in India
d.light	High-quality solutions for families living without reliable electricity	Surpassed the 2015 milestone of empowering 50 million lives.	Empower another 100 million people by 2020
rangSutra	Provide sustainable livelihoods for artisans and farmers, by creating top quality hand-made products based on the principles of fair trade	Reached 6,000 artisans in nine years. Large portions of income go to the welfare of the artisans' families; paying for food and childrens' education	Increase retail sales to 10% of sales by 2016 and bring in large retailers to increase sales by 20% by 2017
LijjatPapad	Female empowerment	Employed 4,600 women, distributed nutritious food to poor children, and provided financial aid to community projects	Directly employ 50,000 people across India by 2016
Selco Solar India	Sustainable energy solutions and services to under-served households and businesses	95,000 villages covered	Lower the cost of solar equipment

Source: Singh Pratap (2012) [9], Childine [10], d.light [11], Global Social Benefits Institute [12], and Lijjat Papad [13].

Case of Social Entrepreneurship – rangSutra

rangSutra is a collective that sources craft and textile products from villages and supplies them to urban retailers. rangSutra has chosen to function as a private company, rather than as a co-operative. In doing so, it has broken the non-governmental organization (NGO) mold, become more market-oriented, achieved a galloping growth rate, and touched the lives of more people. It is a company of 1,000 artisans from India's remotest regions: the Rajasthan deserts and the hill regions of Uttaranchal and Assam.

Their goals are to ensure sustainable livelihoods for artisans and farmers by creating high-quality handmade products based on the principles of fair trade and celebrating India's rich craft heritage. Socially, craftspeople and artisans come from some of the most disadvantaged communities, with very few opportunities for self-development and growth. The fact that artisans and craftspeople still retain their skills is something of a miracle, given the fast-changing trends in the urban market, which are the mainstay of many rural artisans.

rangSutra does not depend on grants and subsidies; it deals with profits and dividends. This may be seen as a new language for the social sector in India, a language that could change the way NGOs view themselves. The company created a completely new structure, with a four-way shareholding between rangSutra itself, with a 20% stake, the Aavishkaar Social Venture Fund (a pioneer in early-stage investing in India that nurtures rural-focused entrepreneurs) with a 23% stake, and Fabindia (India's largest private platform for products made from traditional techniques, skills, and hand-based processes) with a 30% stake. The artisans hold the remaining shares.

Currently, 1,060 artisans share ownership of rangSutra (they were offered shares at a price of INR100). Interestingly, most of the shareholders are women and first-time investors. Apart from the shareholders, rangSutra also employs an additional 1,000 artisans. This number is likely to increase as the company continues to grow. rangSutra has expanded to work with artisans in the Jaisalmer and Barmer districts. NGOs and self-help groups (SHG) from other parts of India are also keen to join rangSutra and access a larger market. Eco-friendly efforts such as using natural dyes make rangSutra products more "ethical" and could help the company expand overseas.

The next step, as envisaged by social entrepreneur Ms. Sumita Ghosh, is to build the rangSutra brand. She is exploring other alternatives, from setting up a retail chain to selling through the Internet. Beyond textiles and crafts, she focuses on other aspects of

rural life including farm products, especially organic foods. The other area she is keen on venturing into is rural tourism.

ANALYZING THE PERCEPTION OF ENTREPRENEURSHIP IN SOCIETY

While Indians have entrepreneurial capacity, Indian society does not encourage entrepreneurship. To a large extent, Indian society is risk-averse. People usually seek secure and long-term employment, such as government jobs. Moreover, social attitudes, lack of capital, inadequate physical infrastructure, and lack of government support are the major hindering factors to widespread support for entrepreneurship. India is the fifth-largest economy in the world (ranked above France, Italy, the UK, and Russia) and has the third-largest GDP in Asia. It is also the second largest among emerging nations.

Over the years, India and PR China have followed opposing strategies for development. While PR China's growth has been fueled by heavy foreign direct investment, India instead concentrated on building local infrastructure to support institutions that support private enterprise. The Indian Government has encouraged entrepreneurship by providing training and facilities, with a focus on rural areas. One style of innovation that is effective in a country as large and diverse as India is grassroots innovation: this includes inventions for a milieu that is quintessentially Indian.

Moreover, in India, the post-liberalization and globalization era has brought with it a growing middle class (estimated at 250 million people) with rising disposable incomes. This presents a major potential that, if tapped, can be a veritable gold mine. Entrepreneurs can cater to various demands of this segment by using India's abundant supply of talent in IT, management, and R&D, which developed in line with the country's strong position in the world as a global outsourcing hub.

After the early 1990s, the advent of liberalization, privatization, and globalization led to a new economy driven by knowledge-based sectors including IT, Information-Technology-Enabled Services (ITES), nanotechnology, and biotechnology. These became the new manifestations of entrepreneurship. While new economy entrepreneurs are mentioned with reverence, there is a need to create more role models at district, state, and national levels to encourage and attract diverse entrepreneurial talent. A breakdown of the various MSME sectors is shown in Figure 2 and more details are provided in Table 7.

In terms of improvement, there needs to be an increase in the quality and quantity of venture capital and "business angel" investors. Additionally, the government needs to continue reducing the administrative burden on entrepreneurs, and coordinate among their agencies to ensure that the necessary resources are directed where they are needed. Physical infrastructure also needs to be improved. Socially, Indian society is adapting to a more risk-friendly environment and more people are looking for jobs in the private sector.

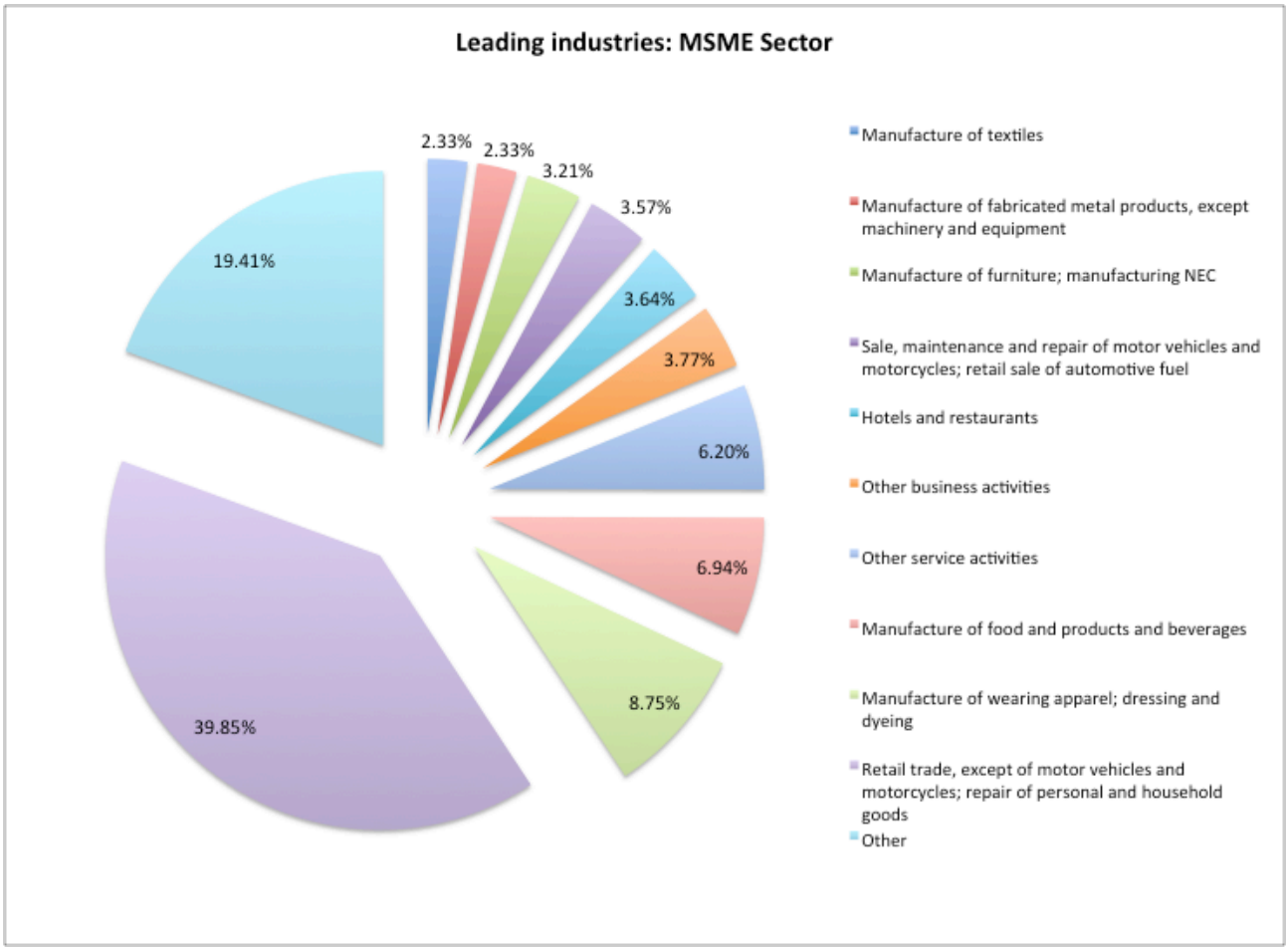

Figure 2. Analysis of industries/sectors. MSME, micro-, small and medium enterprises; NEC, new enterprise creation.

Source: Ministry of Micro, Small and Medium Enterprises, Government of India [5].

Table 7. Registered sectors (summary of results from the Fourth All India Census of MSME 2006–07)

No.	Characteristics		Number (in 100 thousands)	Percentage
1	Total enterprises		15.64	–
2	Rural enterprises		7.07	45.23
3	Women's enterprises		2.15	13.72
4	Enterprises by type	Micro-enterprises	14.85	94.94
		Small enterprises	0.76	4.89
		Medium enterprises	0.03	0.17
5	Enterprises by operation type	Perennial	15.14	96.81
		Non-perennial	0.50	3.19
6	Enterprises by activity type	Manufacturing	10.49	67.10
		Repair and maintenance	2.52	16.13
		Services	2.62	16.78
7	Enterprises by main power source	No power needed	3.79	24.25
		Coal	0.25	1.59
		Oil	0.53	3.40
		LPG/CNG	0.07	0.42
		Electricity	10.49	67.07
		Others	0.51	3.28
8	Enterprises by organization type	Proprietary	14.09	90.08
		Partnership	0.63	4.01
		Private company	0.43	2.78
		Public ltd. company	0.08	0.5253

Source: Ministry of Micro-, Small and Medium Enterprises, Government of India [5].
Notes: CNG, cascade natural gas; LPG, liquefied petroleum gas; MSME, micro-, small and medium enterprises.

Entrepreneurial Case Study – Shantha Biometrics

Shantha Biotechnics is a biotechnology company based in Hyderabad and is the first Indian company to develop, manufacture, and market a recombinant human healthcare product. The company is a wholly owned subsidiary of the Sanofi group [14]. The genesis of Shantha Biotechnics can be traced back to the initiatives of Dr. K. I. Varaprasad Reddy and Mr. Khalil Ahmed; Dr. Varaprasad and Mr. Khalil Ahmed established the company in 1993 with the sole purpose of developing efficacious but cost-effective vaccines and therapeutics. The project began modestly as an R&D operation at Osmania University under the industry-university interactive program in 1993, and later at the Center for Cellular and Molecular Biology, until an independent R&D facility was built in 1997.

Although the World Health Organization (WHO) recommended that every child be vaccinated for Hepatitis B by the early 1980s, large multinational pharmaceutical companies held monopolies on the recombinant Hepatitis B vaccine. Selling for prices as high as USD23 a dose, most Indian families could not afford vaccination. Shantha Biotechnics saw an unmet domestic need and developed novel processes for manufacturing the vaccine to reduce prices to less than USD1/dose. Further expansion enabled the global distribution of low-cost mass vaccination through organizations such as the United Nations Children's Fund (UNICEF). In 2009, Shantha sold more than 120 million doses of vaccines. In the same year, the vaccine division of French pharmaceutical company, Sanofi, Sanofi Pasteur, acquired Shantha Biotechnics, which was valued at EUR550 million (more than INR37.7 billion).

This case study illustrates how the globalization of healthcare R&D is enabling private sector companies such as Shantha to address access to essential medicines. Sources including interviews, literature analysis, and on-site observations were combined to conduct a robust examination of Shantha's evolution as a major provider of vaccines for global health indications. Shantha's ability to become a significant global vaccine manufacturer and achieve market success appears to have been made possible by first addressing India's local health needs. How Shantha achieved this balance can be understood in terms of a framework of four guiding principles [14]:

1. Identifying a therapeutic area (Hepatitis B), where cost efficiencies could be achieved to reach the poor.

2. Seeking investments and partnerships from non-traditional and international sources, including the Foreign Ministry of Oman, and the large healthcare multinational, Pfizer.

3. Focusing on innovation and quality: investing in innovation from the outset yielded the crucial process innovation that allowed Shantha to make an affordable vaccine.

4. Developing its own good manufacturing practice (cGMP, Current Good Manufacturing Practice) facility, which established credibility for vaccine pre-qualification by the WHO and generated interest from large pharmaceutical companies in its contract-research services. These revenue sources allowed Shantha to continue to invest in health innovation, which is relevant to the developing world.

The Shantha case study underscores the important role that the private sector can play in global health and access to medicines. Homegrown companies in the developing world are becoming a source of low-cost, locally relevant healthcare R&D for therapeutics such as vaccines. Often, such companies may be compelled by market forces to focus on products relevant to diseases endemic in their country. Sanofi's acquisition of Shantha reveals that even large pharmaceutical companies based in the developed world recognize the importance of meeting the health needs of the developing world. Collectively, these processes suggest an ability to tap into private-sector investments for global health innovation, and highlight the globalization of healthcare R&D to the developing world.

EXISTING SUPPORT POLICIES

In this era of globalization, fostering entrepreneurs has become one of the prime concerns of government policy makers. Rather than focusing solely on microeconomic conditions or access to finance, the Indian government also supports schemes that complement existing policies to create an overall environment that is conducive to entrepreneurial activities. In this regard, government support schemes are well designed and well placed for a fruitful outcome. The government constantly evaluates and revises its existing programs.

An entrepreneur requires a continuous flow of funds, not only for setting up the business, but also for operations and regular upgrades to the industrial unit. To meet this requirement, the government (at both central and state levels) has undertaken several steps, including the setting up of banks and financial institutions, and formulating various policies and schemes. These measures are specifically focused on SME promotion and development.

The Indian government has taken active steps to promote entrepreneurship across various industry and service sectors, declaring several policy measures, and implementing numerous programs to enhance the global competitiveness of small enterprises across the country. Acts, programs, and schemes are listed below [15]:

Acts, rules, and regulations:

- Acts regarding MSMEs
- Notifications regarding MSMEs
- Policies of states and union territories for the small-scale sector
- Policies relating to excise duty
- Policy of reservation for small industries
- Labor policies for small-scale industries
- Small-scale industrial (SSI) policy statement
- Comprehensive policy package for small-scale industries and the tiny sector

Programs and schemes:

- Schemes implemented by the Ministry of MSME
- Schemes implemented by the Office of the DC (MSME)
- Small Industries Development Bank of India (SIDBI) micro finance program
- Memorandum of understanding (MOUs) with foreign countries
- MSME national award scheme
- NSIC schemes
- SIDBI schemes
- Tax holiday scheme
- Composite loan scheme
- Industrial estate schemes
- Excise exemption scheme
- Factoring services
- Small industry cluster development program
- National equity fund scheme

Sector-specific schemes:

- Schemes implemented through the Khadi and Village Industries Commission (KVIC)
- Schemes implemented through the Coir Board
- Schemes for the priority sectors

- Animal husbandry schemes
- Dairy development schemes
- Fisheries development schemes
- Agriculture development schemes
- Coconut development board schemes
- Tea board schemes
- National horticulture mission
- National horticulture board schemes
- National medicinal plants board scheme
- Spice board schemes
- Silk board schemes
- Schemes for petrochemicals
- Pharmaceutical sector schemes
- Information and technology sector schemes
- Tourism industry schemes
- Textile industry schemes
- Scientific and engineering research schemes
- Technology promotion, development, and utilization program
- Food processing industry schemes
- New and renewable energy schemes
- Marine products schemes

ENTREPRENEURSHIP AND GEM ECONOMIC LEVEL ANALYSIS

GEM research was undertaken in India for all the years except 1999, 2004, and 2009. However, most of the findings were quite similar to the inter-country experience. The gender orientation and the age profile of entrepreneurial activities are in line with GEM findings. Most of the starts-up were for self-employment purposes: "very few firms anticipate any growth; the average number of employees expected within five years for a start-up is 1.42, and for an owner-managed firm it is 3.21" [1].

There were, however, important distinctions for India. In marked contrast to the pattern in developed countries, income and education are inversely related to entrepreneurship. Also, over a brief time-span, the nature of entrepreneurship (opportunity-based and necessity-based) and TEA showed dramatic shifts. TEA also does not seem to affect or be affected by overall growth (one year lag).

However, the more recent GEM Reports from 2007 to 2008 (India did not participate subsequently) indicate that as India is emerging as a major economy in the world, the outlook of its potential entrepreneurs towards business is also very optimistic. For example, the estimates of the 2007 GEM Report of perceptions about entrepreneurship, among even the non-entrepreneurial population in the 18–64 age group, are quite positive. On potential entrepreneurship activity, India scores 52%, compared to 17% for China, 4% for Russia and 25% for Brazil. The high-income countries lag way behind. A similar relative position for India is seen in cases of perceived opportunities (70%), perceived capabilities (69%) and entrepreneurial intentions (50%) [2]. Similarly, the 2008 GEM Report worked out the entrepreneurial attitude and perceptions in 43 GEM member countries, according to their phase of economic development. India scores quite high on almost all parameters. The percentage of respondents agreeing to various indicators is as follows [16]:

- 58% see a good opportunity for starting a business in the next 6 months
- 56% personally know a person who has started a business in the past two years
- 45% have the required knowledge and skill to start a business
- 67% consider entrepreneurship as a desirable career choice
- 81% are attracted by media attention to entrepreneurship

These results indicate that despite India's placement as a low- and middle-income country and classification as a factor-driven country, its economic and entrepreneurial performance has exceeded most of its peers, as reflected in its economic growth, which has hovered between 7.5% and 9.7% since 2000. Even during the global economic meltdown, India's economy performed much better than those of major world economies and grew at a rate of around 7%. This is just a reflection of India's entrepreneurial manifestation subsequent to liberalization in the early 1990s. It also reflects India's sustained and planned intervention in fostering entrepreneurship through training, teaching, and research. A large infrastructure for promoting entrepreneurship has been created through government and non-government initiatives since the early 1970s.

Most studies of the role of entrepreneurship in economic growth suggest that there is a strong relationship between the level of entrepreneurial activity in a region or country, and its rate of economic growth [17]. The GEM report of 2002 also showed that the national level of entrepreneurial activity has a statistically significant association with the subsequent level of economic growth. GEM data also suggest that no country has high levels of entrepreneurship as well as low levels of economic growth [18].

The GEM report for the year 2010 indicates that 110 million individuals between the ages of 18–64 are nascent entrepreneurs (in businesses that have not paid salaries or wages to the workers and owners for more than three months) and 140 million individuals are new business owners (in businesses that have been paying salaries or wages to their workers and owners for more than three months but less than three-and-half years). Out of these 250 million individuals, 63 million plan to hire at least five new workers in the next five years. This underscores the fact that an increase in entrepreneurship activity causes a definite growth in the level of job opportunities available.

The key implications and suggestions of the GEM report for the year 2009–10 are as follows [19]:

- The quality of entrepreneurship is what makes an impact in the economy, not just the quantity.

- Economic ecosystems need to create conducive environments for entrepreneurs who start up due to necessity. These environments should also be able to create entrepreneurs from those who already have other job options, by enticing them to take up opportunity-driven entrepreneurship.

- Entrepreneurship needs both dynamism and stability.

- The steps taken for the enhancement of entrepreneurship should be based on the level of the economy of the country.

- Every member of society should have an entrepreneurial outlook, and should co-operate to support it. This includes non-entrepreneurial members, as their acceptance of entrepreneurs individually will result in a collectively higher level of societal approval of entrepreneurship.

- It is important to track growth trends in other locations, and in countries of the same economic level, so as to learn from their successes and failures.

GEM Findings on India

The following statistics regarding India have been provided by the GEM report [19]:

- Job-growth expectations for early-stage entrepreneurship activity in the period 2009–10 were less than 15%. This places India second lowest on the list. The majority of cases indicate employment of only 5–9 extra workers for every member.

- India ranks fourth lowest in terms of innovation for early-stage entrepreneurship activity amongst the factor-driven economies.

- India shows a low (less than 25%) international orientation when compared to other economies with an equally large landmark.

ANALYSIS OF THE CONCEPTUAL MODEL FOR THE POTENTIAL SYNERGY BETWEEN ENTREPRENEURIAL ACTIVITIES AND THE NATIONAL ECONOMY

Figure 3 below illustrates the Indian government's initiatives regarding MSMEs, entrepreneurs, and linkages with the national economy.

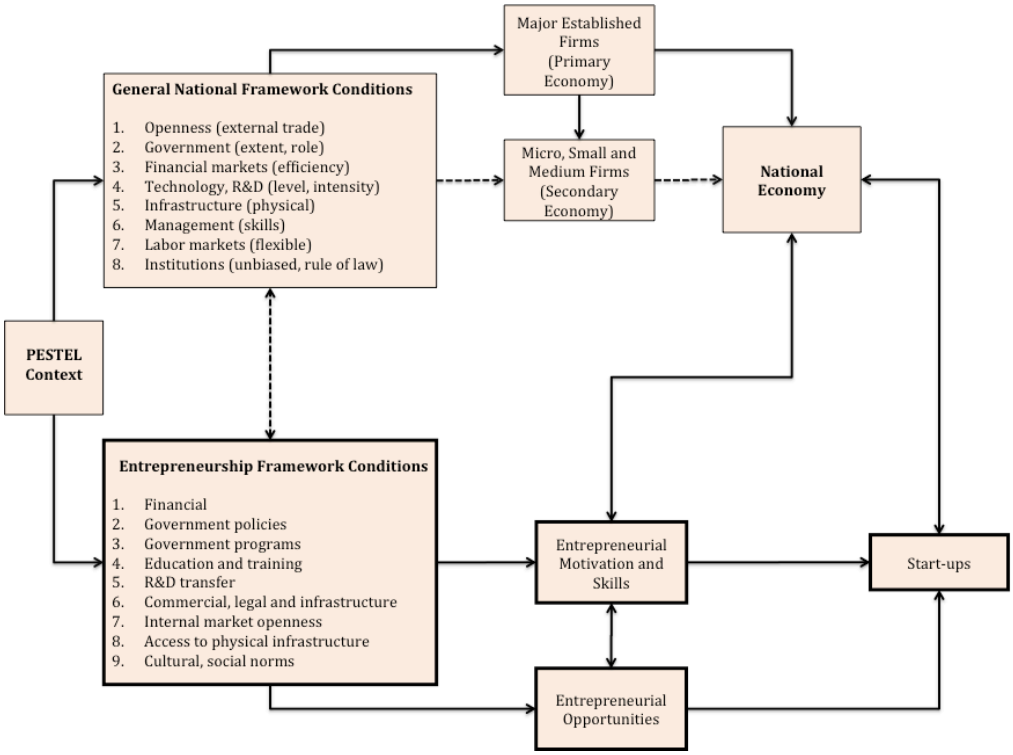

Figure 3. Government policy initiatives.

Fiscal Incentives

Government policies have aimed to stimulate the development of all small enterprise segments to withstand large-scale domestic and international corporations. The government offers the following incentives to small enterprises:

- *Tax incentives/concessions*: The government allows a 20% deduction from profits/ gains for 10 years under the Income Tax Act for factories set up in under-developed and rural areas.

- *Incentive for exports*: A five-year tax holiday is allowed for companies set up in free-trade zones and software technology parks; it is up to 100% for export-oriented units, freeing them from income tax, as well as having a duty-drawback facility for exported articles, components, and raw materials.

- *Transport subsidy*: A 75–90% transport subsidy is available to the hilly regions of the country to mitigate these locational disadvantages.

- *Credit-linked capital subsidy scheme for technology upgrading*: Under this scheme, a 12% back-ended subsidy is admissible to small enterprises on the loans advanced by commercial banks for technology upgrading.

Protection Policy

To strengthen small enterprises and enable them to compete with large industries, a policy of exclusive product reservation in the MSME sector was initiated in 1967 with 47 items. Currently, the list stands at 675 products. Similarly, under the government's store-purchase program, the government purchases required items specifically from small industries. The scheme is operated in two ways. Firstly, the government has reserved 358 items to be purchased exclusively from small businesses. Secondly, the government gives a 15% price preference to small industries against quotations from large industries while procuring the items, which are not reserved, for small-scale units.

Infrastructural Facilities

The government also provides several types of properties to assist and encourage entrepreneurship.

Industrial estates: Realizing that small entrepreneurs may lack in necessary infrastructure, the government initiated the Industrial Estate Program in 1955. Under the program, infrastructural facilities such as electricity, water, roads, communication, plots and sheds, banks, canteens, etc., are provided to entrepreneurs. The entrepreneur may either buy plots/sheds or lease them. More than 800 industrial estates are operating in the country.

Export processing zones (EPZs): The government has set up eight EPZs that are designated to produce for exporting. The units operating in these EPZs are given several incentives, such as relaxation of labor and taxation laws, and foreign direct investment. All the infrastructural facilities are made available to entrepreneurs in the EPZs.

Industrial parks: The new focus on export markets and cluster development has led the government to set up product-specific Industrial Parks or Technology Parks, such as the Electronic Hardware Technology Parks set up in 1986 or, more recently, Software Technology Parks. In such parks, product/sector-specific infrastructure is provided.

Integrated infrastructure development centers (IIDCs): These are aimed at upgrading and augmenting infrastructure facilities in rural and under-developed areas with an emphasis on linking agriculture and industry. Overall, 50 such centers will be created and will host 450–500 units. At least 50% of the plots will be allotted to small enterprises in IIDCs.

Technology upgrading and modernization policies

Besides developing clusters, the government has launched a scheme for upgrading technology and management. The program addresses the modernization and technological needs of small industry clusters. The Department of Science and Technology, Government of India, also actively promotes technology-based enterprises and makes technologies available to MSMEs on favorable terms. The government also started a scheme under which Small Industry Associations are given a one-time grant of INR5 million, or 50% of the cost for setting up testing facilities.

Marketing support policies

Marketing is one of the major problems that small entrepreneurs face and the government has come up with several strategies to address this issue; for example, the National Small Industries Corporation (NSIC) was set up to register small industries under a single-point registration scheme and secure preferential supply orders from the government.

- *Sub-contracting exchanges*: There are 28 sub-contracting exchanges operating through small-industry service institutes. These exchanges enlist small enterprises and identify items to incorporate from public sector units (PSUs) and large-scale industries.

- *Quality certification*: The Bureau of Indian Standards has been developing standards for various products, and registers small enterprises for adopting those quality standards. The Small Industries Development Organization (SIDO) has also set up four Regional Testing Centers that provide testing facilities to small enterprises. The government also encourages MSME units to acquire International Organization for Standardization (ISO) 9000 Series quality certification for which it offers 75% of the cost (subject to a maximum of INR75,000) of certification.

- *Marketing development assistance*: The Ministry of Commerce, Government of India, reimburses 60% of expenditure incurred by MSME delegations visiting foreign countries for business promotion.

Rajiv Gandhi Udyami Mitra Yojana

The objective of Rajiv Gandhi Udyami Mitra Yojana (RGUMY), i.e., the Rajiv Gandhi Friends of Entrepreneurs Scheme, is to partner with selected lead agencies to provide hand-holding support and assistance to potential first-generation entrepreneurs in establishing and managing of a new enterprise, completing the various formalities required to set up and run an enterprise, and deal with various procedural and legal hurdles. Under this scheme, agencies provide guidance and assistance to registered potential entrepreneurs to prepare project reports, arrange finances, select appropriate technology, market tie-ups with buyers, install plant and machinery, and obtain various approvals, clearances, and the "No Objection Certificate."

Performance and Credit-Rating Scheme

This scheme was launched in 2005. Under the scheme, seven renowned, accredited rating agencies have been empowered to carry out the rating. MSMEs are free to choose any one of them at their convenience. Rating under the scheme serves as a trusted third-party opinion on the capabilities and creditworthiness of the micro- and small enterprises. An independent rating by an accredited rating agency has a good chance of acceptance by the banks/financial institutions, customers/buyers, and vendors. Under this scheme, the rating fee payable by the micro- and small enterprises is subsidized for the first year only, subject to a maximum of 75% or INR40,000, whichever is lower.

Provision of Credit

Flow of credit to small enterprises: In order to ensure that timely and adequate credit is available to small enterprises, the Reserve Bank of India has issued instructions to commercial banks that, out of the funds normally available to the MSME sector, 40% be given to units with an investment of up to INR0.5 million in plants and machinery; 20% to the units with investment between INR0.5 million–INR2.5 million; and the balance can be given to other small units.

- *National equity fund*: Most young first-generation entrepreneurs find it difficult to raise the promoter's equity (required by banks and financial institutions), on their own. Therefore, to meet the gap in the prescribed minimum promoter's contribution and/or equity, the government has launched a National Equity Scheme under which soft loans are made available at 5% service charge to the extent of 25% of the project cost, subject to a maximum of INR1 million.

- *Micro-credit to micro-enterprises*: Realizing that poor and micro-entrepreneurs have no access to credit, the government has been promoting micro-credit schemes through self-help groups (SHGs). The Small Industries Development Bank of India set up the SIDBI Foundation for Micro Credit in 1999, with an initial corpus of INR1 billion. It provides loans to NGOs and other micro finance institutions lending to SHGs.

- *Dedicated venture capital fund for small industries*: SIDBI set up a venture capital rund of INR100 million in 1992–93 to assist innovative MSME ventures in the software/IT industry. The corpus of the fund was increased to INR1 billion by March 1999. As of 2013, there were 12 government-sponsored venture capital funds in different states.

INSTITUTIONAL NETWORK FOR SUPPORTING ENTREPRENEURSHIP

In order to implement policies and meet the various requirements of entrepreneurs in areas such as finance, technology, and infrastructure, the government has evolved a network of institutions at the central, state, and local levels. According to the requirements of specific functional areas, institutions created at each of the said levels for industrial promotion are discussed below:

Policy

The Government of India has created the Office of the Development Commissioner for Micro, Small, and Medium Enterprises (DC-MSME) as a primary body for formulating, coordinating, and monitoring policies and programs for promoting and developing small-scale industries. The DC-MSME provides a comprehensive range of facilities and services, including consultancy in techno-economic and managerial aspects, training, common facility services, testing facilities, and marketing to small-scale units. It provides services through a network of 30 Micro, Small, and Medium Enterprises Development Institutes (MSME-DI) at the state level, and 31 branches at the regional level.

The state governments, in order to formulate their policies, have created a Directorate of Industries. At the district level, state governments have set up District Industry Centers (DICs) to implement these policies. Besides coordinating and monitoring the efforts of industrial development in the various districts, the DICs also facilitate small entrepreneurs through consultancy, counseling, guidance, and training support.

Infrastructure

At the state level, Industrial Development Corporations are responsible for the creation of infrastructure in terms of setting up industrial estates. They also offer assistance to small-scale industries in respect of term loans, subscription to equity, and promotional services.

Machinery, Raw Materials, and Marketing

The National Small Industries Corporation (NSIC) was created at the national level to supply appropriate technology and/or machinery and equipment required by entrepreneurs on a hire-purchase basis. It also provides assistance in marketing the products manufactured by MSME units. At the state level, this function is performed by the State Small Industries Corporations (SICs), while at the grassroots level, the DICs also partly undertake the task of providing marketing and technical assistance to small entrepreneurs.

Supplies of scarce raw materials are also regulated by the DICs at the district level. Another major institution created for meeting the various needs of rural industries is the Khadi and Village Industries Commission.

Exports

For exports, the government has set up Export Promotion Councils (EPCs) to provide export-related services to small enterprises. Some of the councils obtain bulk purchase orders from foreign buyers and distribute these among member units. Several of them are product-specific such as the Apparel Export Promotion Council, or the Chemicals and Allied Products Promotion Council, etc.

Technical and Management

To provide technical and managerial support to small industries, national development banks, in collaboration with various state governments, have established Technical Consultancy Organizations (TCOs) in most major states in India. The TCOs help small- and medium-scale entrepreneurs by extending technical consultancy services such as for-market surveys, feasibility studies, and business plan preparation. They also conduct training programs to develop managerial and entrepreneurial competencies in existing and potential entrepreneurs. At the grassroots level, DICs perform these functions.

Financing

- *Small Industries Development Bank of India*: Founded in 1990, SIDBI provides direct and indirect financial assistance under different schemes to meet the credit needs of the MSME sector, and coordinates other institutions in similar activities.

- *National Bank for Agriculture and Rural Development (NABARD)*: NABARD provides short-term refinance for various types of production/marketing/procurement activities and sanctions credit limits to scheduled commercial banks. It is a top bank that provides credit assistance to farm and non-farm sectors in rural areas.

- *Other commercial banks*: Apart from offering loans, commercial banks contribute to the process of entrepreneurship development in other ways:

    a. Some conduct NEC programs on their own, or finance such programs conducted by other institutions.

    b. Most banks have set up "entrepreneurship guidance cells" or other such mechanisms to support potential entrepreneurs.

c. A few banks have set up their own institutions to promote entrepreneurship in rural areas, popularly known as Rural Development and Self-Employment Training Institutes (RUDSETI).

d. Other government ministries and departments support entrepreneurship development. There are a variety of state-sponsored and autonomous institutions that support the promotion of the MSME sector, the Ministry of Micro, Small and Medium Enterprises (MoMSME) being the driving force. The key ones are the Ministry of Food Processing Industries (MoFPI), National Manufacturing Competitiveness Council (NMCC), and the National Science and Technology Entrepreneurship Development Board (NSTEDB) of the Department of Science and Technology (DST).

Private Sector Agencies Engaged in Entrepreneurship Development

While state-sponsored institutions are actively engaged in promoting the MSME sector, a few private sector organizations, particularly business associations, chambers of commerce, and organizations promoting female entrepreneurship, are also quite active in India. The prominent entities among them are:

- Confederation of Indian Industries (CII)
- Federation of Indian Chambers of Commerce and Industry (FICCI)
- Federation of Association of Small Industries of India (FASII)
- Federation of Indian Micro and Small and Medium Enterprises (FISME)
- Associated Chamber of Commerce and Industry (ASSOCHAM)
- All India Manufacturers' Organization (AIMO)
- World Association for Small and Medium Enterprises (WASME)
- Asian Centre for Entrepreneurial Initiatives (ACENI)
- Association of Women Entrepreneurs of Karnataka (AWAKE)
- Consortium of Women Entrepreneurs of India (CWEI)
- Association of Lady Entrepreneurs of Andhra Pradesh (ALEAP)

NATIONAL ECONOMIC GROWTH OBJECTIVES IN RELATION TO ENTREPRENEURSHIP – ENHANCEMENT POLICY

The overall objective of the National Entrepreneurship Policy is to create conducive conditions to augment continuous flow and emergence of opportunity-driven entrepreneurs. The specific objectives of the policy are to:

1. Trigger an entrepreneurial culture and instill entrepreneurial values into society at large and influence the mindset of people towards entrepreneurship.

2. Create awareness about the charms of being an entrepreneur and the process of entrepreneurship, especially among the youth.

3. Encourage more dynamic start-ups by motivating educated youths, scientists, and technologists to consider entrepreneurship as a lucrative, preferred, and viable career.

4. Support early-phase entrepreneurship development including the pre-start-up, nascent as well as early post-start-up phase and growth of enterprises.

5. Broaden the base of entrepreneurial supply by meeting specific needs of under-represented target groups like women, minorities, socially and economically backward communities, scheduled castes and scheduled tribes, and under-represented regions to achieve the inclusive, balanced, and sustainable growth of entrepreneurship in the country.

6. Facilitate the creation of social enterprises to address the needs of the population at the "bottom of the pyramid."

7. Ensure adequate availability and flow of information to potential entrepreneurs, eliminate entry and exit barriers, create a business friendly, non-threatening, and conducive regulatory and policy environment to reduce the administrative burden related to compliance of various kinds.

8. Create an ecosystem by evolving an institutional framework and organizational structure to achieve the above objectives.

ISSUES AND CHALLENGES IN THE NATIONAL ENTREPRENEURSHIP-ENHANCING PROCESS

There is a need to demystify perceptions of risk and failure through disseminating case studies of best practices and unsuccessful attempts in the entrepreneurial space. Recognition and rewards from the local level, right up to the national level, will energize and encourage new entrepreneurs. Involving entrepreneurial networks and associations will also help improve visibility and encourage entrepreneurship.

An imaginative combination of assessing debt and equity would require positive efforts on the part of banks, financial institutions, venture capitalists (VCs), "business angel" investors and private equity (PE) funds. In India, financiers need to be more proactive in assessing the business opportunities generated by Indian entrepreneurs. Innovations in risk management will also reduce information asymmetry and make funding more accessible. Business angel investors, VCs and PE funds are beginning to become more important, particularly in knowledge-intensive sectors, and need incentives to encourage greater involvement.

To create incentives for seed capital funding, certain steps are needed:

- Establishing a secondary market for smaller companies,
- Creating new instruments for start-up funding and providing financial literacy to start-ups. Synergies between education (including modern vocational education training/skill development), innovation (converting ideas into wealth and employment), and entrepreneurship should be encouraged.

The National Knowledge Commission (NKC) has already recognized the need to enact uniform legislation for publicly funded research that provides intellectual property (IP) rights for successful research outcomes to universities and research centers, and also entitle inventors to share commercialization royalties. This will serve as a source of innovation and entrepreneurial advancement. India's innovation intensity could also improve significantly if more PhD holders and other research scholars were provided a supportive entrepreneurial environment.

There is also a need to significantly increase Business Incubation for Entrepreneurship (BIE) by comprehensively exploring policy options to improve access to financing. While Indian incubators are doing valuable work, there is more room for them to become

entrepreneurial themselves, by providing services such as market data, business-model preparation, and recruiting. Growing the pool of skilled personnel is a key priority. This entirely depends upon access to quality education.

The key challenges in higher education relate to access, inclusiveness, and excellence. In Vocational Education and Training (VET), there is a need to completely overhaul and modernize current institutions and practices. Reforms in VET require innovative delivery models, incentives for states, ensuring performance-based training and assessment, re-branding, certification, encouraging learning-by-doing, providing incentives to develop English-speaking skills, and ensuring flexibility of VET alongside the higher-education stream for easier crossover and choice as critical success factors.

Economic liberalization has been a key catalyst for entrepreneurship. There are a number of initiatives at the central and state levels that aim to improve the ease of doing business. In fact, the "Doing Business Report 2008" (published by the World Bank-IFC) states that India can jump 55 places from its current rank of 120th if some local best practices are adopted nationwide. Priority should be given to the MCA-21 project (initiated by the Ministry of Company Affairs) to fully automate processes of enforcement and compliance. Other suggestions to enhance entrepreneurship include:

- Meaningful implementation of the Single Window System;
- Introducing a single, composite application form as already done in a few states;
- Introducing a single, unique company number (for company, tax, and social security registrations);
- Reducing the frequency of tax payments for entrepreneurs from monthly to quarterly
- Creating specialized commercial courts;
- Introducing Limited Liability Partnerships (LLPs); and
- Creating "one-stop shops" to provide all relevant information needed to start entrepreneurial activity. There are a number of websites related to entrepreneurship in India. The National Knowledge Commission (NKC) proposes an all-encompassing website on entrepreneurship as a one-stop information portal for current and aspiring entrepreneurs. In addition, entrepreneurship in India will also grow significantly with the spread of e-governance and quality infrastructural development.

A study on entry barriers to entrepreneurship in India [20] revealed that the major entry barrier is family disapproval, followed by lack of awareness about entrepreneurship, and a general belief in the incurring of great risk. A business, with its inherent uncertainty and insecurity, discourages the majority of youths from nurturing ambitions for an

entrepreneurial career. Because of various compulsions and social pressures, they do not wish to risk social security, preferring the stability of salaried jobs. Moreover, thanks to a biased mindset, entrepreneurship is not considered as respectable a career as bureaucracy or other professions such as medicine, engineering, or management, all of which enjoy higher social status. Any comprehensive policy must address these barriers by removing the negative mindset towards entrepreneurship and raising the profile of entrepreneurs in society. In this respect, exposure to role models is likely to have a significant demonstrative effect, as recognition of them is itself likely to increase the social legitimacy of entrepreneurship.

Celebrating the success of entrepreneurs and their contribution to the nation's economy through the media and academia is an urgently needed step. It is common knowledge that societies predisposed to entrepreneurship value self-sufficiency, individualism, and autonomy with respect to people who accumulate wealth. Thus, induced interventions aimed at increasing the awareness of entrepreneurship as a lucrative and attractive career for society's youth are called for.

PROPOSALS TO BETTER NURTURE ENTREPRENEURS AND ACHIEVE EXPECTED OUTCOMES FOR NATIONAL ECONOMY AND PRODUCTIVITY GROWTH

In the 12th five-year plan, the MSME-growth working group concluded new thrust areas to spur growth in the MSME sector. Recommending six umbrella schemes, the working group believes these will be "game changers," and their implementation will boost the MSME sector in the global market. The six schemes are:

1. Credit and finance;
2. Technology and innovation;
3. Infrastructure;
4. Marketing;
5. Skill and entrepreneurship development; and
6. Institutional structure.

Accordingly, the schemes and proposals mentioned under each would be treated as components of the umbrella scheme. The advantages of such an approach are manifold. There would be flexibility in utilizing funds under each umbrella scheme. Funds can be transferred from those with tardy implementation to components that are doing well.

The implementation of different components would be cost-effective and time-saving since the inter-linkages between different components could be addressed simultaneously. For example, land procurement and building construction activities related to the setting up of test laboratories, factory complexes, modular industrial estates, and tool rooms can be addressed simultaneously under the umbrella scheme on infrastructure whenever activity under different components is planned in the same location. The greatest advantage of implementing the umbrella scheme is the visibility of impact.

The working group has also come up with the following recommendations:

- *Finance*: Operationalize SME exchanges to enable access to equity finance

- *Technology*: A scheme for the acquisition and up-grading of technology

- *Infrastructure*:
  a. Developing clusters of excellence
  b. Setting up of 100 tool rooms

- *Marketing*:
  a. Procurement policy for goods and services from MSEs by government departments and central public-sector undertakings (PSUs)
  b. Business-to-business (B2B) international portal
  c. Enabling global footprints of MSMEs
  d. Leveraging defense offset policies in favor of MSMEs

- *Skill Development:*
  a. Revamped skill-development and capacity-building program
  b. Encouraging young and first-generation entrepreneurs by scaling-up the Prime Minister's Employment Generation Programme (PMEGP) and other programs

- *Institutional Structure:*
  a. Strengthening of institutions such as MSME-DIs, the Entrepreneurship Development Institute of India (EDI), and KVIC institutions
  b. Application of e-tools in promotional and regulatory matters for facilitating easy entry
  c. Real-time statistical and policy analysis through strengthening of databases

The working group recommended focused efforts for time-bound implementation of these game changers.

PERMANENT NATIONAL COMMISSION ON ENTREPRENEURSHIP TO INSTITUTIONALIZE AND FOSTER ENTREPRENEURSHIP DEVELOPMENT

In India, the central government is greatly engaged in empowering entrepreneurship. These ministries include the Ministries of MSME, Finance, Commerce and Industries, Company Affairs, Human Resource Development, Women and Child Development, Law and Justice, Rural Development, Department of Science & Technology, Food Processing Industries, Housing and Urban Poverty Alleviation and Social Justice, and Empowerment. Since entrepreneurial development is affected by the policies and actions of different ministries at the central and state levels, the implementation of entrepreneurship policy necessitates inter-ministerial and inter-governmental coordination.

Also, initiatives for collaborations and broad-based partnerships with community organizations, members of the media, business, and corporate sectors go far beyond the purview of any single ministry. In the above context, the Government of India aims to set up a permanent National Commission on Entrepreneurship (along the lines of the Prime Minister's National Skill Development Council), with the prime minister as chairperson and ministers of the relevant ministries, the deputy chairmen, the Planning Commission, captains of industry, young entrepreneurs (at least 10% representation), academia and specialized institutions engaged in promoting entrepreneurship, R&D institutions, business angel investors, and VCs to collaboratively achieve convergence. The proposed commission will guide entrepreneurship movement in the country, with the aim of unleashing entrepreneurship and the power of youth in pursuit of wealth creation, employment generation, and productivity improvement through judiciously harnessing technology and resources. State governments will also be encouraged to set up similar organizations at the state level, which may be led by the chief minister.

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INDONESIA

Dr. Aji Hermawan

INTRODUCTION

The term entrepreneurship or "kewirausahaan" in Bahasa Indonesia has become a very popular term in Indonesian society. The last decade has seen many entrepreneurship movements, especially those initiated by governments, private companies, and academia.

Indonesia has no specific data on entrepreneurship development. The available statistics are for micro, small and medium enterprises (MSMEs) or are employment data. The Global Entrepreneurship Monitor (GEM) survey was first conducted in 2006 and no other data were available until 2013, at which point Indonesia undertook its second GEM survey [1–2].

Indonesia showed a high rate of total early-stage entrepreneurial activities (TEA) in the last survey (25.5%), which was higher than average for factor-driven economies, despite Indonesia being an efficiency-driven economy. Many Indonesian entrepreneurs are necessity-driven rather than opportunity-driven, which means many are doing business due to limited job opportunities.

Entrepreneurship is positively perceived by society and successful entrepreneurs are highly respected in the community. Recently, there has been a shift towards choosing entrepreneurship as a career choice from the former predominantly favored choice of a government office.

The growth of social entrepreneurship has also been apparent in Indonesia. Poverty and social issues have led activists and businesses to tackle societal problems with social entreprise solutions.

ECONOMIC DEVELOPMENT LEVEL

The World Economic Forum (WEF) Global Competitiveness Report classifies the phases of economic development into three categories: factor-driven, efficiency-driven, and innovation-driven economies. In the 2013 Global Competitiveness Report, Indonesia was categorized as an efficiency-driven economy, together with neighboring countries Malaysia, Thailand, and the Republic of China (ROC) [2].

Indonesia has moved from being a factor-driven to an efficiency-driven economy. The source of economic growth is characterized by the exploitation of natural resources such as oil, gas, timber, and agricultural products. The decline in natural resources caused Indonesia to shift into manufacturing sectors, which eventually led to manufacturing outpacing agricultural and natural-resource-driven growth. However, the manufacturing sectors are still characterized by upstream industries (mainly processing simple products) and low-cost labor industries. Many efforts are being made to move manufacturing into downstream industries that process more products with higher added value.

Compared to the average efficiency-driven economy, Indonesia performs much better in terms of macroeconomics and market size. Figure 1 shows the basic indicators of the Indonesian economy in the Global Competitive Index (GCI). Indonesia has maintained stable macroeconomics after recovering from the economic crisis of 1997–98. The 2008 world crisis did have an impact on the overall Indonesian economy. The country's large population and economic growth rate have made it attractive for investments due to the sizeable purchasing power of its population. Indonesia's status as an efficiency-driven economy also provides a context for developing its entrepreneurship.

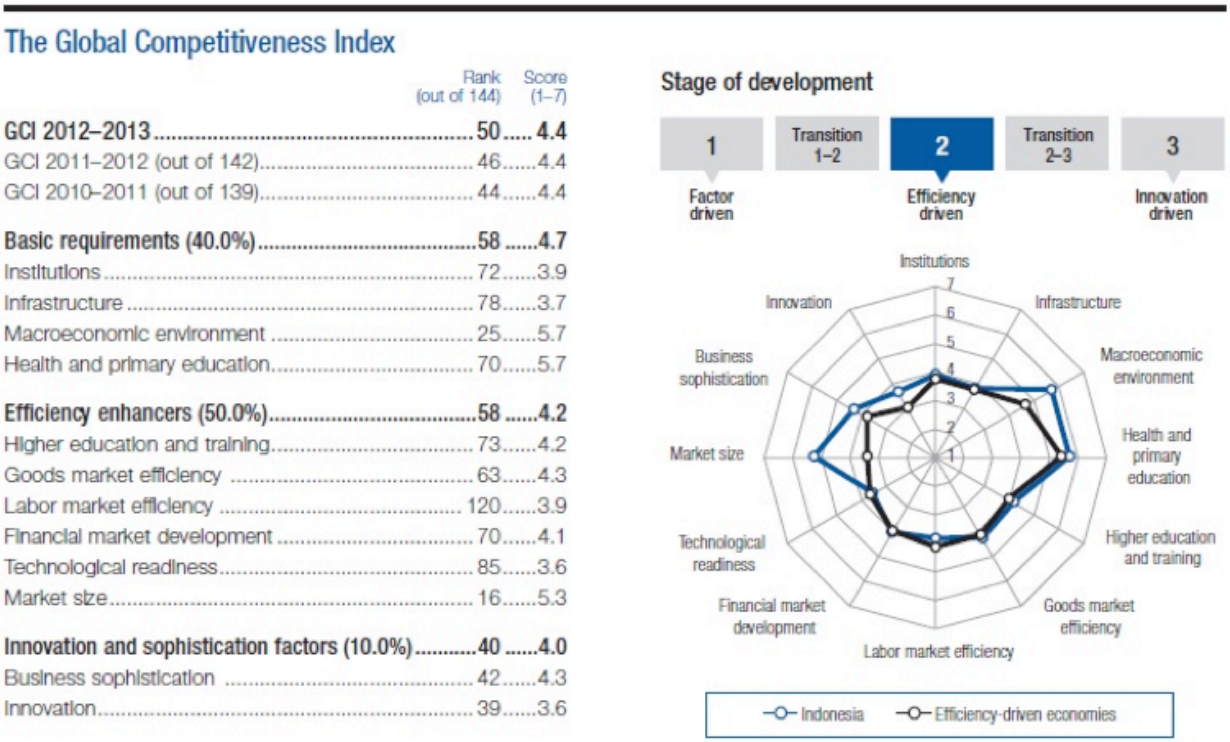

Figure 1. Indonesia global competitiveness index.
Source: Global Entrepreneurship Monitor [2].

ENTREPRENEURSHIP ACTIVITY

In the 2013 GEM survey, Indonesia showed a high TEA rate of 25.5%. This is a relatively high rate, even when compared to an average factor-driven country. Similar high levels of TEA can be seen in African sub-Saharan countries and some factor-driven economies in Latin America such as Chile, Colombia, and Peru. The level of TEA increased significantly from the 2006 rate (19.3%) [1–2]. In terms of gender, the TEA is similar for both males and females. In 2006, the TEA was 19.8% for males and 18.7% for females [1]; the increase in 2013 did not significantly change in composition, at 26% versus 25%, respectively. This indicates that the level of women's participation in entrepreneurship activity is not an important issue.

The rate of established business ownership (owner-managers in businesses that persist for 3.5 years or more) is also relatively high at 21.2% in 2013, which is up from 17.6% in 2006. A significant increase is seen in the number of new business owners, which was 20.4% in 2013. This number almost doubled from the level in the 2006 GEM survey, at 11.5%. The massive promotion of entrepreneurship programs in the past seven years could be the main cause of this birth of new entrepreneurs in Indonesia. However, the opposite trend appears to inhere to the number of nascent entrepreneurs, which has slowed from 9.6% to 5.7% in 2006. These real challenges to success, including a lack of goverment support, might be slowing down the new breed of nascent entrepreneurs. The development of Indonesian entrepreneurship activities is shown in Figure 2.

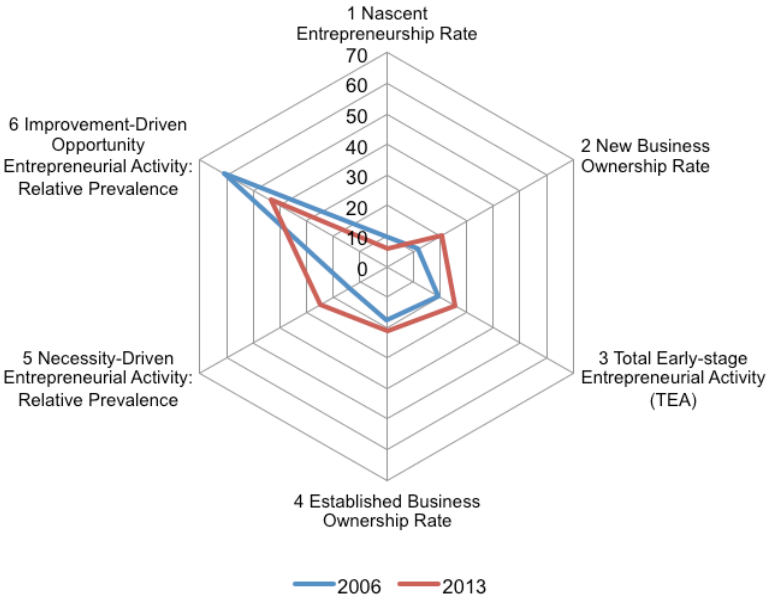

Figure 2. Development of entrepreneurship activities.

Source: Global Entrepreneurship Monitor [2].

Indonesia has a higher rate of opportunity-driven early-stage entrepreneurs (44%) than necessity-driven ones (25%). However, the rate of necessity-driven entrepreneurs is still relatively high and, more surprisingly, there has been a phenomenon of increasing necessity-driven entrepreneurs in tandem with decreasing opportunity-driven entrepreneurs. Necessity-driven entrepreneurs increased from 14% in 2006 to 25% in 2013, while the opportunity-driven entrepreneurs decreased from 61% in 2006 to 44% in 2013. As the necessity-driven status is mainly caused by limited job opportunities, this phenomenon can be explained by a flux of new entrepreneurs triggered by massive movements during the last decade.

The high necessity-driven rate is common in factor-driven economies. Considering that Indonesia is an efficiency-driven economy, the TEA rate of 25.5% is much higher than the average for factor-driven (21.1%), efficiency-driven (14.4%), and innovation-driven economies (7.9.%). Similar patterns were also found in new and established business rates, which were higher than the averages for the other three categories of economic type. The comparison between Indonesia and world economies is shown in Figure 3.

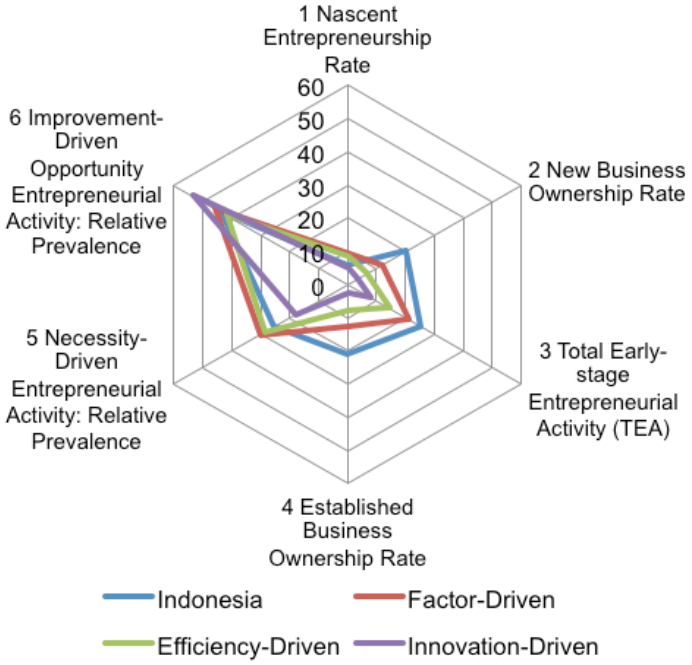

Figure 3. Comparison of entrepreneurship activities.
Source: Global Entrepreneurship Monitor [2].

The large number of entrepreneurs is also reflected in the employment data. In Indonesia, routine employment surveys are conducted by Statistics Indonesia (BPS). The 2013 data for employment by status are shown in Figure 4. Entrepreneurs equate to the number of all those self-employed, a rate of 38% of the total labour force (aged 15 years or above). This number includes self-empoyed without workers (17%), self-employed assisted by

temporary helpers (17%), and employers with permanent workers (4%). The number with self-employed status without workers also represents a high number of necessity-driven entrepreneurs [3].

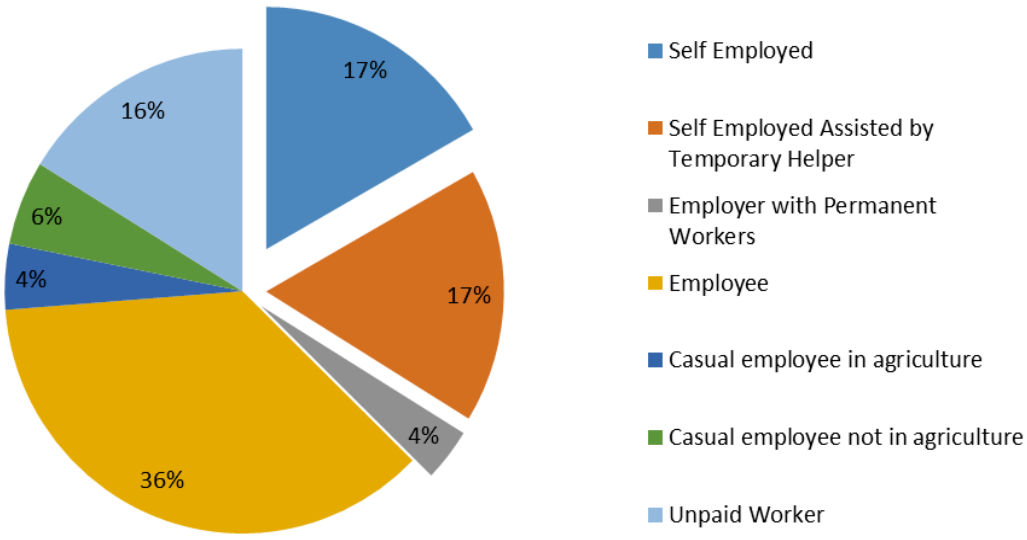

Figure 4. Employment by status, 2013.
Source: Statistics Indonesia [3].

ENTREPRENEURIAL ATTITUDES AND PERCEPTIONS

Entrepreneurial attitudes and perceptions are important in leading entrepreneurship activities. In GEM 2013, Indonesia showed better attitudes and perceptions in all aspects, compared to GEM 2006. The highest increase was in the high-status category of successful entreprenuership. The entrepreneurship campaign by both public and private organizations could have been the cause of these positive changes.

Figure 5 shows the differences between the 2006 and 2013 GEM surveys in terms of entrepreneurship attitudes and perceptions. Indonesia reported more positive attitudes on entrepreneurial measures such as: perceived opportunities to start a business, and capabilities. Indonesians came to perceive starting a business as a desirable career choice. Furthermore, achieving success as an entrepreneur now provides a high status in society and media attention to entrepreneurs is also high. In Indonesia, there is a cultural preference for careers with the government or established companies; working as a civil servant used to be the preference for many people. However, because of the low pay in the public sector, there is now a trend for the best talent to avoid government jobs. As entrepreneurship is perceived as a good career choice, successful entrepreneurs enjoy a

good position in Indonesian society. Hence, there has been a shift in recent years towards young people attempting entrepreneurship as an alternative career choice. More and more, youths are inspired to become entrepreneurs.

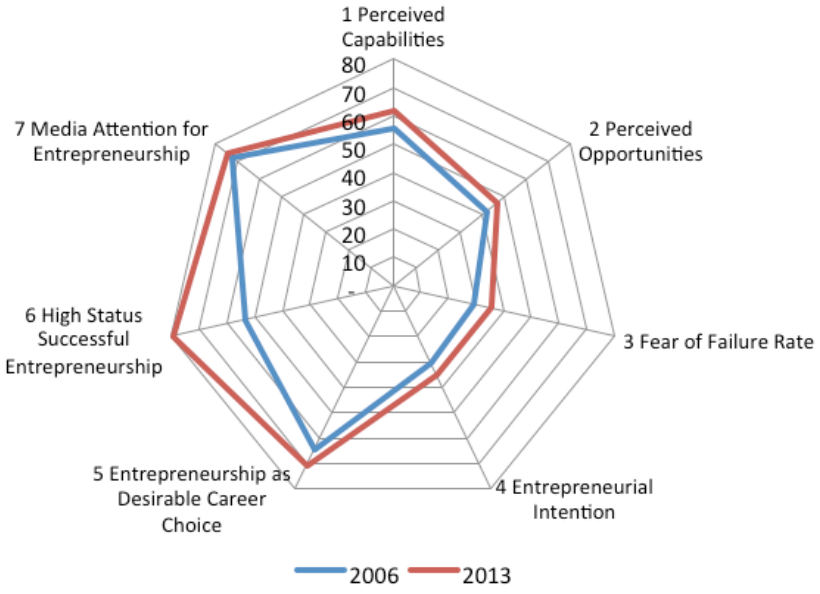

Figure 5. Development of entrepreneurship perceptions.
Source: Global Entrepreneurship Monitor [2].

Compared to other economic categories, Indonesia is closest to the average for factor-driven economies in every aspect, except for media attention to entrepreneurship, which is perceived to be higher than other countries. This explains why Indonesia has seen a significant increase in the status of successful entrepreneurs. Indonesia's position among other economies is shown in Figure 6.

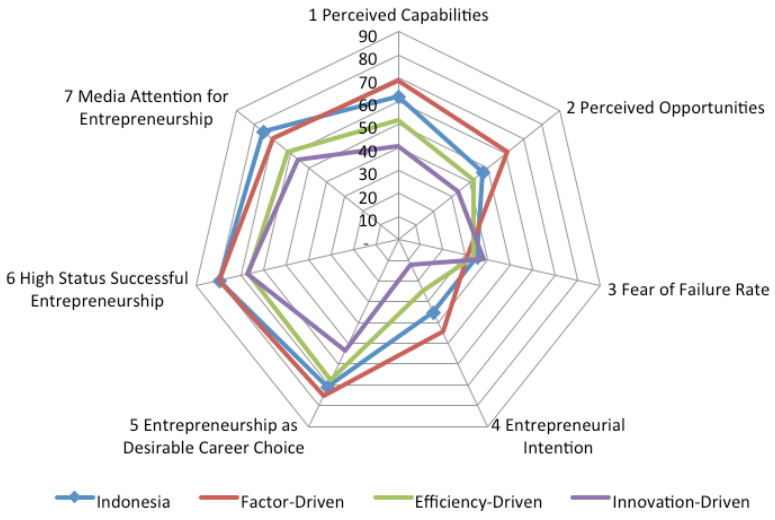

Figure 6. Entrepreneurship perceptions across various economies.
Source: Global Entrepreneurship Monitor [2].

ENTREPRENEURIAL ASPIRATIONS

The number of early-stage start-ups expecting to employ at least five employees within the next five years is very low, at only 4%, down from 11% in 2006 [1–2]. While the increasing rate of necessity-driven entrepreneurs might lower growth expectations, it is not sufficient to link TEA to indicators of economic performance such as job growth.

Innovative orientation statistics show that 23% of entrepreneurs produce new and innovative products; at least they are perceived as such by the local population and have few competitors. This number decreased by almost half from the 2006 GEM data. Once again, necessity-driven entrepreneurs contribute to this rate.

Entrepeneurs also show low levels of internationalization. Only 17% of TEA indicate that at least 25% of customers come from other countries. In 2013, Indonesia had no data on internationalizaton. Like other countries with large territories, Indonesia shows a low level of international orientation.

ENTREPRENEURSHIP FRAMEWORK CONDITIONS

Entrepreneurship framework conditions (EFCs) are factors influencing the entrepreneurship environment. These factors are assessed based on national expert surveys. EFCs include financial support, national policies, government programs, education, R&D transfer, commercial infrastructure, internal markets, physical infrastructure, and cultural and social norms.

In general, Indonesia has low-level evaluations of government support policy on taxation and regulations, as opposed to a general policy on entrepreneurship as a relevant economic issue. The lengthy and complicated regulations for new business, and government corruption are major challenges for new entrepreneurs. Nevertheless, efforts are escalating to eradicate corruption and improve government services. However, government services are still perceived as unconducive.

On the other hand, physical infrastructure has a high value in Indonesia. This means that entrepreneurs in Indonesia have easy access to physical resources such as communication, utilities, transportation, land, and space, all of which do not discriminate against SMEs.

This is similar in most economies across the world. However, when compared to other Asia-Pacific countries, Indonesia has a lower rate of physical infrastructure.

Other factors are positively assessed and reveal that for these, Indonesia is not very different from the other countries in Asia-Pacific. One area in which Indonesia performed above other Asia-Pacific countries is post-secondary level education. Indonesia ranks higher because of the massive entrepreneurship education offered at the university level. Government support for entrepreneurship centers, incubators in universities, entrepreneurship curricula, and student entrepreneurship competitions influence the high level of this indicator. Indonesia's entrepreneurship frameworks compared to other countries is shown in Figure 7.

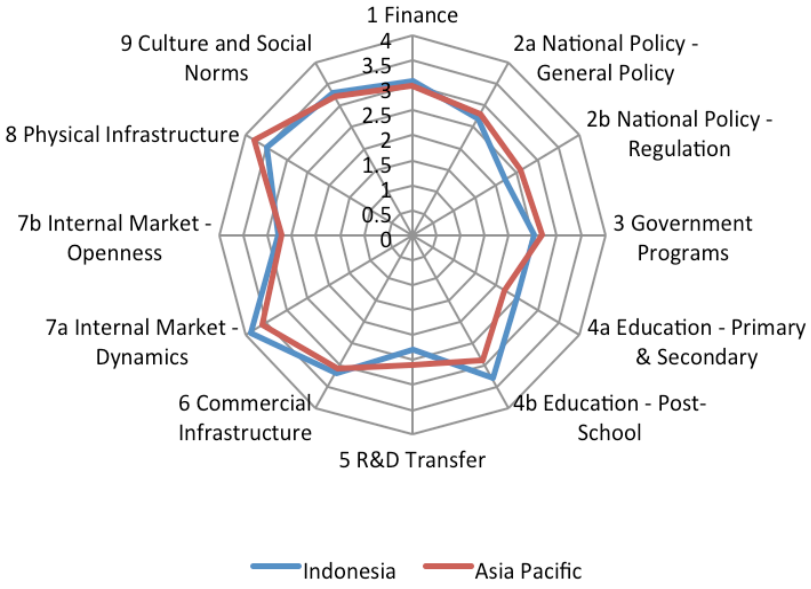

Figure 7. Entrepreneurship framework conditions.
Source: Global Entrepreneurship Monitor [2].

EFFECTIVE APPROACHES AND POLICIES

To have a better impact on the national economy, entrepreneurship development should differentiate between the different entrepreneurs. The current approach of fostering entrepreneurship without differentiation only creates a pool of necessity-driven entrepreneurs. The famous motto, "to change job seekers into job creators," rarely happens in reality. Many "job creators-to-be" never have aspirations to grow and recruit employees.

The government should take a different approach to necessity-driven entrepreneurs. Their subsistence characteristic demands more emphasis on the social entrepreneurship dimension rather than treatment as a profitable business development.

Education and training for educated entrepreneurs should also shift towards more innovative and new-product development. Focusing only on mindsets and motivation while ignoring the business and technical dimensions has made many new young entrepreneurs become trapped in unscaleable businesses. A serious development program for incubation and mentorships should also be developed. Current entrepreneurship programs focus on challenges and awarding prizes without any real continuation of business development. The real need for facilitation and mentorship from successful businessmen and professionals is rarely fulfilled.

The Indonesian financing sector has been focused on banking and the capital market, which are not suitable for new business start-ups. Venture capitalists are limited, and generally behave like conventional banks. The development of business angel investors should also be supported, along other assisting businesses in Indonesia.

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JAPAN

Kikuko Harada

ENTREPRENEURSHIP VIEWED FROM THE NUMBER OF START-UP COMPANIES

In Japan, entrepreneurship and entrepreneurs have long been recognized as job creators, important sources of innovation, and powerful drivers of economic growth. However, recent statistics and surveys on trends in a number of start-up companies show that entrepreneurship has been low for the past two decades, both in comparison with earlier periods and with other countries. The engine for recovery continues to stutter.

Start-up and Business Discontinuance Rate

Figure 1 shows the entry and exit rates for business establishments. Employees are calculated based on the number of business establishments newly covered by employment insurance and discontinued business establishments [1]. The entry rate fell rapidly from the end of the 1980s, following the busting of the economic bubble. The exit rate followed suit, falling in the mid-1990s, but gradually rose and exceeded the entry rate by the beginning of the 2000s. After that, entry and exit rates remained between 4.0 and 5.0, with an average entry rate of 4.42 and exit rate of 4.47 from 2000 to 2010.

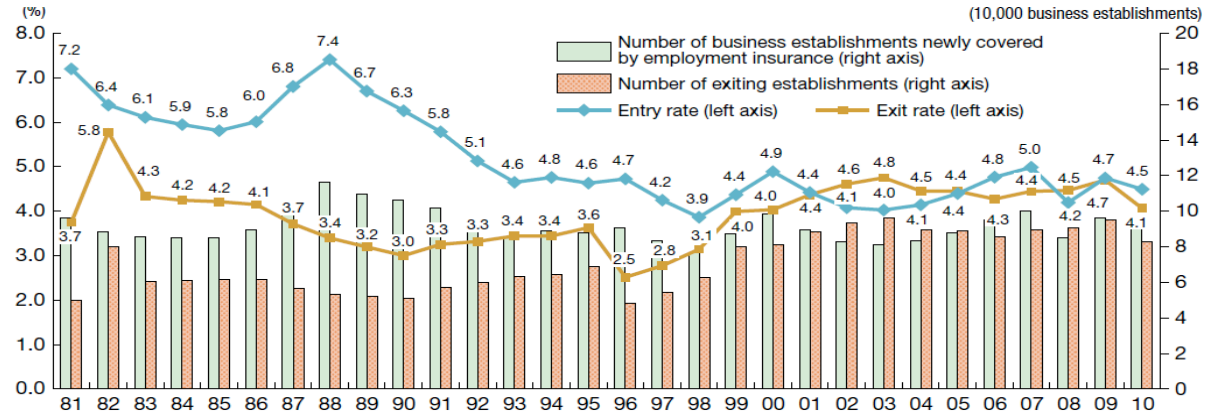

Figure 1. Entry and exit rates based on the Annual Report on Employment Insurance Programs.

Source: Ministry of Economics, Trade and Industry and Japan Small Business Research Institute [1] and Ministry of Health, Labor and Welfare [2].

Notes: Entry rate = number of business establishments newly covered by employment insurance in the fiscal year concerned / number of business establishments covered by employment insurance at the end of the previous year x 100. Exit rate = number of establishments that cease to be covered by employment insurance in the fiscal year concerned / number of establishments covered by employment insurance at the end of the previous year x 100. "Establishments covered by employment insurance" are business establishments insured under the provisions of the Act on the Collections, etc. of insurance premiums of labor insurance (Article 5 of the Employment Insurance Act).

Figure 2 shows that entry and exit rates, based on the number of registrations of corporations, are lower than those in Figure 1. From 2000 to 2009, the average entry rate was 3.48 while the average exit rate was 3.03 [1].

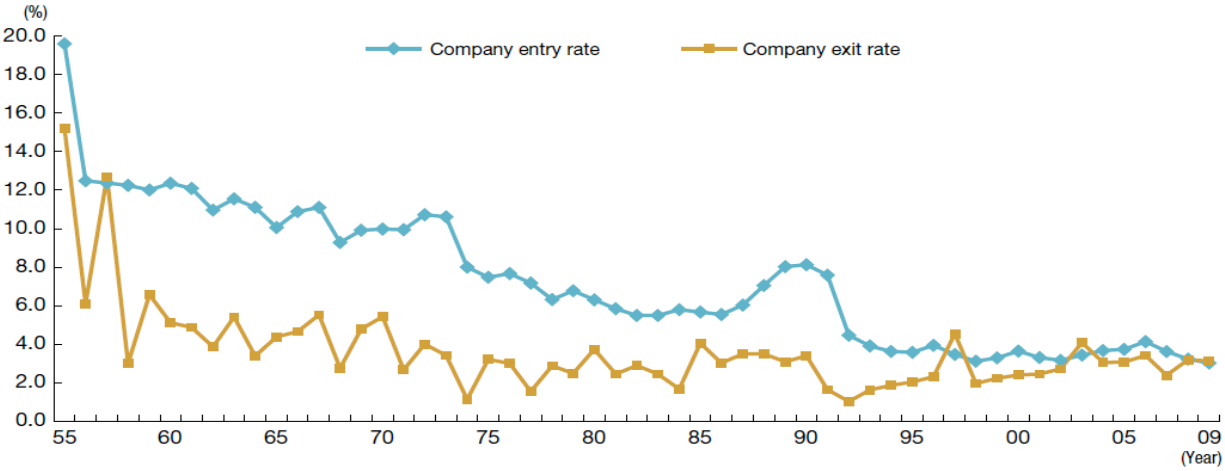

Figure 2. Entry and exit rates based on the Ministry of Justice Annual Report of Statistics on Civil Affairs, Litigation and Civil Liberties and National Tax Agency Annual Statistics Report.

Sources: Ministry of Economics, Trade and Industry, Japan Small Business Research Institute [1], Ministry of Justice [3], and National Tax Agency [4].

Notes: The number of registrations is from the *Annual Report of Statistics on Registrations* from 1955 to 1960, *Annual Report on Registrations, Litigation and Civil Liberties* from 1961 to 1971, and *Annual Report on Civil Affairs, Litigation and Civil Liberties* from 1972 onward. Company entry rate = number of registrations of incorporations / number of companies in previous year x 100. Company exit rate = company entry rate – company increase rate.

Japan's entry and exit rates are compared against the USA and UK in Figure 3 [5]. Even taking into consideration the different calculation techniques of each country, Japan's rates are still clearly lower. Similarly, the Global Entrepreneurship Monitor (GEM) shows a low rate of entrepreneurial activity in Japan.

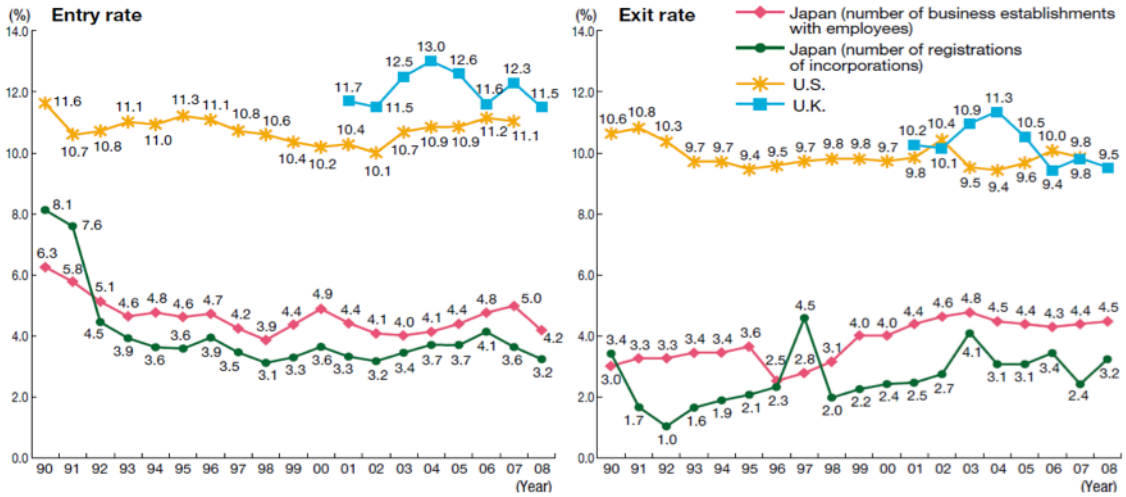

Figure 3. International comparison of entry and exit rates.

Sources: Ministry of Health, Labor and Welfare [2], Ministry of Justice [3], National Tax Agency [4], Ministry of Economics, Trade and Industry and Japan Small Business Research Institute [5], United States Small Business Administration [7], United Kingdom Office for National Statistics [8].

Notes: Entry and exit rates for the US are calculated on the basis of the appearance and disappearance of employers.

Entry and exit rates for the UK are calculated on the basis of the number of enterprises registered for Value Added Tax (VAT) and Pay As You Earn (PAYE) tax. As the nature of the underlying statistics used for each country differs, straightforward comparisons are not possible.

According to the 2012 GEM Global report, Japan's total early-stage entrepreneurial activity (TEA) rate (shown in Figure 4) in 2012 was the lowest among not only the 25 innovation-driven economies, but also among all 69 countries participating in the GEM [1, 6].

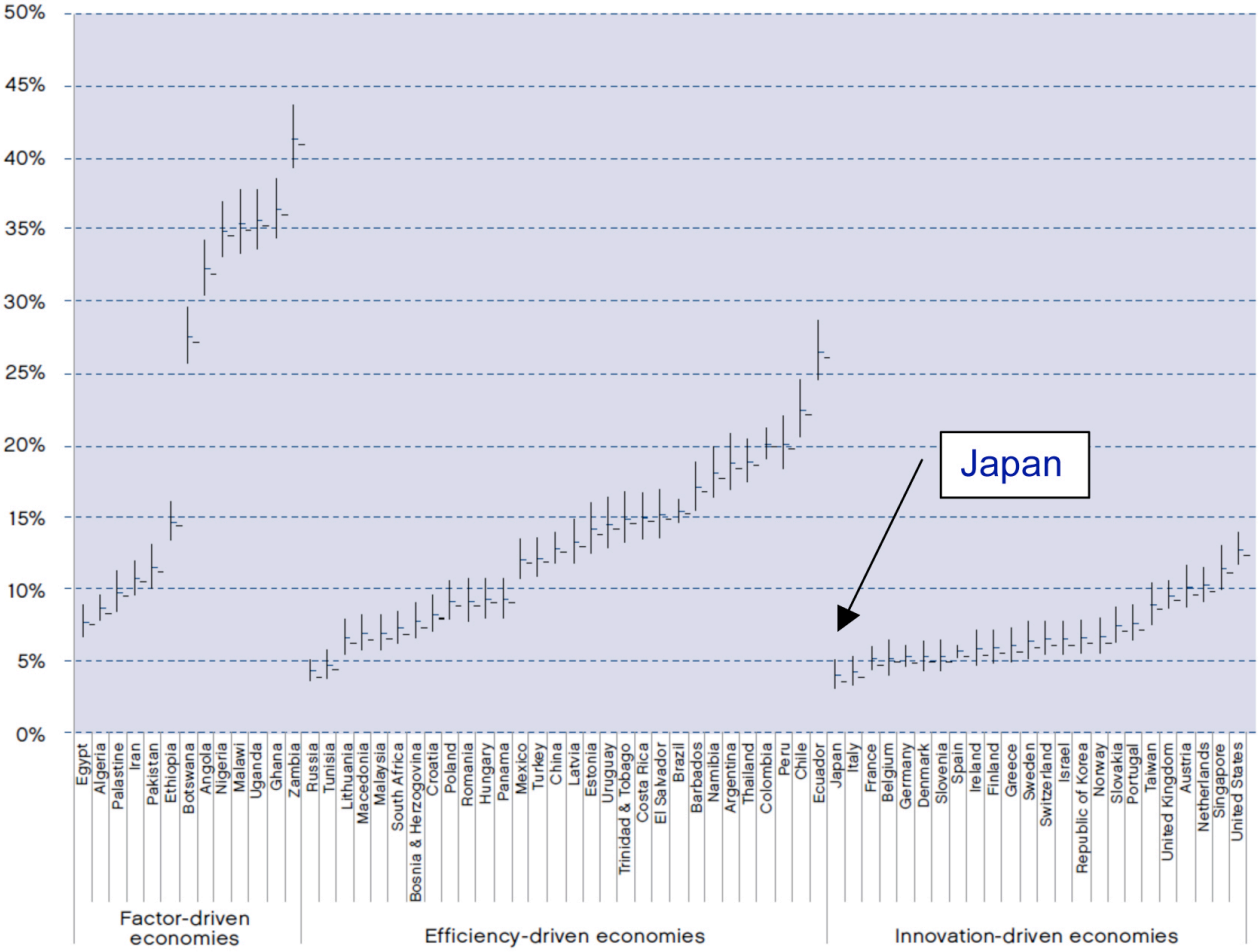

Figure 4. Total early-stage entrepreneurial activity rates for participating countries in 2012 by phase of economic development.

Source: Ministry of Economics, Trade and Industry and Japan Small Business Research Institute [1].

This is not only the case for 2012. As shown in Figure 5.1, Japan has been positioned either as the lowest or among the lowest 10 countries with an average rate of 3.33 for the past 10 years.

After the Lehman crisis in 2008, the TEA rate of most of the countries with innovation-driven economies declined in 2009, but the rates for the USA and UK moved upwards. On the other hand, Japan's rate declined in 2012 after rising in 2011, along with those of France and Germany. GEM data also show that Japan's rate of business discontinuation has been the lowest among the countries surveyed, with an average rate of 1.12 for the past five years (2012: 1.0; 2011: 0.7; 2010: 1.5; 2009: 1.4; 2008: 1.0 [no

earlier data available]) [6]. In Japan, fewer people start up a company, but once they start, they tend to continue the business for longer.

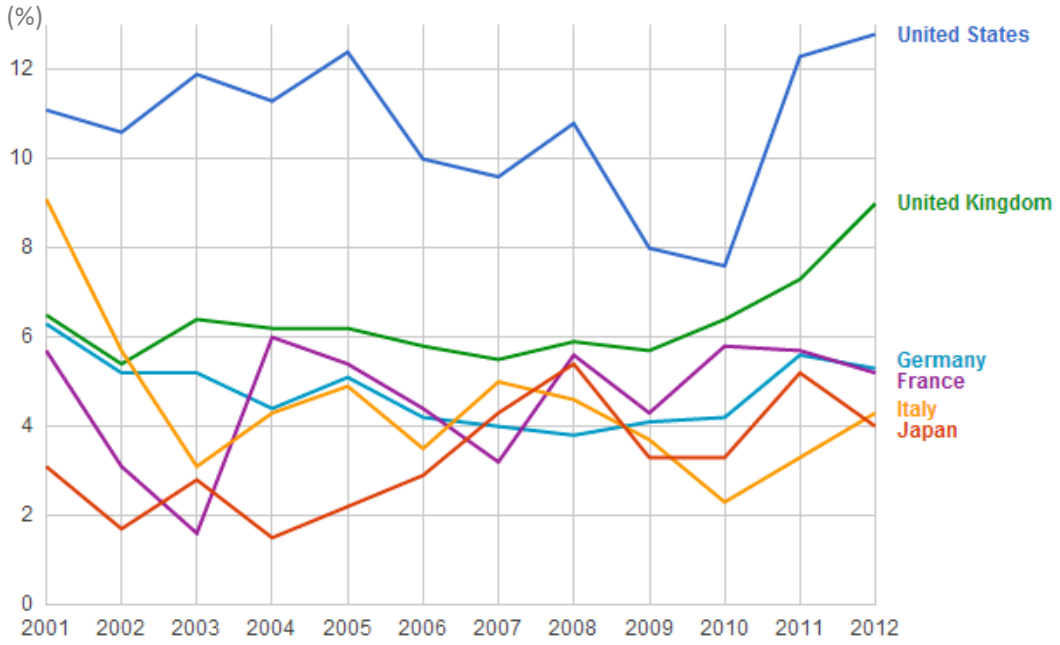

Figure 5.1. Total early-stage entrepreneurial activity rates
(Percentage of population aged 18–64 who are either nascent entrepreneurs or owner-managers of a new business).

Source: Global Entrepreneurship Monitor 2012 Global Report [6].

Note: Data from six countries (USA, UK, Germany, France, Italy, and Japan) that are G7 members and belong to the same group of innovation-driven economies are used for comparison.

The Japanese rate of opportunity-driven TEA was 62.5% on average from 2005 to 2012, which is fairly high and is steadily increasing. However, the Japanese rate of necessity-driven TEA is also high among the innovation-driven economies, with a peak rate of 36% in 2010 (average of 26.27% from 2001–12) [6].

Figure 5.2 shows the ratio of those involved in TEA who claim to be driven by opportunity. Figure 5.3 shows the ratio of those involved in TEA who are involved in entrepreneurship because they had no other option for work.

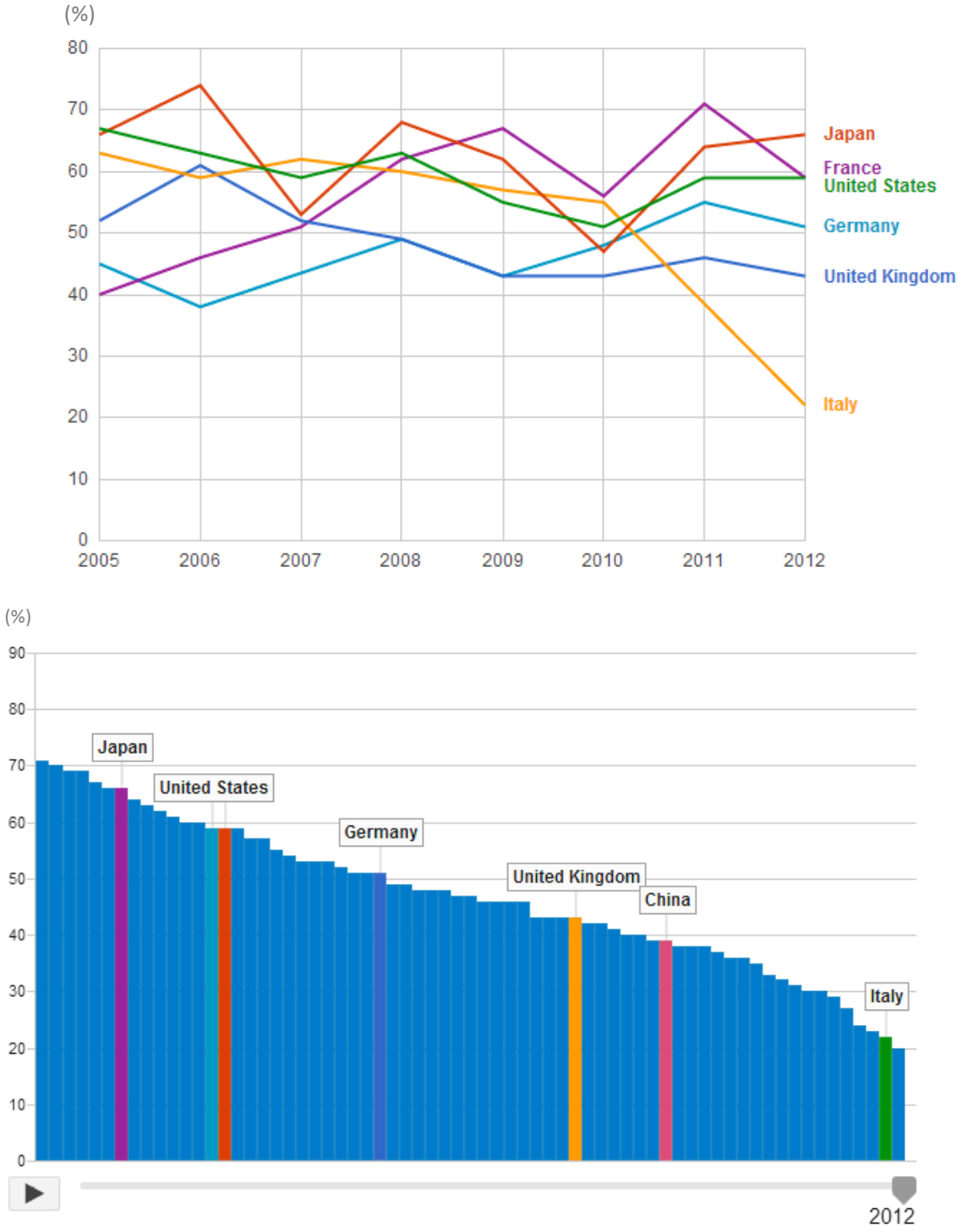

Figure 5.2. Improvement-driven entrepreneurial activity: relative prevalence.

Source: Global Entrepreneurship Monitor 2012 Global Report [6].

Note: The percentage of those involved in TEA are those who (1) claim to be driven by opportunity as opposed to having no other option for work, and (2) who indicate that their main driver is the desire to be independent or increase their income, rather than just maintaining their income level.

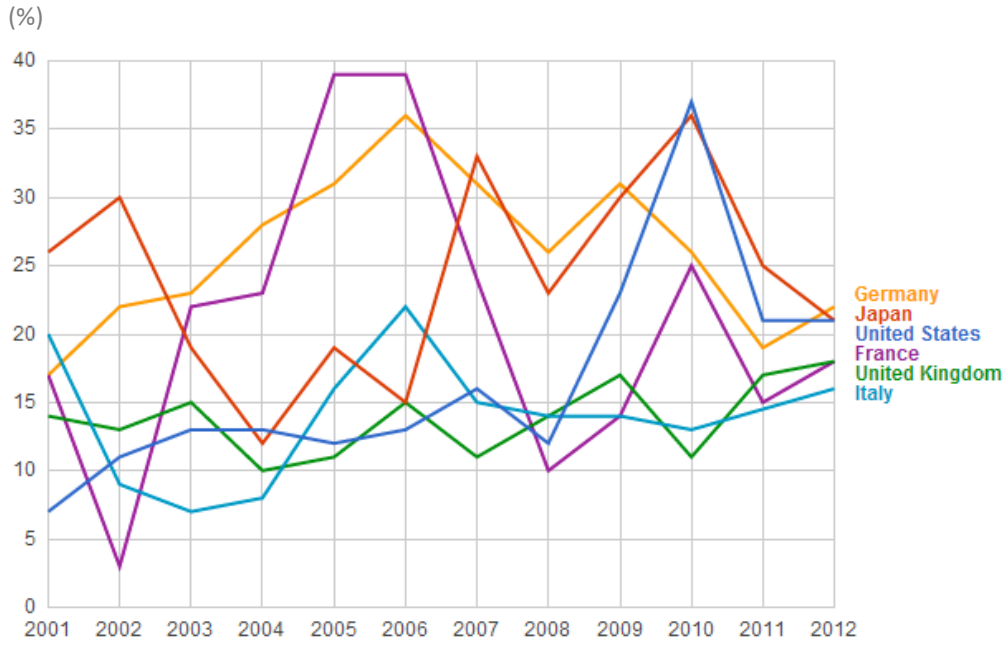

Figure 5.3. Necessity-driven entrepreneurial activity: relative prevalence (Percentage of those involved in TEA because they had no other options for work).

Source: Global Entrepreneurship Monitor 2012 Global Report [6].

Rate of Start-up by Gender or Age

According to Figure 6, Japanese male entrepreneurs vary in number by age, with entrepreneurs in their 30s and 60s being more common [1]. The number of Japanese female entrepreneurs constant across all age groups except for the 30–39 year-old age group, where they are more numerous.

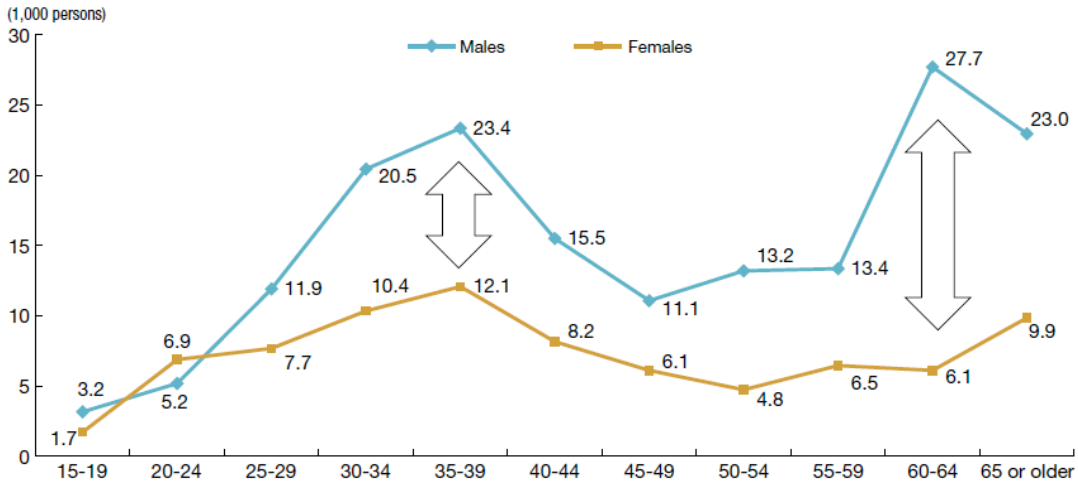

Figure 6. Number of entrepreneurs by gender and age.

Source: Ministry of Trade, Economics and Industry and Japan Small Business Research Institute [1] and Ministry of Internal Affairs and Communications (MIC) [9].

Note: "Entrepreneurs" here consists of persons who changed or found new employment within the past year and are now self-employed (excluding homeworkers).

Figure 7 is taken from a survey of business start-up companies in Japan conducted by the Japan Finance Corporation Research Institute (JFCRI), and introduced in a 2012 White Paper on SMEs [1, 10]. This survey covered about 1 million members aged 15 or older in a national sample of 450,000 households in 2007. The results, introduced in the 2012 White Paper on SMEs, showed the percentage of female entrepreneurs among all entrepreneurs in Japan. In this survey, the rate of female entrepreneurs is around 15%, which is substantially lower than the data of Figure 8, 32.3% under the MIC's Employment Status Survey [9]. The reason for this may be that compared with companies founded by men, those established by women are on a smaller scale and more likely to be funded using self-financing alone.

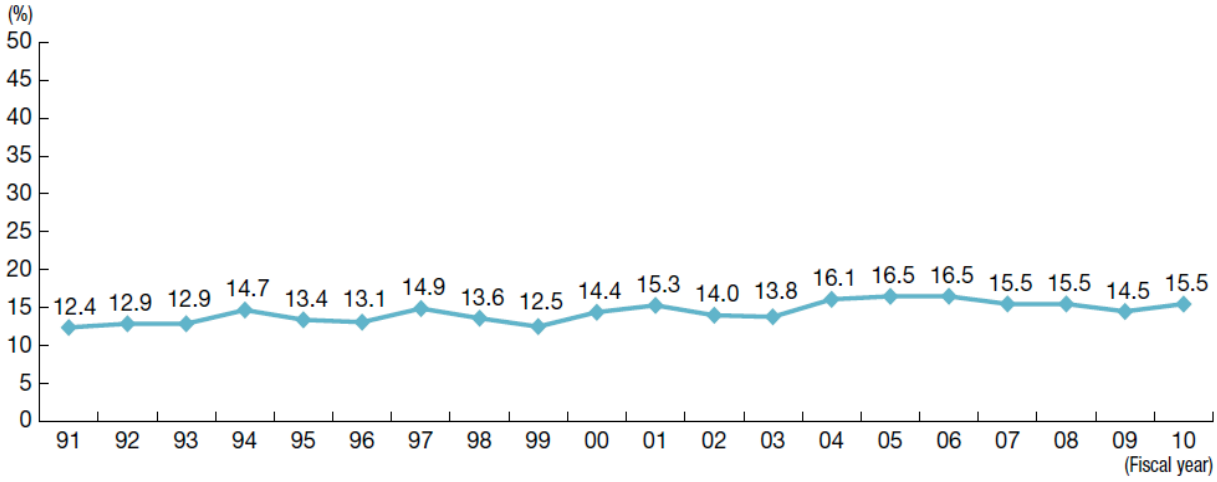

Figure 7. Percentage of female entrepreneurs among all entrepreneurs.

Source: Ministry of Economics, Trade and Industry and Japan Small Business Research Institute [1] and Japan Finance Corporation Research Institute [10].

GEM research reports that entrepreneurship activity is most prevalent among those 25–34 years of age, and economies in all geographic regions show bell-shaped distinctions with the highest entrepreneurship rates generally occurring among this age group. The second-highest participation occurs in the next oldest age group (35–44 years). Together, these two age categories make up close to 50% or more of all entrepreneurs. However, in Japan, similar participation levels are seen across all or most of the age ranges [6]. Moreover, the participation of those older than 60 years is increasing (Figure 8).

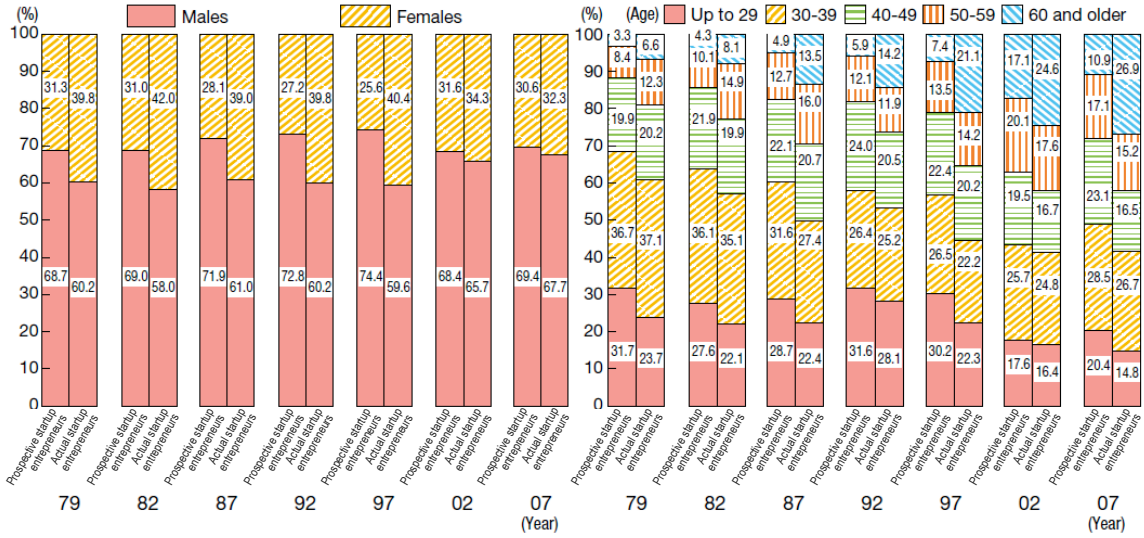

Figure 8. Breakdown of prospective and actual start-up entrepreneurs by gender and age.

Source: Ministry of Internal Affairs and Communications [9].

Notes: "Prospective startup entrepreneurs" consists of persons who responded "want to start own business," both those engaged in work and wanting to change jobs and those not engaged in work. "Actual start-up entrepreneurs" consists of persons who changed or found new employment in the past year and are now self-employed (excluding homeworkers).

GEM research also shows that Japan's female TEA rate is relatively low even if we consider that innovation-driven economies tend to have a low female TEA ratio. The average Japanese female TEA rate was 2.16 between 2002 and 2012 (Figure 9).

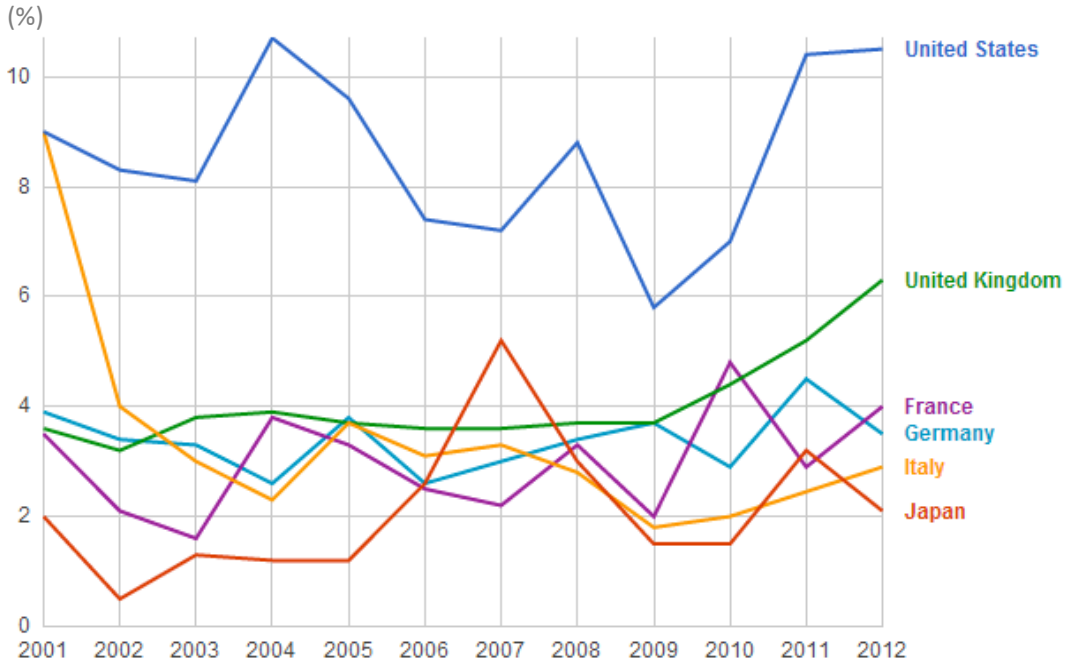

Figure 9. Total early-stage female entrepreneurial activity compared with other countries (Percentage of females in the 18–64 year-old population who are either nascent entrepreneurs or owner-managers of a new business).

Source: Global Entrepreneurship Monitor 2012 Global Report [6].

The rate rose to 5.2 in 2007 but fell again to 1.5 in 2009. The rate of 2.1 in 2012 was the second lowest among all 69 countries surveyed [6]. Among innovation-driven economies, active female entrepreneurship raises a country's TEA as a whole, as in the USA and UK. Policies that can promote changes in societal attitude and encourage women entrepreneurs would enhance economic growth in Japan.

Industries and Sectors with High Start-up Rates

Figure 10 shows the business fields of female and male entrepreneurs, according to the MIC Employment Status Survey (2007) [9]. This figure shows that many of the companies founded by female entrepreneurs provide personal services, including food and beverages, accommodation, education and learning support, and living-related services, which together account for 40% of all female start-ups. One of the reasons why personal service fields are so common is that it is easier to start with limited resources. The other is that these fields are expected to grow as society further matures and personal lifestyle needs become diverse in the future. On the other hand, male entrepreneurs conduct more business in construction and specialized services.

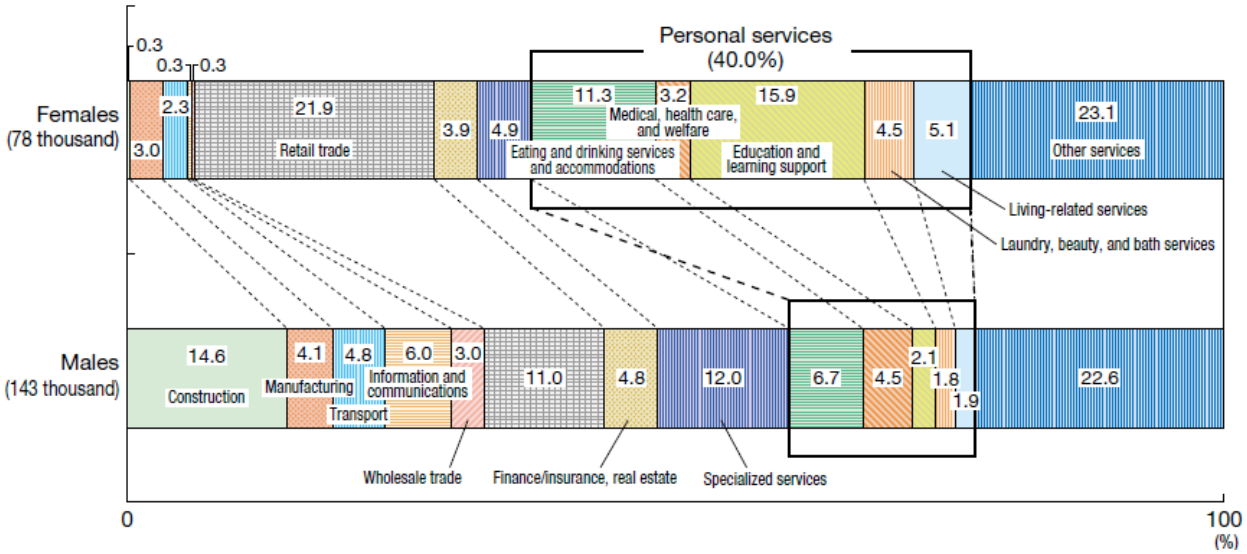

Figure 10. Business fields of female and male entrepreneurs.

Source: Ministry of International Affairs and Communications [9], Ministry of Economics, Trade and Industry and Japan Small Business Research Institute [11].

Notes: "Entrepreneurs" consists of persons who changed or found new employment in the past year and are now self-employed (excluding homeworkers). Only non-primary industries are included in the above. "Other services" are classified into "services not elsewhere classified" and "unknown." "Personal services" here consist of the following: eating and drinking services and accommodations; medical, health care, and welfare; education and learning support; laundry, beauty and bath services, and living-related services.

Figure 11 shows the business fields that existing enterprises are interested in exploring for the future. The figure shows that the major business fields related to start-ups are

environmental protection and recycling, followed by energy conservation and new energy. The field that most are interested in is new energy [11]. This trend has obviously been strengthened by the great demand among the public for energy alternatives to nuclear power, and the government's deregulation of the energy industry, which was brought about by the explosion at the Fukushima Daiichi nuclear power plant right after the Great East Japan Earthquake in 2011.

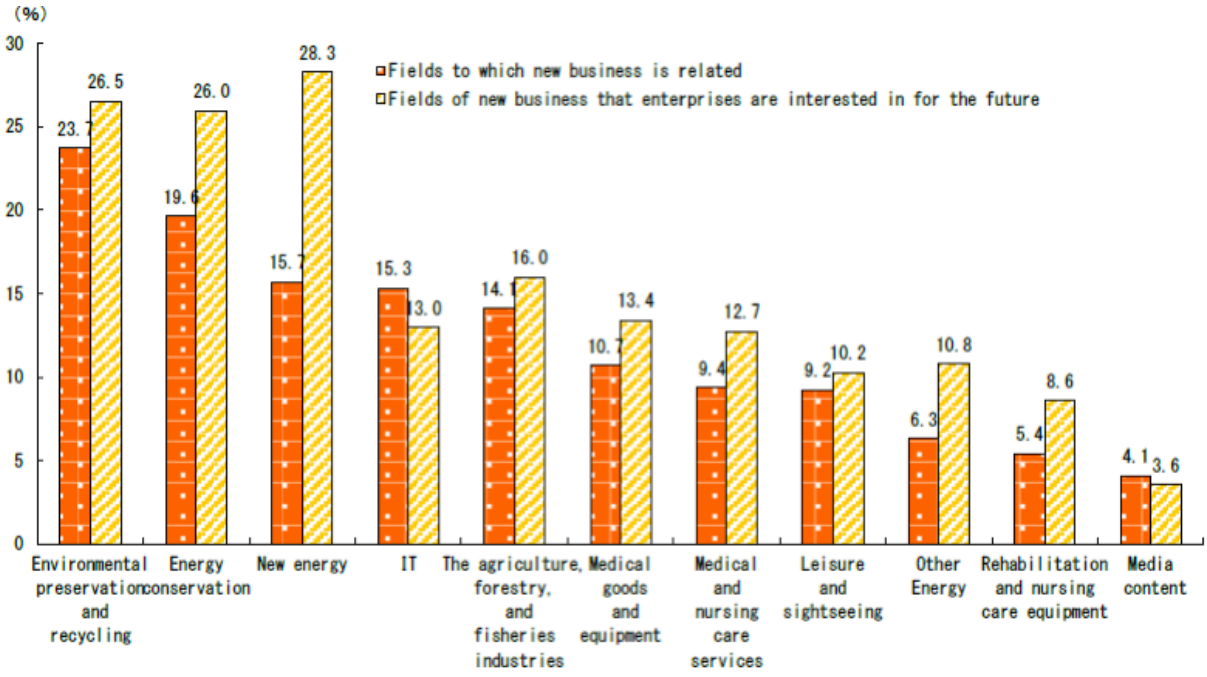

Figure 11. Fields related to new business or those which enterprises are interested in for the future.

Source: Ministry of Economics, Trade and Industry and Japan Small Business Research Institute [11].

Policies and Support for Entrepreneurship Promotion

As shown in the previous section, due to the economic downturn that started in the 1990s, Japan recorded one of the lowest rates of entrepreneurial activities among the world's leading nations. Given that high start-up rates have a positive correlation with economic growth, it was necessary improve this situation and build an economically dynamic society. The Japanese government has viewed creating new business as a prime task and implemented several policies to promote entrepreneurship [11]. This move eventually led to a review of the existing SME-support measures.

Among the actions taken was the promotion of entrepreneurship education. The Ministry of Economy, Trade, and Industry (METI) organized an Entrepreneurship Education Study Committee in October 1997, and produced the report "Toward Development of Entrepreneurial Human Resources" in 1998. Subsequently, METI started to strengthen management and business education at universities, especially for science and engineering majors, and to encourage students to intern at venture companies. METI also carried out entrepreneurship education programs at schools (primary to high school) for several years.

Another political action toward entrepreneurship development was the enactment of a new law to support the establishment of a Technology Licensing Office (TLO) in each university in May 1998. Political initiatives to transfer technology from academia to industry strengthened after this law came into effect in August 1998. Universities have a lot of research resources, which seed promising future industries, but they are often not fully exploited in Japan. Another problem is that large Japanese firms tend to sign exclusive rights for the bulk of university discoveries, and small, new start-up firms are usually not able to access and develop them. Currently, there are 38 approved and three certified TLOs in Japan, which support science and technology start-ups to create new business collaborations with universities.

A new Law for the Promotion of New Business Creation was also enacted in December 1998 and enforced in 1999. This law was tasked with developing a business environment that would encourage individuals to start new businesses and to promoting autonomous local industry development with industrial resources [12]. Under this law, various measures to promote new business activities were introduced, including the awarding of grants to business start-ups, creation of a special debt guarantee scheme, the foundation of a new loan system, special exceptions to the stock option system, joint-investment funds with private institutions to support the smooth financing of SMEs, as well as providing an incubation facility and a comprehensive support system (platform) for the creation of new business in regional areas.

A Priority Plan for the Creation of New Markets and New Jobs (Hiranuma Plan), made in 2001, focused on developing innovation systems and fostering ventures to assist the creation of new industries. In this plan, numerical targets were set, such as doubling the number of new business start-ups over five years, the creation of 1,000 university venture companies over three years, and a 10-fold increase in the number of patents acquired by universities over the last 10 years were listed [13].

The Law for the Promotion of New Business Creation was integrated into the Law on the Promotion of New Business Activities of SMEs together with two other laws in 2005. The new law was intended to make complex laws easier for users to understand, and aimed to strengthen support for new business activities, which are brought about by cooperation of SMEs in different fields. Later, the Law for the Advancement of Manufacturing Core Technology of SMEs was promulgated and came into force in June 2006. Through supporting SME R&D in core manufacturing technology and the use of their resources, this law was enacted for the purpose of advancing SME technology that was capable of being internationally competitive. Separately, local support institutions were encouraged to cooperate organically and provide effective advice and support on a variety of SME issues. Measures to promote cooperation in specific industries have also been carried out. Among these is the Law for Promotion of Agri-Commerce-Industry Collaboration, enacted in 2010. This law was aimed at supporting the development of new products and services through collaboration between agriculture, forestry, fisheries, and small businesses.

Along with these policies, deregulatory and financial reforms were introduced over the last two decades to remove legal and administrative obstacles to developing a market-centered financial system. These reforms also served to create a direct flow of financing from national assets that comprised as much as JPY1,200 trillion in private savings. Japan's Big Bang financial regulatory reform was conducted under the slogan of "Free, Fair, and Global" from 1996 to 2001, to transform the highly regulated bank-centered financial system into a transparent and market-centered financial system.

Reform measures included a revision of foreign exchange and foreign trade control laws, the elimination of barriers among banking, securities, and insurance, entry permits for online banking, and thorough disclosure to investors and depositors. In 1997, the Angel Tax System was implemented and allowed preferential tax treatment for private investors investing in venture companies. Investors with capital losses from selling certain SMEs shares become eligible to receive tax deductions. A reform in 2008 enlarged the tax deduction to include applications for donation deduction.

In 1998, the Limited Partnership Act for Investment was enacted to promote the smooth provision of capital to business entities and their sound growth. In 1999, the Tokyo Stock Exchange created the "Mother's Market" to provide a wide field of procurement to start-up companies in need of funds. In 2000, NASDAQ Japan (now JASDAQ) opened and entrepreneurs with high-business potential become eligible to source money from venture capital (VC) investment with greater ease. A special system of minimum capital regulation in 2002 made it possible to establish a limited company or corporation for only

JPY1. After a three-year transition period, the minimum capital regulation was abolished with the Companies Act of 2005. Thus, the government has made a large effort to promote entrepreneurship by providing various law reforms, financial aid (both direct and indirect), and networking opportunities during the past two decades.

Japan's present cabinet is expected to further strengthen national initiatives to encourage entrepreneurship. Prime Minister Shinzo Abe has promised to implement structural reform to bring about sustainable growth and promote the creation of new businesses [14]. Deregulation in key sectors such as energy, agriculture, medicine, and the labor market is said to have the most positive impact. METI will provide considerable amounts of funding to double Japan's rate of business start-ups by 2020 (about 10%). To do that, it will have to add another 100,000 start-ups to the current annual tally. The reforms also involve pressing the banks to stop demanding onerous personal guarantees when entrepreneurs seek loans for their businesses.

Currently, it would appear that business start-ups are able to receive enough public services only if they can access existing resources and opportunities including support subsidies, low-interest loans, loan guarantees, investment aid, tax incentives, R&D grants, management and technical consulting, business trade fairs, and physical infrastructure, including low-rent incubation facilities. In addition to these government-led national policies, each prefecture and city provides its own support measures to develop entrepreneurship. Chambers of Commerce and other private sector organizations also offer various types of support including study sessions, seminars, consulting, financial services, networking gatherings, business plan competitions, and awards.

SOCIAL PERCEPTIONS OF ENTREPRENEURSHIP

Both public and private support systems for start-up companies are relatively well developed. However, not many people see starting their own business as a desirable career choice, nor do they appreciate the importance of entrepreneurship in the economy.

The problem seems to have its roots in cultural values in respect of entrepreneurship. In Japan, children are still encouraged to study hard to be admitted into a prestigious university, whose reputation may offer a better chance to secure a stable job as an employee. They do not have much opportunity to consider that there is a career option as an entrepreneur, in lieu of working for others, unless their parents are doing the same.

The majority of adults who can influence young people still regard employment with a big company or a government office as a successful career. One of the factors causing these negative perceptions toward entrepreneurship may stem from the higher wages and better social benefits that big companies and government offices provide. In Japan, the average income for self-employed persons has continued to decline from the end of 1970, in contrast to the rise of company employee salaries [15]. However, it is also true that more than 30% of wealthy Japanese are entrepreneurs, and they also pay the most tax [16].

Another reason may arise from the business culture wherein people tend to attach credibility to a company by its size rather than the quality of its product or service. In that sense, a new start-up company without a record of past deals or achievements cannot avoid facing difficulties in doing business unless they have existing good connections. Therefore, when an economic situation is bad, and starting a new business looks very difficult, avoiding the risk of entrepreneurship is a fairly reasonable choice. GEM research data also reflect this fact (Figures 12–20) [6]. It reports that few people in Japan intend to start a business or consider entrepreneurship a desirable career choice, although they agree that successful entrepreneurs receive positive media attention and high status. The percentage of people who personally know someone who started a business, or personally provided funds for a new business started by someone else, is also very low. People either do not see many opportunities, or think they lack the ability to start a business.

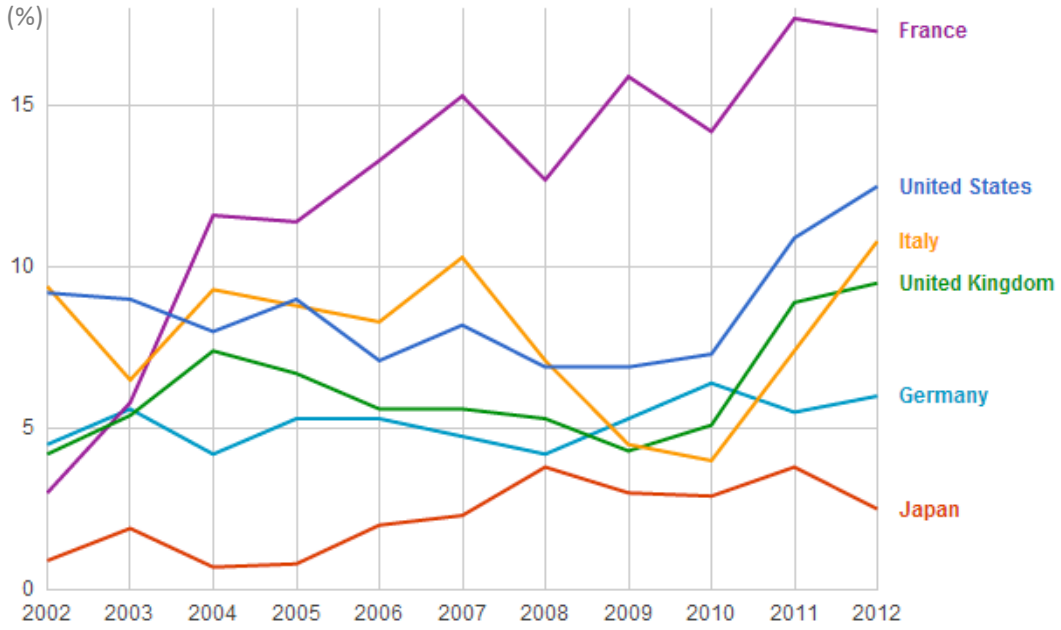

Figure 12. Entrepreneurship intention.

Source: Global Entrepreneurship Monitor 2012 Global Report [6].
Note: Shows the percentage of adults aged 18–64 who intend to start a business within the next three years (excludes individuals already involved in any stage of entrepreneurial activity).

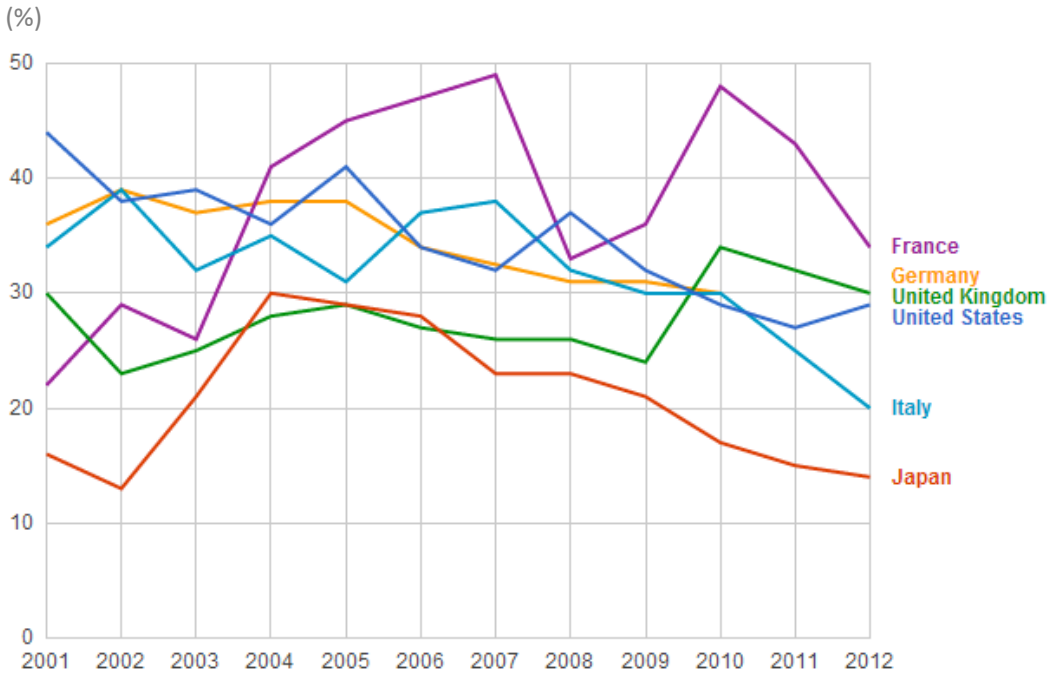

Figure 13. Knowledge of start-up entrepreneur rate.

Source: Global Entrepreneurship Monitor 2012 Global Report [6].
Note: Shows the percentage of adults aged 18–64 who personally know someone who has started a business in the past two years.

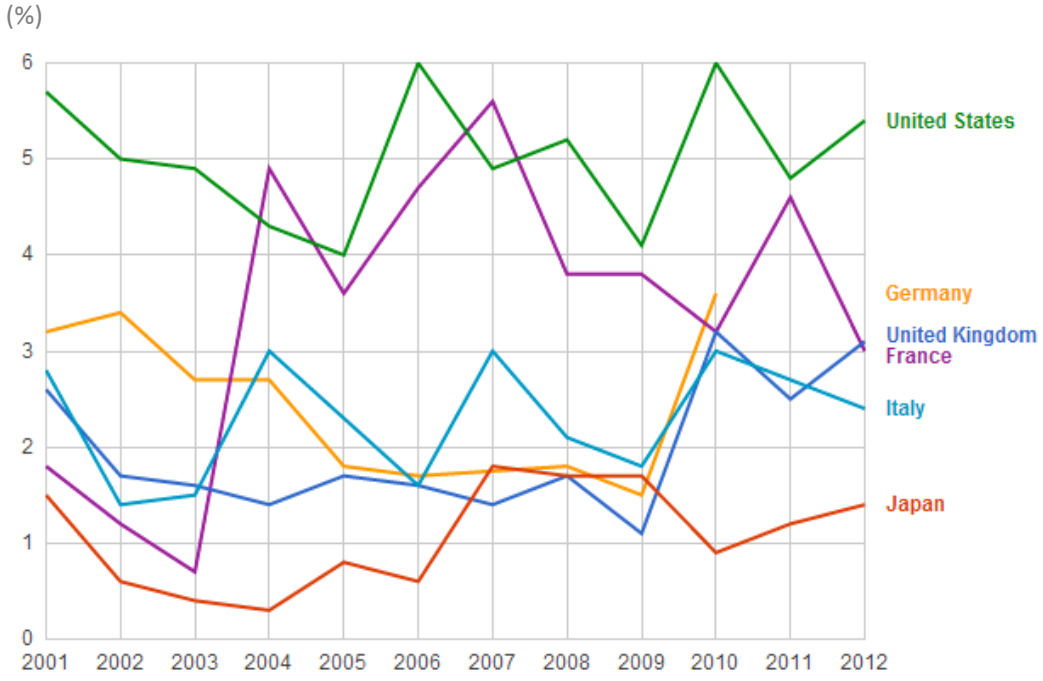

Figure 14. Informal investor rate.

Source: Global Entrepreneurship Monitor 2012 Global Report [6].
Note: Shows the percentage of adults aged 18–64 who have personally provided funds for a new business started by someone else in the past three years.

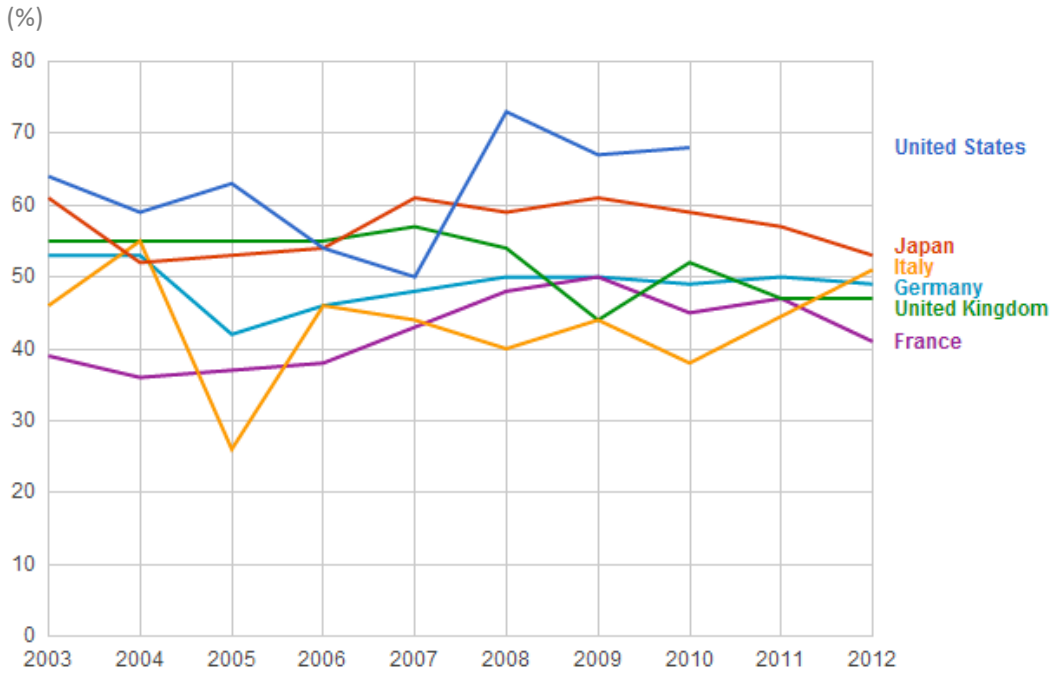

Figure 15. Media attention for entrepreneurship.

Source: Global Entrepreneurship Monitor 2012 Global Report [6].
Note: Shows the percentage of adults aged 18–64 who agree with the statement that, in their country, stories in the public media about successful new businesses are common.

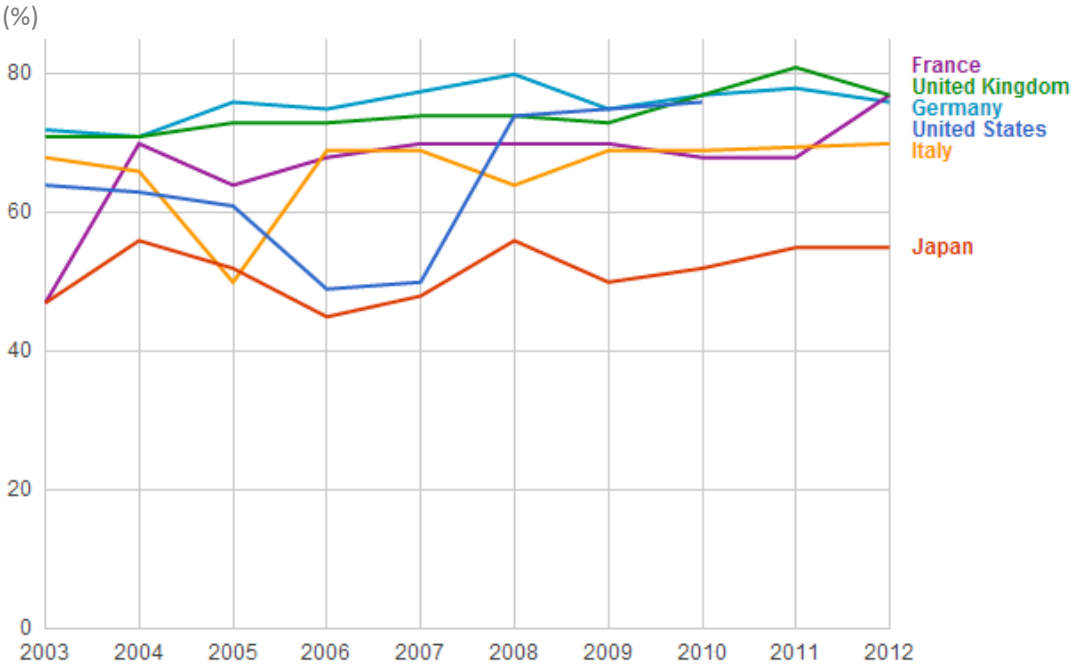

Figure 16. High-status successful entrepreneurship.

Source: Global Entrepreneurship Monitor 2012 Global Report [6].
Note: Shows the percentage of adults aged 18–64 who agree with the statement that, in their country, successful entrepreneurs enjoy high status.

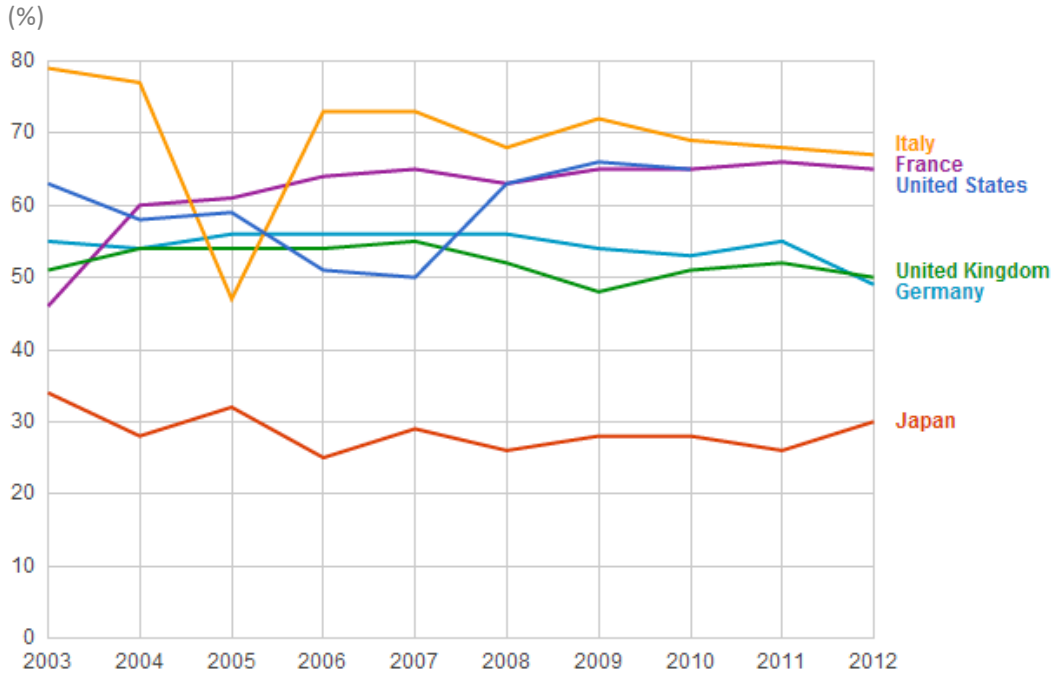

Figure 17. Entrepreneurship as a desirable career choice.

Source: Global Entrepreneurship Monitor 2012 Global Report [6].
Note: Shows the percentage of adults aged 18–64 who agree with the statement that, in their country, most people consider starting a business to be a desirable career choice.

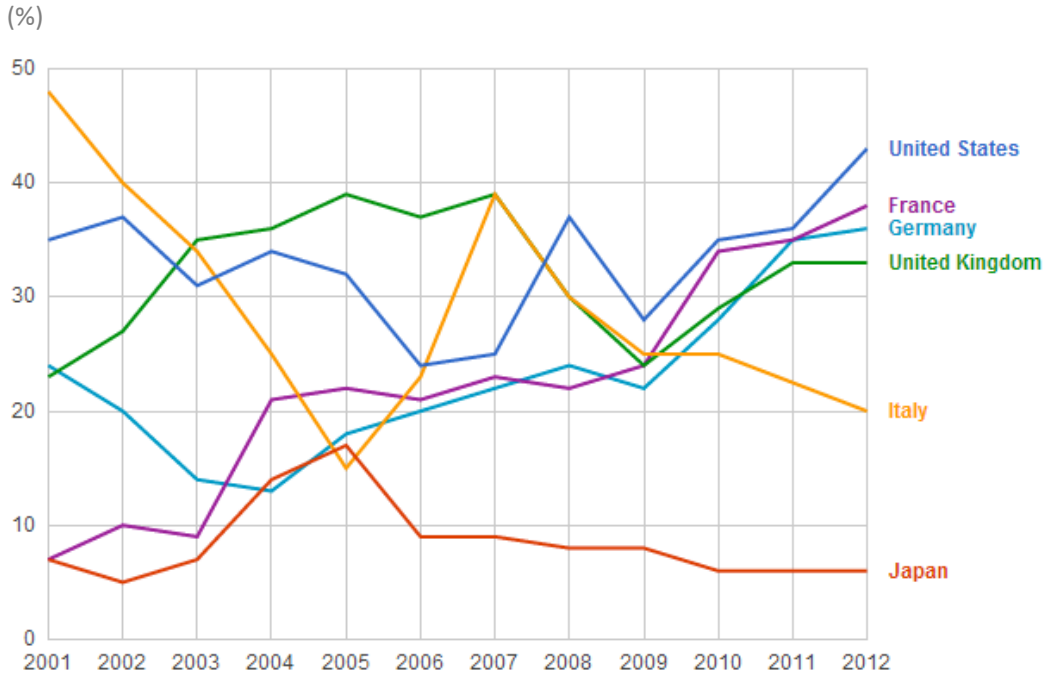

Figure 18. Perceived opportunities.

Source: Global Entrepreneurship Monitor 2012 Global Report [6].
Note: Shows the percentage of adults aged 18–64 who see good opportunities to start a firm in the area where they live.

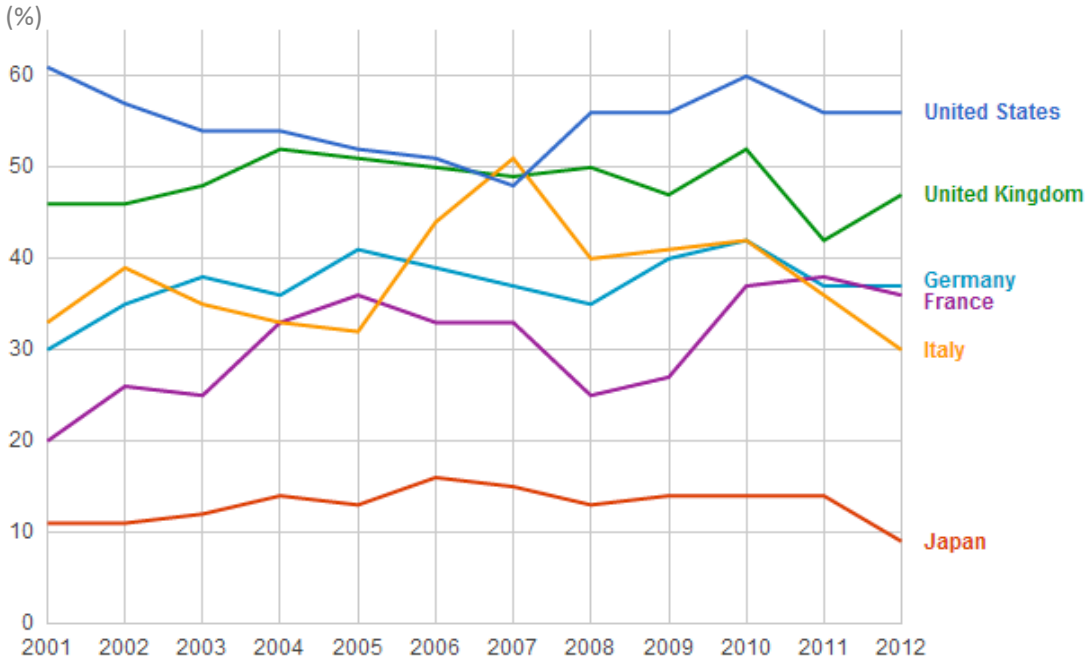

Figure 19. Perceived capabilities.

Source: Global Entrepreneurship Monitor 2012 Global Report [6] and Organization for Economic Co-operation and Development [18].

Note: Shows the percentage of adults aged 18–64 who believe that they have the required skills and knowledge to start a business.

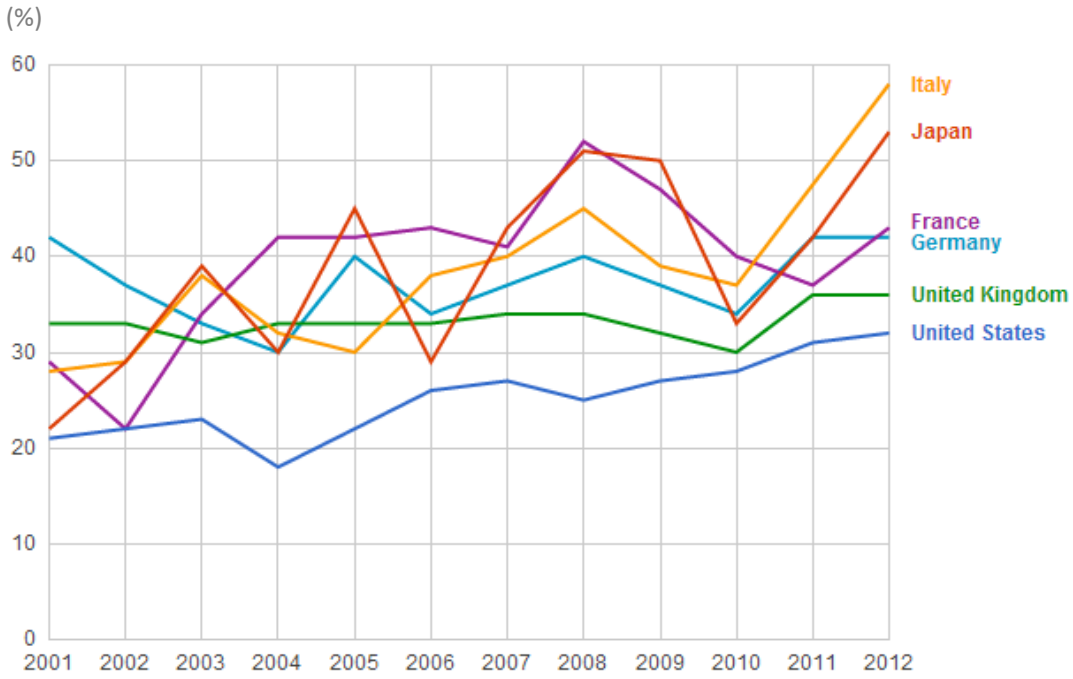

Figure 20. Fear of failure.

Source: Global Entrepreneurship Monitor 2012 Global Report [6] and Organization for Economic Co-operation and Development 2013 [18].

Note: Shows the percentage of adults aged 18–64 with a positive perception of opportunities, but indicate that fear of failure would prevent them from setting up a business.

The GEM report indicates that across the geographic regions, fear of failure shows less distinction than opportunity and capability perceptions. However, even if people perceive opportunities and have the skills necessary for entrepreneurship, fear of failure may prevent them from actually starting a business. The level of fear of failure, in general, increases as one moves from the early-stage to more advanced development levels. This means that the rate of fear of failure in innovation-driven economies is higher than that of factor-driven or efficiency-driven economies. However, even among innovation-driven economies, the rate in the USA and UK is relatively low compared to Japan or Italy. It is clear that in Japan, entrepreneurial activities are not germane to people in general, and positive perceptions and attitudes toward entrepreneurship have not yet developed in society.

The Organization for Economic Co-operation and Development (OECD) research report, Entrepreneurship at a Glance 2013 (Figures 21–24) also shows that the preference for self-employment is very low in Japan [18]. People tend to be more afraid of losing regular or guaranteed income than of the possibility of going bankrupt or losing their property if they were to start a business. In most countries, a large majority of adults believe that entrepreneurs who fail should be given a second chance; however the rate of this belief in Japan is among the lowest [19].

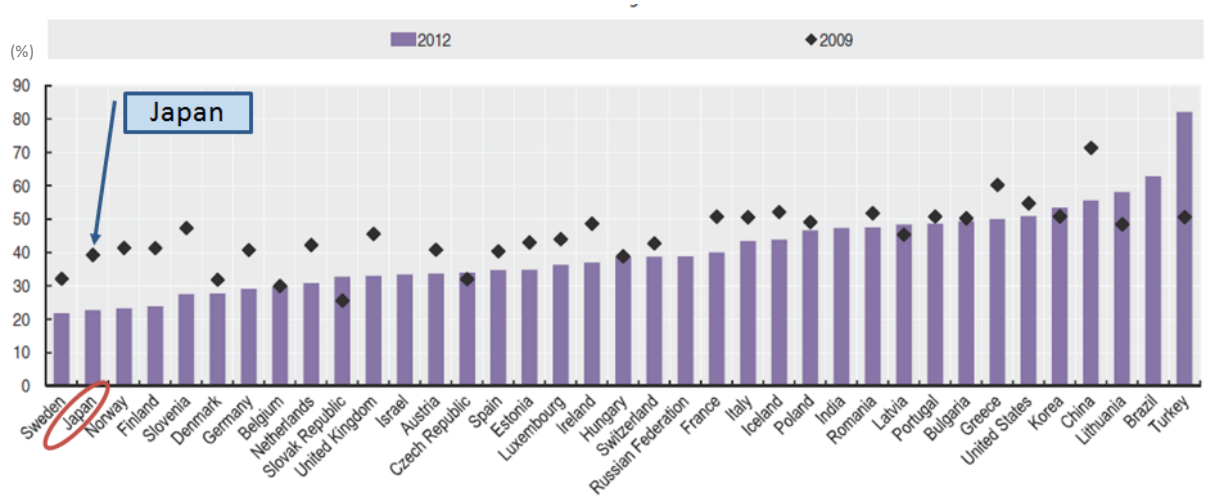

Figure 21. Preference for self-employment.

Source: Organization for Economic Co-operation and Development 2013 [18].

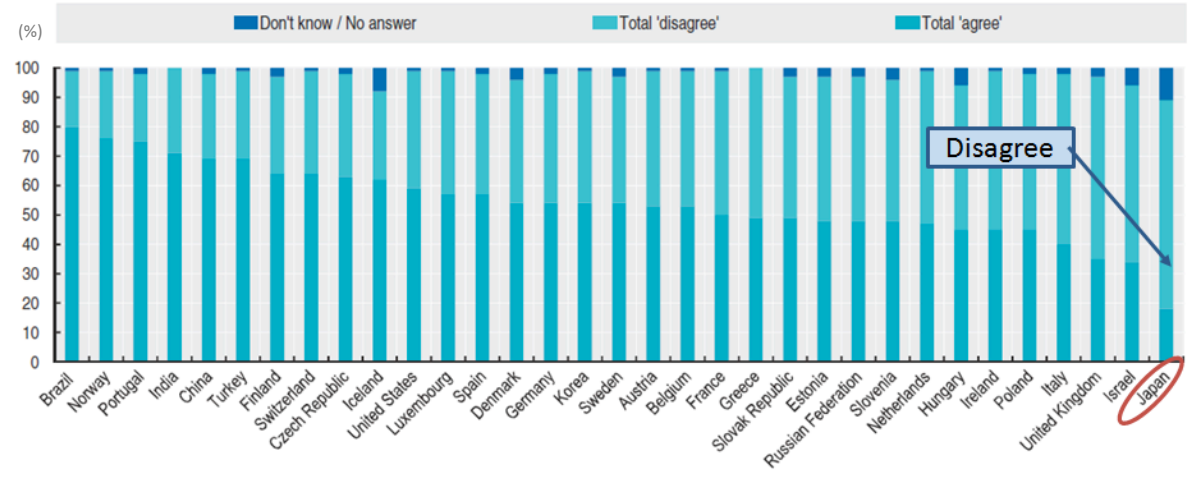

Figure 22. Role played by schools in developing a sense of initiative and an entrepreneurial spirit (2012 percentages).

Source: Organization for Economic Co-operation and Development 2013 [18].

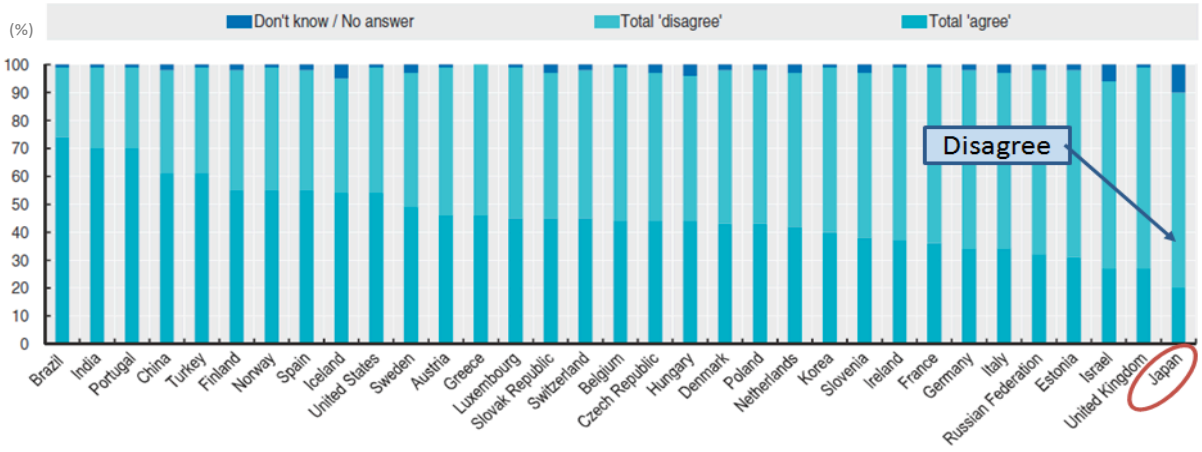

Figure 23. Role played by schools in enabling skills and know-how to run a business (2012 percentages).

Source: Organization for Economic Co-operation and Development 2013 [18].

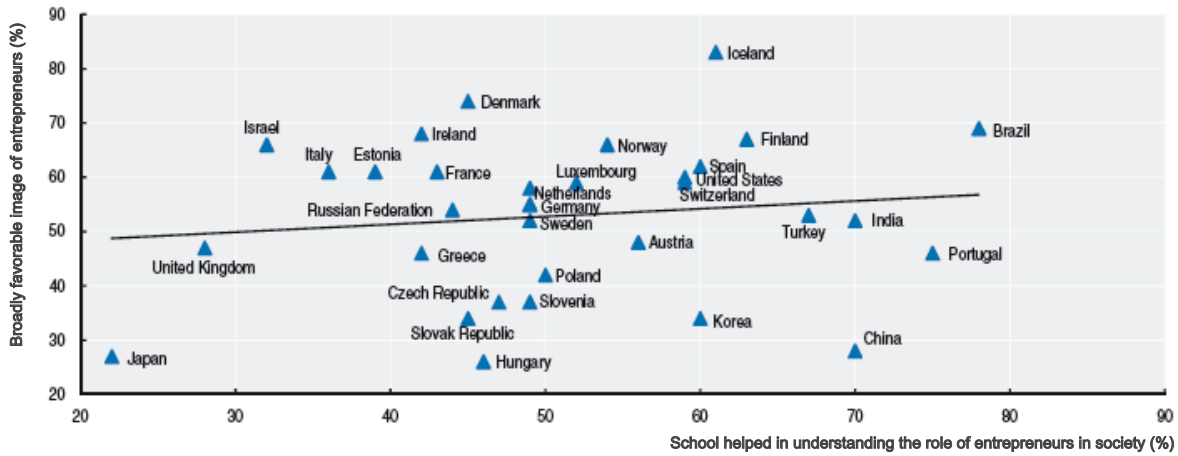

Figure 24. Entrepreneurship education and the image of entrepreneurs (2012 percentages).

Source: Organization for Economic Co-operation and Development 2013 [18].

The data also reveal the lack of entrepreneurship education at schools in Japan. In Brazil, Norway, and Portugal, more than 75% of adults acknowledge the role played by school education in this regard, while in Japan this share is less than 20%. In Japan, 60% of people say that their education did not help to develop their sense of initiative, and also did not provide them with the skills and know-how needed to start a business. In Japan, the perceived low image of entrepreneurs could be related to people's assessment of the role that education has had in forming the societal view of entrepreneurs.

These data seem to show that Japan might lack an important foundation to nurture entrepreneurship, such as the existence of entrepreneurs with positive beliefs and attitudes, along with the social environment to encourage them. We propose that education may be one of the key responses to this problem.

NEW DRIVE FOR ENTREPRENEURSHIP: SOCIAL INNOVATION

While the number of business start-ups in Japan has remained low in recent years, social entrepreneurs have actively devised innovative ways to resolve various social issues.

In Japan, social entrepreneurship has not played an active role in economies compared to the USA or UK where large-scale privatization took place under of the regimes of Thatcher and Reagan. However, the major disaster of the Great Hanshin-Awaji Earthquake in 1995 triggered social awareness, and promoted the establishment of social enterprises. Correspondingly, the Japanese government enacted the Specified Nonprofit Activities Promotion Law in 1998 and granted corporate status as a non-profit organization (NPO) to citizens' social activities. This law became the primary driving force of social entrepreneurship in Japan and nearly 50,000 had registered as NPOs by the end of August 2013.

According to the Statistics of Japan Cabinet Office, the most common NPO field activities are health, welfare, or medical; social education; community development; and children's health and development [19]. Apart from these fields, sports science, culture and art, as well as environmental conservation, are also well-represented. These fields are on the rise largely because society is rapidly aging and facing a depopulation problem.

From the 1990s to the 2000s, universities also established new management departments and courses to imbue professionals with problem-solving skills, encourage students to

conduct fieldwork, and participate in internship programs to acquire practical experience. This educational trend has contributed to creating a new breed of social entrepreneurs. One particularly noteworthy phenomenon of the last few years is that many talented people, such as graduates from prestigious universities, MBA holders, and experts with professional backgrounds, have been starting social enterprises and succeeding in establishing unique business models.

Kiroki Komazaki, founder and president of NPO Florence, is a good example of this group of young social entrepreneurs. After he graduated with a degree in policy management at Keio University, he started a sick childcare service in 2004 when he was 25. The service now operates in 23 wards in Tokyo and Komazaki was chosen as one of Newsweek's Top 100 Social Entrepreneurs who changed the world in 2007.

Another case is Eriko Yamaguchi, the founder and CEO of Motherhouse Co. Ltd. She is also a graduate of Keio University with a degree in policy management. After graduating, she continued her studies in Dhaka, Bangladesh, setting up Motherhouse afterwards in 2006. The company makes bags with jute fiber and sells them at fair prices in developed countries. She is creating jobs for people in Bangladesh instead of providing temporary relief by donation. The Schwab Foundation awarded the Social Entrepreneur of the Year in Japan prize to Yamaguchi in 2010.

Both Komazaki and Yamaguchi operate businesses valued at USD5 million, but their media attention has given young people a positive perception of social entrepreneurship and increased the reputation of Keio University's policy management program.

The increase in social entrepreneurship was further accelerated after the Great East Japan Earthquake in 2011. Currently, countless competitions and awards for social entrepreneurs are offered in various locations. More media attention is paid to social entrepreneurs than to profit entrepreneurs, and this is playing a vital role in promoting the public's understanding of the significance of social entrepreneurship. Social entrepreneurs are innovators who drive social inclusion and contribute to achieving the objectives of community revitalization. However, the majority of Japanese social enterprises are still small in size and do not have much impact on problem-solving itself. There seem to be several common reasons why they cannot grow, including a lack of finance or skilled people with management capabilities. In response to these problems, tax reforms have been enacted; however, there have not yet been enough and there are too many administrative procedures.

As a method of direct finance, online crowdfunding has provided one way of sourcing money from a large number of people. Nobel Laureate Professor Shinya Yamanaka used one such crowdfunding scheme for his research on regenerative medicine before winning the Nobel Prize, making the system well-known and offering ordinary people an opening to get involved in social or new business activities through donation or investment.

REPRESENTATIVE ENTREPRENEURIAL CASES

Although its entrepreneurial activities are low compared to other countries, Japan has been blessed with internationally renowned entrepreneurs who have built the foundation of Japanese industry. These include Kounosuke Matsushita (Panasonic), Soichiro Honda (Honda), Dai Ibuka and Kazuo Morita (Sony), Kazuo Inamori (Kyocera), Shigenobu Nagamori (Nidec), Yasuyuki Nanbu (Pasona), and Hideo Sawada (HIS). Along with the progress of deregulation and IT development, the falling transaction costs and barriers to entry have generated a new incentive for entrepreneurs of every age. Examples of young entrepreneurs include Nobuo Kawakami (DWANGO), Akimitsu Sano (COOKPAD), Susumu Fujita (Cyber Agent), Tomoko Numba (DeNA), Kohey Takashima (Oisix), and Yoshikazu Tanaka (GREE). With longer life expectancies and greater health in later life, older generations are moving to start new firms and mentor young entrepreneurs such as Sachio Semmoto (E-access) and Haruaki Deguchi (Lifenet Insurance).

It is difficult to choose a limited number of model cases, but among the prominent entrepreneurs who have actively worked and created a new business market during the past 20 years, Masayoshi Son, Tadashi Yanai, and Hiroshi Mikitani may be the most popular figures of the times, today.

Masayoshi Son, chairman and CEO of Softbank Corp., was named best company president for the second straight year in a survey of business leaders in Japan. Son, 56, is the third-richest person in Japan, with personal assets estimated at USD9.1 billion (JPY910 billion), according to the 2013 ranking of the world's wealthiest people by USA business magazine *Forbes* [20]. Of Korean descent, he was born in Saga in Japan, moved to the USA at age 16, and finished high school and university in California. At the University of California, Berkeley, and then at the University of California, Los Angeles, he majored in economics and studied computer science. At age 19, Son predicted that with advances in microprocessors, computer technology would ignite the information revolution. He patented a translating device that he eventually sold to Sharp Electronics for USD1 million

in 1979. With this money, he set up SoftBank in 1981. SoftBank started its business with PC software distribution.

After SoftBank went public on the over-the-counter (OTC) market in 1994, Son made strategic investments in Internet-related companies in the USA, including an investment in Yahoo! Inc. He partnered with a nascent Yahoo to create the American company's joint-venture in Japan, which gave him a stake in a web giant that was rapidly growing at the time. SoftBank became listed on the First Section of the Tokyo Stock Exchange in 1998. In the 2000s, by taking advantage of the deregulation of the telecommunications sector, SoftBank began its own broadband services. After the dotcom bubble deflated, however, SoftBank's stock capitalization shrank to as little as USD20 billion. However, Son persevered and rebuilt the company.

In 2006, by acquiring Vodafone, SoftBank entered the mobile communications business, the market that was dominated by NTT, DoCoMo, and KDDI. SoftBank played an important role in realizing broadband and mobile communication services at low rates and with high transmission speeds in Japan. Following the accident at the Fukushima No. 1 nuclear power plant caused by the Great East Japan Earthquake in 2011, Son started investing in a nation-wide solar power network for Japan.

In 2013, he established a joint venture between Softbank and Newcom Group, a Mongolian investment firm, in a bid to translate his green-energy concept into reality. Once again he challenged monopolized industries that were protected by government regulations. In 2013, SoftBank acquired Sprint Nextel Corporation. Son's next ambition is to achieve global leadership in the mobile Internet. At present, SoftBank Group comprises the pure holding company SoftBank, 235 subsidiaries and 108 affiliates with USD33.78 billion consolidated sales and 24,598 employees for the fiscal year 2012.

Another entrepreneur, Tadashi Yanai, is routinely ranked as one of the richest men in Japan. Yanai, born in Yamaguchi in 1949, is the founder and president of Asia's largest apparel company, Fast Retailing, known for its UNIQLO casual clothing shops. Yanai graduated from Waseda University in 1971 with a bachelor's degree in economics and politics. He took his first job with JUSCO (now AEON), and quit after nine months. He then returned to his hometown and started working at his father's company. In 1984, he opened his first UNIQLO store in Hiroshima.

In 1994, Fast Retailing listed its shares on the Hiroshima Stock Exchange. In 1998, the UNIQLO fleece campaign sparked a boom across Japan. UNIQLO's innovative fabric,

Heattech, a proprietary warmth-generating cloth developed in partnership with the Japanese company that provides carbon fiber for Boeing 787 Dreamliners, has created even more customers. Since 2001, UNIQLO has expanded worldwide operations to include the UK, PR China, Hong Kong, the Republic of Korea (ROK), USA, France, Singapore, Russia, the Republic of China (ROC), Malaysia, Thailand, and the Philippines. As of the end of August 2013, UNIQLO had 853 stores in Japan and 446 stores overseas with 23,982 employees. The company also owns the Theory and Helmut Lang brands.

UNIQLO has grown by offering high-quality casual wear at reasonable prices using its SPA (Specialty store retailer of Private Label Apparel) business model, which spans product design, manufacture, distribution, and retail. Yanai's goal, which he often repeats with great conviction, is to make UNIQLO the number one apparel retailer in the world. His target – USD50 billion in yearly revenue by 2020 – will require far higher gains above UNIQLO's current revenue of USD13 billion, in order to drive the company ahead of front-runners Inditex (which owns Zara, H&M, and Gap).

Another entrepreneur, Hiroshi Mikitani, currently the chairman and CEO of Rakuten Inc., was born in Kobe in 1965 [21]. His father is an economist and his mother, who was educated in New York at an early age, was one of the first professional women in Japan to work in a global company. After graduating from Hitotsubashi University, Mikitani worked for the Industrial Bank of Japan (now part of Mizuho Corporate Bank). Mikitani was transferred to the USA and earned an MBA at Harvard University in 1993. In 1995, he resigned from the bank and founded a consulting group.

With the money he earned from his consulting firm, he founded MDM Inc. (precursor to Rakuten) in 1997 and began the Internet shopping mall, Rakuten Ichiba. Through an initial public offering (IPO) on the JASDAQ market in 2000, Rakuten accelerated merger and acquisition (M&A) activities and started new businesses such as online hotel reservation, credit cards, securities and banking, e-money, portal media, online marketing, and professional sport. These businesses have shaped the present Rakuten group with USD4.4 billion in consolidated sales and more than 10,000 employees in 2012. Its strength is its 87.4 million membership (about 7 out of 10 people in Japan are Rakuten members) and 41,933 merchants, which sell products in Rakuten shopping malls [22].

Mikitani's next ambition is the online drug sales business, an area that is highly regulated by the MHLW (Ministry of Health, Labor, and Welfare). While the market for over-the-counter drugs is estimated at USD6 billion, professional medications, with around 15,000 varieties, are worth USD860 billion. Many require prescriptions under the

Pharmaceutical Affairs Law. Non-prescription drugs have been available online in Japan since January 2013 after the Supreme Court ruled that restricting that sales channel was illegal. That case, brought by Rakuten affiliate Kenko.com Inc., triggered the health ministry's review of which drugs should be regulated.

Now, Mikitani is ready to fight with the government for full deregulation. His final goal is to become the top Internet services company in the world. In order to realize this goal, Rakuten is currently accelerating global expansion into the Americas, Europe, Asia, and Oceania, starting with their e-commerce, eBooks and eReading, and travel businesses.

These entrepreneurs have pioneered new fields of business and contributed to revitalizing the industry and creation of jobs. In addition, Son and Mikitani have taken the initiative in promoting deregulation and regulatory reforms, and helped to open up closed markets previously monopolized by certain companies. Successful entrepreneurs like them do not seem to need government-led support; rather, their strategy is to fight against old rules and conventional bureaucracy.

ISSUES AND CHALLENGES IN THE NATIONAL PROCESS OF ENHANCING ENTREPRENEURSHIP

If we judge the present entrepreneurship climate simply by the number of start-ups, we have to say that Japanese policies for entrepreneurship development have not been successful. As we saw at the beginning of this chapter, Japan's business entry rates have been at the low end of the scale, both in comparison with earlier periods and with other countries. We could also note this trend from the declining number of loan users. The number of companies using the Start-up Loan Program of the Japan Finance Corporation for companies that are prior to, or within one year of, establishment has been decreasing apart from a slight increase in fiscal year 2012 [23–26]. Another loan, which enabled SMEs to implement advanced equipment, started in 1999 and ended in 2005 due to the decline of users [27].

According to the Venture Enterprise Center (VEC) survey of venture capital investment trends in Japan for fiscal year 2012, total investment and loan amounts also declined for three consecutive years after hitting a peak of JPY279 billion in fiscal year 2006 [28]. In fiscal year 2009, in particular, total investment dipped below JPY100 billion in a sign of sluggish sentiment. While investment turned upward to some extent in fiscal year 2010, it

remained more or less flat in fiscal year 2011, indicating a slow recovery. The number of companies that undertook an IPO on the domestic emerging markets has been recovering, with 48 companies in 2012 from the lowest number of 19 in 2009. However, it is far from the prior high level of more than 100 IPO companies a year with the peak of 203 in 2000. Given this situation, it is unquestionable that Japan's entrepreneurship has not grown much, although there was a slight sign of recovery in 2012. The question then remains: while there is a seemingly full set of public support for entrepreneurs, why are the Japanese people reluctant to start a business on their own?

The Japanese Government has taken note of the most common challenges faced by start-up companies including financing, numerous administrative procedures, lack of management know-how, and difficulty in securing human resources, and they have taken various measures to tackle them [11]. However, while these public support measures have been useful for some of the start-ups, they have not functioned to improve perspectives or attitudes towards entrepreneurship or increased start-up companies.

The true challenges to be addressed relate to more fundamental issues. Among these is a widespread culture that does not recognize entrepreneurship as an important career and the lack of a role model who creates jobs and income. This culture creates a negative perception of entrepreneurship as GEM and OECD research has shown, and leads to a lack of entrepreneurial ambition and societal support. It is also true that the success of the big firms born in Japan's great period of post-war entrepreneurialism later discouraged graduates from joining new ventures; experienced managers are seldom keen to leave large companies. Wives and mothers exert a strong influence on men not to join risky start-ups. But the perceived balance of risk is shifting, as many of the big firms are struggling these days. Moreover, the cost of starting a firm is decreasing thanks to IT development and other innovations.

In order to promote entrepreneurship, education and training programs that change attitudes and provide skills could play a vital role. There are already plenty of training programs focused on setting up and growing new businesses, offered by public and private organizations. Universities and business schools also offer a variety of courses on entrepreneurship. However, these courses typically focus on providing guidance on the key steps and factors needed to start a new business.

Other important aspects of the entrepreneurial process, however, are difficult to address within these programs. The attitude of individuals towards business is one case in point, as it reflects a combination of personal characteristics, societal values, and the underlying

business environment. We cannot control the business environment under a market economy. It is also difficult to change inherent individual personalities, although we can influence values and attitudes and change social perceptions. As an indispensable step, more systematic efforts should be spent on basic education to instill fundamental values and attitudes. In order to succeed, however, we need to learn from the failures of the past.

Most of the entrepreneurship education programs that were implemented at schools as model practices by the government (METI) did not last after the assigned budget period ended. One of the reasons for this was a lack of trained teachers. METI provided schools with ready-made package materials and external instructors; they did not train teachers. Once the money was used up, the schools discontinued the program.

Another problem is that the content of the programs did not match the needs of the schools. There were various kinds of materials, including trading games and simulated businesses but not many of them focused on internal entrepreneurial qualities such as opportunity recognition, problem solving, or leadership skills, which school teachers value most. There was then less time to spend on such activities after the school curriculum changed in 2011 and began to focus on subject learning. On the other hand, those schools and teachers which regard entrepreneurship as an essential ability for children and keep practicing entrepreneurial activities have succeeded in working with local communities and have received support from them by sharing the objective of revitalizing the community together. While universities are starting to produce young entrepreneurs through their programs, the contribution that school education plays could have a greater impact on society.

ENTREPRENEURSHIP AND GEM ECONOMIC LEVEL ANALYSIS

GEM research reveals that there is a particular pattern in the association between GDP per capita and the level and nature of entrepreneurial activity in an economy. In economies with low GDP per capita, TEA rates tend to be high with a relatively high proportion of necessity-motivated entrepreneurship. As income per capita increases, larger established firms play an increasingly important role in the economy. This provides an option for stable employment for a growing number of people, serving as a viable alternative to starting a business. Subsequently, TEA rates tend to become low. However, high-income economies are also characterized by a greater availability of resources and more affluent markets, which may stimulate an increase in opportunity-motivated entrepreneurship.

As for business discontinuance, the rate generally declines as economic development increases. Therefore, innovation-driven economies tend to have low TEA and business discontinuance rates. There are a number of reasons for discontinuing a business. The GEM report states, "there are some differences in the reasons for discontinuance among the development groups [17]. The group averages show that lack of profitability and problems obtaining financing account for over half of the discontinuances in the factor-driven and efficiency-driven economies. These reasons, particularly 'trouble obtaining finance,' are less frequently noted in the innovation-driven economies, whereas entrepreneurs in those economies exhibit a higher likelihood of exit due to retirement, sale, or another opportunity." Japan may be one of those latter economies, facing the challenge of a falling birthrate and an aging population. Often, SMEs face difficulties in finding a successor and are forced to close their businesses.

Despite some commonalities in their economic development levels, each country has a unique disposition towards entrepreneurship. For example, the USA, UK, Germany, France, Italy, and Japan are innovation-driven economies with high GDP levels, but relatively low TEA levels (with the exception of the USA). The entrepreneurship situation is different for the USA where the TEA rate has always been high. A high start-up rate has a positive correlation with economic growth, but we can assume that economic growth is brought about not by number, but by highly motivated, growth-oriented entrepreneurs who will create jobs. GEM research also reveals that the economic contribution of opportunity-motivated firms is higher than that of necessity-driven enterprises.

In the case of Japan, the TEA rate is very low compared to other countries even at the same economic level, but the rate of opportunity-driven and growth-oriented entrepreneurship is comparably high. If Japan could improve its social perception of, and attitude towards, entrepreneurship and implement a support system to encourage motivated entrepreneurs, the TEA rate would increase and GDP would also improve as a result. The GEM research analysis by METI mentions that Japan's entrepreneurship will increase only if individual attitudes can be managed, such as knowledge, skills, experience, the ability to recognize an opportunity, and the fear of doing business [29]. Therefore, a cultural change, one that contributes to individual attitudes and perception, is much needed and can be addressed through education and training.

NATIONAL ECONOMIC GROWTH OBJECTIVES IN RELATION TO ENTREPRENEURSHIP ENHANCEMENT POLICIES

Prime Minister Shinzo Abe's three-part plan to revive the economy, known as Abenomics, is designed to help start-ups as well as big businesses. The three components are:

1. Monetary loosening by the Bank of Japan,
2. Fiscal stimulus; and
3. A series of reforms to increase long-term growth rates, including radical deregulation in new "special economic zones" spread across the country.

Driven by the fiscal and monetary stimulus under the Abe administration, the economy has risen to its highest level in more than five years. The third installment of the plan is much anticipated.

Prime Minister Abe, in his policy speech to the 185th Session of the Diet on 15 October 2013, stated "Japanese confidence withered away during Japan's prolonged deflation. We will free Japan from this spell and once again restore a nation brimming with the spirit of entrepreneurship. We will create a society in which young people are dynamically engaged and women shine. This is the very essence of my growth strategy." He expressed his strong commitment to reinforcing Japan's industrial competitiveness and creating opportunities in growth business fields by relaxing regulations in every field and supporting the launch of new ventures [30].

If this pledge is realized, many new opportunities could emerge for entrepreneurs in industries ranging from medical care to agriculture. There is a risk, however, that Abenomics could fail and greatly damage Japan's overall economic situation. If the central bank's radical monetary loosening is not followed by thorough deregulation and strong growth, the result could be a sovereign-debt crisis (Japan's debt currently stands at close to 250% of GDP). In such a crisis many of Japan's biggest firms could collapse and that would leave people with no choice but to start their own businesses. Promoting entrepreneurship through reforms would certainly be less painful.

EFFECTIVE APPROACHES AND POLICIES FOR BETTER ENTREPRENEURSHIP

How can Japan make entrepreneurship the growth engine for its economy? Certainly, the government's structural reforms and deregulations will help to remove hurdles for entrepreneurs to start new businesses. Multiple monetary sources and incubation facilities should also help them to grow. However, entrepreneurship is not just making profit through business, it is conditioning attitudes and mindsets to bring innovation to society. Whatever field people are in, they need entrepreneurship. Hence, our goal should not be merely to increase the number of start-ups, but to build an environment that encourages entrepreneurship.

To realize this goal we must first of all work on ensuring that being an entrepreneur is an attractive prospect for Japanese. This includes social entrepreneurs whose potential is often underestimated; they generate sustainable jobs and have demonstrated a stronger resilience to economic crises than the general population. More opportunities need to be provided for people to acquire entrepreneurial capabilities and experience, which in turn nurture positive perceptions and attitudes, and decrease the fear of challenge or failure.

As mentioned above, education can play an essential role, as in the case of Finland and some of other EU countries where entrepreneurship is included as part of the core curriculum in schools. By incorporating entrepreneurship into numerous subjects as cross-curricular themes, the school's teaching methods and culture of learning will predispose children to entrepreneurial activity, and highlight its importance to the individual and society. Eventually, this investment in education will lead to the development of an entrepreneurial society and revitalize the national economy.

Japan also needs to thoroughly reform its overly centralized system of governance in Tokyo. In Japan, the national government formulates a policy for each field and regional governments then implement those policies under the direction of each ministry. Revenue obtained through national taxation is redistributed to localities through local tax allocation and subsidies. This is the process through which policy implementation is regulated. In the past, Japan was basically satisfied with this system, which placed a greater emphasis on equilibrium than on regional autonomy.

However, in the 21st century, people want each region to proactively offer a diverse range of public services that suit local needs. As a result, there have been calls for regional sovereignty; flexible support for businesses as well as educational reforms are among

these needs. People want to move away from the system of centralized control and the overreliance on bureaucrats, and reform was initiated in 2000 through amendments to the Local Autonomy Law. However, under the new government led by the Liberal Democratic Party, initiatives are underway. Prefectures and municipalities should secure their own autonomy, and engage in independent governance that meets the needs of business start-ups in line with the local economic situation. Indeed, entrepreneurship may be most in need in the arena of politics and governance in Japan.

Entrepreneurship is like sports and music: it can be acquired by consistent practical training at home, at school, and in the community. And even if entrepreneurs do not start a business on their own, they understand the value of challenge, and they would be good supporters of other entrepreneurs. An increase in the number of such people will contribute to creating social awareness of entrepreneurship and, in the long term, build an entrepreneurial society. As the GEM report says, it is not the supply of entrepreneurs that constitutes the key bottleneck to economic dynamism, but rather the activities towards which entrepreneurial individuals channel their efforts.

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PAKISTAN

Dr. Muhammad Idrees Khawaja

ENTREPRENEURSHIP STATUS

Start-up rates and business discontinuance rates are not available for Pakistan other than those documented in the Global Entrepreneurship Monitor (GEM) report.

Comparison with GEM Data

GEM classifies economies into three categories: factor-driven, efficiency-driven, and innovation-driven economies. Factor-driven economies are those passing through early stages of development and typically produce a higher proportion of necessity-driven entrepreneurial activities. As development increases, efficiency and productivity also increase, leading to an efficiency-driven economy. In innovation-driven economies the returns on innovation are large. These economies rely on R&D and are knowledge-based. These economies also provide an enabling environment for the transformation of innovations into commercial ventures. GEM Pakistan includes Pakistan among the factor-driven economies.

According to GEM Pakistan, the total early-stage entrepreneurship activity (TEA) rate (the sum of the nascent entrepreneurship rate and new business manager rate) in Pakistan was 9.1% in 2011. While this rate compares favorably with innovation-driven economies (6.9%), it is much lower than other factor-driven economies (14.2%).

GEM classifies TEA into two types: opportunity-based and necessity-based. About 4% of Pakistanis were involved in opportunity-based early-stage entrepreneurial activity. This rate is considerably lower than the average for factor-driven (8.5%) and efficiency-driven countries (9.1%). The male TEA rate in Pakistan is more than eight times higher than the female TEA rate. This gender gap is high compared to other factor- and efficiency-driven countries. The point that emerges from these figures is that entrepreneurial activity in Pakistan is considerably lower than in other factor-driven economies.

Generally, early-stage entrepreneurs and business managers in Pakistan have low aspirations to grow relative to most other GEM participating countries. Fear of failure is a common constraint to entering into entrepreneurial activity. In Pakistan, for 31.2% of the population (including those who are entrepreneurially active), fear of failure prevents them from entering into business. However, this rate is lower than average for factor-driven economies.

SOCIAL ENTREPRENEURSHIP

Social Entrepreneurship includes a diverse range of activities. This section will further extrapolate on microfinance, to explain the state of social entrepreneurship in Pakistan.

Microfinance

Although banks and other institutions have long engaged in activities that fall under the purview of microfinance, the activity as a separate sector only gained momentum in 2001, and it is well developed today. The microfinance sector can be broadly classified into microfinance banks, microfinance institutions, rural support programs, as well as other institutions (NGOs) that offer diverse products. As of 2012, the sector could boast 31 retail microfinance providers, including eight microfinance banks, ten microfinance institutions, five rural support programs and eight other types of providers. A wholesale provider, the Pakistan Poverty Alleviation Fund (PPAF), partners with retail providers to extend the microfinance sector. However, the microfinance sector does not entirely rely on PPAF for funding, as a number of institutions in the industry have the capacity to generate funds directly from diverse sources. Moreover, retail service providers have formed a federation, the Pakistan Microfinance Network, which acts jointly where required. The Pakistan microfinance network aims to enhance the scale, quality, diversity, and sustainability of the microfinance industry.

Microfinance Banks

Microfinance banks are relatively new players in the microfinance market in Pakistan, but have gained importance relatively rapidly. These banks were established under the Microfinance Institutions Ordinance 2001, and are regulated by the central bank, i.e., the State Bank of Pakistan.

Microfinance Institutions

Microfinance Institutions (MFIs) are non-bank microfinance providers that specialize in the provision of microfinance services. These organizations are registered with the Security and Exchange Commission of Pakistan (SECP) under the Companies Ordinance 1984 as non-profit associations, under the Societies Registration Act 1860, or as trusts under the Trusts Act 1882. The flagship service of these institutions is micro-credit but some basic insurance services (mostly credit-life) are also provided to credit clients.

Group lending remains the dominant lending methodology but some of the MFIs, such as Kashf and Asasah, which are diversifying into larger loan sizes, are beginning to deal with individual clients as well. Given their non-bank status, they cannot "mediate" deposits, although some do "mobilize" savings from their clients. There are a few MFIs with individual philosophies of lending and offer some unique financial products. One of these is Akhuwat, whose philosophy is based on the principle of Qarze-e-Hasna, i.e., helping someone in need with interest-free loans. Akhuwat has innovative loan products including the Liberation Loan, a type of loan given to those who have borrowed money from moneylenders at very high interest rates. Akhuwat pays the principal amount in one go for the client, and then the client has to pay back the amount in interest-free installments to Akhuwat. Loans are extended for business, marriage, emergencies, and housing.

Rural Support Programs and Broad-Based Development NGOs

Rural Support Programs (RSPs) originated in Pakistan during the 1980s when the first RSP, called the Aga Khan Rural Support Program (AKRSP), was established in the Northern Areas of Pakistan. In subsequent years, the RSP model, based on community organization and mobilization, was replicated across the country. The RSPs and broad-based development NGOs provide microfinance services as well as grants for community-level infrastructure projects, education, and health services at the village level. Some RSPs have received initial endowments from the government. These include the National Rural Support Program, Punjab Rural Support Program, and Sindh Rural Support Program.

Others have received no support from the government but rely almost exclusively on donor support such as the Sarhad Rural Support Program, Balochistan Rural Support Program, and Thardeep Rural Development Program. A few other organizations are also in this category, such as the Development Action for Mobilization and Emancipation (DAMEN), the Sungi Development Foundation (SDF), and the Centre for Women Cooperative Development (CWCD). International NGOs have also entered the sector, such as the Bangladesh-based Bangladesh Rehabilitation Assistance Committee (BRAC).

Lending Methodologies

Despite the wide variety of microfinance providers in Pakistan, the lending methodology is surprisingly uniform. Financing is primarily through the group-lending methodology. This methodology uses both the community group and the solidarity group approach. The RSPs use the broad-based village, community, or women's 20 organization as the group

through which they provide financial services. The MFIs, on the other hand, generally use the solidarity group-lending model. Kashf Foundation, in particular, follows the Grameen Approach of solidarity group lending. The community approach focuses on reducing the transaction costs of loan screening, disbursement, and repayment, whereas the solidarity group approach is more focused on using the group for guarantee purposes and ensuring that the social collateral becomes operative. While the community organization also exerts peer pressure for the return of the loan, the collateral aspects of the community group approach are not always as well defined as the solidarity group model.

SOCIETY'S PERCEPTION OF ENTREPRENEURSHIP

Entrepreneurship is not held in great esteem by Pakistani society. This may be traced to the fact that few educated people enter the field. Even business school graduates prefer to seek jobs rather than become entrepreneurs. Azhar et al. [1] find that young people are not willing to opt for entrepreneurial activities because it is not socially admired. These findings are based on a survey of business graduates and nascent entrepreneurs.

REPRESENTATIVE CASE OF ENTREPRENEURSHIP

Mausummery is a family-owned business in Pakistan, which successfully introduced ladies-wear suits under the brand name of Mausummery Lawn (a delicate textile) and has become a household name in a short span of time. Their success story is described below [2].

Mausummery Lawn – A Success Story in Family Business

Mausummery Lawn is one of the leading lawn brands in Pakistan started by a couple at their home in 1997 as a family business to provide the best fabric for its customers. The company has grown a lot over a very short period of time, with its fabrics and products available for purchase nationwide and also globally through their online store**.**

Brand Story

Their brand story states, "the brand today has grown to a solid network of 21 flagship stores across 12 cities of Pakistan showcasing collections throughout the 12 months. We believe that passion is at the heart of Mausummery, providing a unique design sensibility to the millions of our wonderful fans."

Recent Achievements and Initiatives

Mausummery is committed to its five-year initiative with the Beaconhouse National University to sponsor its annual endowment fund for students in the Department of Textile Design. It has a network of 21 flagship stores across 12 cities and continuous training programs for employees.

Factors Contributing to Success

- *Entrepreneurial knowledge*: Its owners are business graduates from leading business schools in Pakistan. However, before starting the business they interned at an established firm to learn and understand the market mechanism and to perform market research.

- *Training:* The firm conducts extensive programs for its employees.

- *Partnership with universities:* The firm has collaborative programs with a university for education sponsorship and also seeks ideas from postgraduate students of textile and fashion design.

- *Brand name:* They gave special consideration to developing their own brand from the very beginning. This has helped them to identify themselves in a unique way.

- *Advertising:* Their advertisement campaigns are very strong, attractive, well timed and well placed.

ENTREPRENEURSHIP SUPPORT POLICY

The policies of two public sector entities that are encouraging entrepreneurship are discussed below.

Small and Medium Enterprise Development Authority Policies and Recent Efforts

The Small and Medium Enterprise Development Authority (SMEDA), a public sector entity, extends a variety of support to existing firms and start-ups. The kind of support extended to SMEs includes sectoral pre-feasibility studies, tackling regulatory procedures, and offering commercial contract templates. SMEDA has also established Common Facility Centers (CFCs) in all four provinces of Pakistan to offer these services and other kinds of advocacy that the firms may require. SMEDA has helpdesks at 21 locations across Pakistan. Since its establishment, the organization has facilitated, in one way or another, 304 firms and conducted 1300 training programs for entrepreneurs. Currently SMEDA has 26 projects worth PKR3.2 billion under implementation. SMEDA is also undertaking huge programs worth billions of rupees with the support of international donors including the United Nations Development Program (UNDP).

State Bank Policies to Facilitate Microfinancing

Small businesses in Pakistan face numerous constraints such as access to financing, high operating costs, credit risk, slow organizational development, lack of innovative ideas, and macroeconomic risks. To overcome these, the State Bank of Pakistan has formulated a set of policies to facilitate microfinancing in Pakistan that include:

1. The use of mobile phones to encourage banking;

2. Strengthening partnership between First Microfinance Bank and the Pakistan Post Office;

3. Setting lower capital limits for microfinance banks;

4. Setting up the Credit Information Bureau to gather and disseminate information on microfinance defaulters;

5. Developing regulatory guidelines on enterprise lending;

6. Scaling back "know your customer (KYC) requirements" for MFI clients and microfinance banks;

7. Allowing MFIs and microfinance banks to undertake branchless banking;

8. Providing the training required for branchless banking;

9. Promoting mobilization of deposits by microfinance banks, e.g., scaling back "KYC requirements" for clients of microfinance banks;

10. Strengthening the apex funding body, i.e., Pakistan Poverty Alleviation Fund, that lends to the microfinance industry; and

11. Framing guidelines on improving governance of MFIs and microfinance banks, for example:

    i. Mandatory training in corporate governance for officials in the microfinance sector

    ii. Strengthening the fit and proper criteria for the Board of Directors of MFIs and microfinance banks.

MY ENTREPRENEURSHIP PROJECT

The writer leads a project titled "Determinants of Expansion of Small and Micro Firms and the State of Entrepreneurship in Pakistan." The proposed study, to be undertaken as a pilot project in the city of Rawalpindi, Pakistan, seeks to empirically investigate the determinants of the expansion of micro- and small firms. The study will also develop stylized facts regarding the overall state of entrepreneurship with respect to micro- and small firms. To explore the determinants and develop the stylized facts, 300 firms across different sectors will be surveyed. A purpose-specific questionnaire will be designed to conduct the study. Responses to numerous questions regarding a particular feature of entrepreneurship, e.g., innovation, will be aggregated to form an index. The indices on different features of entrepreneurship will serve as the potential determinants of each

firm's expansion in the econometric investigation. Each firm's expansion will be captured by measuring employee growth over a certain period.

This knowledge of what determines the expansion of micro- and small firms and the stylized facts regarding the overall state of entrepreneurship will provide policy makers with the relevant information that is needed to base policy prescription. This is especially true with respect to providing an enabling environment for entrepreneurship to prosper. To date, micro-firms may not have received the policy attention they deserve. This study, by focusing on micro-firms, will help to generate policy interest in them as agents of economic growth.

ENTREPRENEURSHIP AND GEM ECONOMIC LEVEL ANALYSIS

GEM classifies Pakistan among the factor-driven economies. This seems to be a correct description of the state of entrepreneurship in particular, and the state of Pakistan's economy in general. The GEM model uses four variables: institutions, macroeconomic stability, infrastructure, and health and primary education [5]. These are the basic requirements for entrepreneurship to take some hold in the economy. However, as even the basic requirements are not completely fulfilled, perceived opportunities, as well as perceived capacity, are rather low and these two parameters in turn adversely affect growth.

State institutions leave much to be desired; while the level of infrastructure perhaps matches comparable economies, energy constraints have seriously held back entrepreneurship and growth. At times, firms and households have been experiencing power outages to the extent of eight hours a day for the last five years. This has put limits on the growth of entrepreneurship and the economy.

The economic history of the country for the past 60 years suggests that growth has remained episodic, an indication that the economy has lacked macroeconomic stability. Various health and literacy indicators also reflect a less than desirable state. Table 1 shows that the institutional quality is poor even relative to the South Asian average.

Table 1. Comparison of Pakistan with other countries in terms of World Bank governance indicators (indices correspond to 2011)

Variables	**Pakistan**	**Average**		**Malaysia**
		South Asia	**Asian Tigers**	
Voice and accountability	–0.83	–0.50	0.48	–0.44
Political stability / absence of violence	–2.7	–1.17	0.82	0.16
Government effectiveness	–0.82	–0.47	1.57	1
Regulatory quality	–0.61	–0.71	1.46	0.66
Rule of law	–0.9	–0.62	1.32	0.52
Control of corruption	–1	–0.65	1.33	0

Source: World Bank [3].

Notes: Afghanistan is an outlier, therefore we have excluded it from the list of South Asian countries. Asian Tigers include the Republic of Korea, the Republic of China, Hong Kong, and Singapore. The World Bank ranks the countries in terms of various aspects of governance as described above. The index values range from –2.5 (poor quality) to 2.5 (highest quality).

It is not merely that the state of the institutions is poorer than those of comparable economies. What is more alarming is that the state of the institutions has consistently declined over time (Table 2). This puts serious constraints on the prospects for growth of entrepreneurship in the country.

Table 2. Comparison of governance indicators in Pakistan (1996–2011)

Variables	**1996**	**2000**	**2006**	**2011**
Voice and accountability	–0.67	–1.31	–0.93	–0.83
Political Stability/Absence of Violence	–1.21	–1.14	–2.05	–2.5
Government Effectiveness	–0.59	–0.58	–0.36	–0.82
Regulatory Quality	–0.45	–0.73	–0.44	–0.61
Rule of Law	–0.66	–0.94	–0.83	–0.9
Control of Corruption	–1.15	–0.82	–0.76	–1

Source: World Bank [3].

The literacy rate of Pakistan is only 56%, which is much lower than that of comparable economies. The low literacy level may constrain entrepreneurship for several reasons: the entrepreneur can face difficulties in interacting with authorities to secure registration and permits, or accessing funds, as fulfilling bank requirements calls for at least some minimum level of literacy.

Volatility in growth performance is a broad indicator of macroeconomic instability. The growth record clearly shows that performance has remained volatile and episodic over the past 50 years (Figure 1).

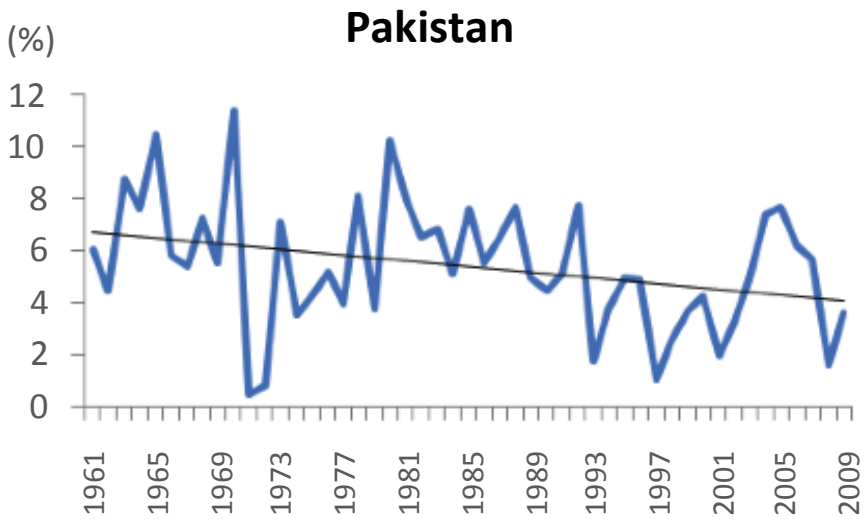

Figure 1. GDP growth in Pakistan.
Source: Ministry of Finance, Government of Pakistan [4].

THE GEM CONCEPTUAL MODEL: ENTREPRENEURIAL ACTIVITIES AND THE NATIONAL ECONOMY

The GEM conceptual model correctly predicts the situation in Pakistan. Institutions, infrastructure, macroeconomic stability, and social indicators all portray a picture that is not conducive to the growth of entrepreneurship. Hence, few occasions arise that could be perceived as conducive to the development of entrepreneurship. For example a person who wants to open a shop might be deterred by the thought of investing time and money in obtaining permission from the government (institutions), of not having uninterrupted access to electricity (infrastructure), exchange rate volatility and inflation upsetting the business plan, or the difficulty of accessing the right kind of labor (social indicators, such as primary education and health).

In this context, three facts stand out:

1. Pakistan is still a factor-driven economy;
2. The TEA in Pakistan is lower than that found in comparable factor-driven economies; and

3. Pakistan has the second highest rate in the world (53%) for necessity-driven entrepreneurship [5].

A closer look at the GEM 2011 report suggests some explanations. However, before we explain the above mysteries, the key messages that emerge from the GEM 2011 for Pakistan are presented below.

The GEM 2011 report shows that entrepreneurs in Pakistan have low aspirations to grow. Additionally, the cultural and social norms are more negative in Pakistan than those observed in comparable economies, while the positive attitude towards entrepreneurship is lower. The TEA, established business ownership rate, nascent entrepreneurship rate, and new business ownership rate are all also lower than those of comparable economies. The positive attitude of males is greater than that of females, the male TEA rate is higher than the female TEA rate, and the established business ownership rate reflects a wide gender gap with the male to female ratio standing at 8:1.

The findings of the GEM 2011 concur very well. Since the cultural and social norms in Pakistan are not very favorable to entrepreneurship, few people are expected to adopt entrepreneurship as a career of their free will. Thus, only those who find it difficult to find a wage-paying job enter into entrepreneurship. This explains why necessity-based entrepreneurship is very high and opportunity-based entrepreneurship is lower than that of comparable factor-driven economies. Moreover, Pakistan is still a male-dominated society. Unlike men, women are not expected to enter the labor force. Gender disparity is found in numerous areas, for example, in the literacy rate and the labor-force participation rate. Given this disparity, the gender disparity in entrepreneurship is no surprise. The near absence of women from entrepreneurial activity could be one reason for Pakistan's lower TEA rate.

We argue that the low TEA rate is attributable to cultural and social norms unfavorable to entrepreneurship, and to the partition of India along ethnic lines in 1947, which led to the out-migration of the entrepreneurial Hindu class from the predominantly Muslim Pakistan. The question is why cultural and social norms are not favorable to entrepreneurship in Pakistan. The unfavorable attitude towards entrepreneurship is grounded in history. In fact, what makes entrepreneurship less respectable is the favorable attitude towards wage-paying jobs. The tilt in favor of the wage-paying jobs has something to do with the colonial history of the Indian subcontinent.

The British, on arrival in India, needed to co-opt one group to rule. After careful examination of its history, culture, and what India could offer in terms of extraction to the colonizers, the British decided to co-opt the landed gentry, who were then strengthened with land grants and favorable legislation time and again. Ali and Malik [6] argue that the colonial period, after the uprising of 1857 (of natives against colonizers) was associated with the ascendency of the incumbent agrarian class and retreat of the entrepreneurial class. The development of an extensive canal-irrigation network in the most populous province, the Punjab, not only benefitted the incumbent agrarian class but also strengthened the hold of the civil-military elite. People preferred to enter military or civil bureaucracy because of the high esteem in which these two classes were held in society: they promised closeness with the colonizers, riches offered from land allotment, and a regular salary. Thus, the only kind of income-generating activity that developed outside the public sector was agriculture, but even this benefitted from heavy state patronage in favor of the elites that the state preferred.

The agro-processing industry began developing when the British decided to leave India in 1947 and the country subsequently divided into Pakistan and India. The people who ran the agricultural value chain were overwhelmingly non-Muslims who out-migrated to India at the time of partition, which further weakened the poor investment climate that prevailed in the geographic part that was to become Pakistan in 1947. Moreover, whatever little industry was in India during the colonial period was in the hands of non-Muslims. Although Muslims were involved in trade and commerce, non-Muslims dominated banking and industry. In the geographic areas that now comprise Pakistan, around 80% of the industrial establishments belonged to non-Muslims before partition. For example, in Lahore 167 out of 215 establishments were indigenously owned and controlled the entire money market. In Karachi 80% of the landed property, and almost the entire foreign trade, was in the hands of non-Muslims. It is against this backdrop that the cultural norm of aversion to entrepreneurship in Pakistan should be viewed.

The socialist philosophy adopted in 1972 by the then-government of the country led to the nationalization of large-scale industry and the entire banking sector. Although the socialist philosophy was practiced only briefly and the gradual privatization of nationalized industry began in the 1980s, the adverse impact of nationalization on entrepreneurship can still be felt. This aspect will be elaborated on in the next section.
One hypothesis is that there is a two-way causal relationship between entrepreneurship and GDP. Until GDP reaches a certain threshold level, necessity-driven entrepreneurship increases because there are not enough opportunities for people to find jobs in established enterprises, and they create jobs for themselves. Once more industries are

established, people move to enterprises and necessity-driven entrepreneurship declines. The increase in GDP leads to increased consumption and investment and therefore throws open a variety of entrepreneurial opportunities. This hypothesis appears to be true in the case of Pakistan. According to a World Bank study, employment elasticity is 0.5% in Pakistan, which means that many people are not able to find a wage-paying job. These people have no option but to become entrepreneurs. Therefore, to encourage entrepreneurship, a country has to encourage economic growth itself.

The question that begs to be answered then is "what constrains economic growth in Pakistan?" Recent literature on growth in Pakistan seems to hold the weak, outmoded, and rentier institutional structure responsible for the constrained development [7–9]. The institutional explanation for the constrained growth in Pakistan also explains why the country is still a factor-driven economy: one of the basic requirements for the growth of entrepreneurship, namely good institutions, is currently weak.

ENTREPRENEURSHIP POLICY AND NATIONAL ECONOMIC GROWTH OBJECTIVES

Entrepreneurial policy in Pakistan has long been characterized by granting favors to the large-scale sector and neglecting the small. While entrepreneurship grows best in a competitive environment, the large-scale sector has been the recipient of subsidies and various kinds of favors that fall into the domain of rent-seeking. The large-scale sector was able to obtain credit and foreign currency at below-market prices from the banks that they themselves owned, and the sector could also mold state policy to their advantage, especially during the 1950s and 1960s. Policy measures such as tariff protection, import licensing schemes, and other controls on imports, though ostensibly meant to encourage productivity and industrialization, instead produced a class of rent-seekers.

In the 1960s, there was a dual exchange rate system and an export bonus scheme. The system encouraged the import of machinery, discouraged the import of consumer goods and offered a large subsidy to exporters. From 1953–64, "virtually all imports into Pakistan were regulated by some form of quantitative controls" [10]. This shifted the terms of trade in favor of industry at the expense of agriculture. Traders switched to manufacturing and thus began the process of industrialization in Pakistan, with a heavy bias in favor of large-scale manufacturing, which grew by over 20% annually.

An import licensing system was introduced in the 1950s. The licensing, together with the exchange rate policy, allowed the state to define the nature and structure of industry in Pakistan through protectionism. The system was designed such that almost all capital goods and non-agricultural industrial goods were imported rather cheaply, thereby setting the nature and structure of the domestic industry. The following paragraph from Zaidi [10] describes how protectionism has adversely influenced the performance of the textile industry in Pakistan.

"The development of the textile industry offers an interesting example of rent-seeking. In 1959, the 9 largest industrial houses accounted for 50% of the total production, with the 5 biggest contributing as much as 37.3% of total production. The Saigol group alone controlled 15% of total production of cotton textiles in West Pakistan. Thus, initially, the textile industry was entirely positioned within the large-scale manufacturing sector and was highly concentrated amongst a few industrial houses. It was these industrial houses that made fortunes out of the textile business, largely because of the favorable treatment accorded to the sector by the state. Between 1960 and 1970, Pakistan's textile industry enjoyed over 11% of the world market share, but today the corresponding figure is only slightly over 2%. By contrast, in 1972 Hong Kong and the Republic of Korea (ROK) held less than Pakistan's share, while in 1988 the share of the two countries had risen to 9.0% and 6.5%, respectively. Furthermore, while Hong Kong and the ROK shifted to higher value-added sectors, the Pakistani textile sector remains fairly concentrated in low value-added products" [10].

The degree of concentration that developed in the 1950s and 1960s is evident from the following [10]:

- Twenty-two families controlled 80% of banking, 70% of insurance and 66% of industrial assets

- Big business houses controlled 7 of the 17 banks, which accounted for 60% of bank deposits and 50% of bank loans.

Moreover, public sector development financial institutions such as the Pakistan Industrial Credit and Investment Corporation (PICIC) and Industrial Development Bank of Pakistan (IDBP) were structured to provide loans to the large industrial units. Papaneck shows that in the 1950s, though there were around 3,000 firms, only seven of them controlled around 25% of industrial assets and only 24 accounted for approximately 50% of industrial assets. This kind of development encouraged rent-seeking: the opposite of entrepreneurship.

Some of the rent-seeking measures directly or indirectly attributable to the big business houses of the 1960s have been documented by White [11]:

- Companies and groups controlled by 43 large families received capital goods licenses worth PKR1512 million or 50.9% of the total licenses issued between 1960–65.

- White [11] estimates that a statistically strong and significant relationship existed between family importance in 1968 and the receipt of foreign exchange licenses in capital goods between 1960–65.

- The distribution of licenses in the 1960s seems unrelated either to the reported profitability of the family-controlled firms at the beginning of the licensing period or to the resultant profitability that accrued from licenses.

- Lewis [12] found that a number of industries were given explicit and implicit subsidies; in the absence of this protection they would have generated negative added value and would have ceased to exist.

- White [11] even goes on to suggest that, unless one was willing to value all the inputs to the industry at zero opportunity cost, the real welfare gains would have been higher had industrial growth been slower.

- Extra subsidies were available for cotton textiles, over and above what was available for jute textile, produced by the then East Pakistan.

- Jute exporters were given bonus vouchers that were only good for importing jute textile machinery, while cotton textile exporters were given regular vouchers that were good for importing anything and were therefore worth more.

In the 1970s, a national leader with socialist leanings and manifesto became popular and rose to power. He nationalized the banks and most large-scale sectors. The socialist wave that swept the country in the 1970s was partly due to the excesses of the big business houses that were accumulating wealth and contributing to inequality. However, the socialist philosophy could not sustain itself for long. Following international changes in the development paradigm, and the poor performance of state-owned enterprises, the country began privatization in the 1980s.

return from rent-seeking being relatively high, firms and businessmen were not encouraged to engage in effective entrepreneurship, i.e., innovation and risk-taking.

ISSUES AND CHALLENGES TO ENTREPRENEURSHIP AND PROPOSALS TO NURTURE ENTREPRENEURSHIP

The real challenge for Pakistan is that it has a very large market of more than 180 million people. Moreover, Pakistan is experiencing a youth bulge with more than 50% of the population under the age of 50. This youth bulge will remain for much of this century. The literacy rate is rather low, which means that much of this bulge is unskilled.

Domestic commerce (trade within the country) is highly constrained in Pakistan due to an over-emphasis on exports and industrialization. The domestic commerce sector employs around 40% of the labor force and contributes 52% to the GDP. If the sector is provided with an enabling environment, estimates suggest that this would increase growth by two percentage points, and would have a significant positive impact upon employment [13].

The question is why emphasizing domestic commerce is important. The answer lies in the following:

- *Trade is a primary human activity*: All production and innovation are rooted in trade. To understand the importance of trade, we just need to recall that England was known as a "nation of shopkeepers" before the industrial revolution and that it was trade that facilitated the revolution.

- *Open markets encourage economic activity*: Markets help determine consumer demand as consumers vote with their money in the markets. Knowledge of demand enables producers to know what and how much to produce.

- *Competitive markets encourage brand development*: Competition in local open markets leads to innovative practices, which in turn facilitate brand development. Once the brands and innovative practices have stood the test of local markets, they are exported abroad. The case of McDonald's supports this point; the fast-food chain first established itself in Chicago. It then expanded beyond Chicago, through Illinois and, subsequently, the whole of the USA. Once established there, it went overseas.

- *Organic industries and local trades survive*: Industries that are locally developed and survive in that local market generally survive, while ones that are transplanted to another region die out once subsidies are withdrawn.

- *Historically, trade has developed in commerce-friendly cities*: it is commerce-friendly cities that have encouraged trade and innovation.

Domestic commerce is severely constrained in Pakistan. Excess demand for retail, storage, and office space, as well as the dilapidated condition of Pakistan's retail markets, support this point. The key constraints to domestic policy development of commerce include weak property rights, unfriendly city zoning, and primitive tenancy laws. These present numerous barriers to the growth of entrepreneurship, e.g., they deter banks from financing commercial construction. Moreover, agricultural markets are highly regulated and the government still determines the prices for some crops and controls storage space for the major crops. For private storage and market pricing mechanisms to take root, the government must withdraw from the agricultural markets. The government has established many industrial parks but rarely any retail space. Finally, the law and order problem that has become endemic and affects retail more than manufacturing, since manufacturing is often located in the outskirts of the city.

Before we elaborate upon what needs to be done to promote domestic commerce in particular, and entrepreneurship in general, a discussion of the following general constraints to entrepreneurship seems in order.

Problematic Factors for Doing Business in Pakistan

The World Bank's "Doing Business in Pakistan" lists several constraints to doing business. Alleviation of these constraints is likely to give a significant boost to entrepreneurship. While constraints like corruption are endemic, others, such as government instability and policy instability, have political dimensions and are not easy to address in the context of encouraging entrepreneurship alone. However, problems such as crime and theft, access to financing, tax rates and tax regulations, foreign currency regulations, and restrictive labor regulations can be addressed with sufficient resolve.

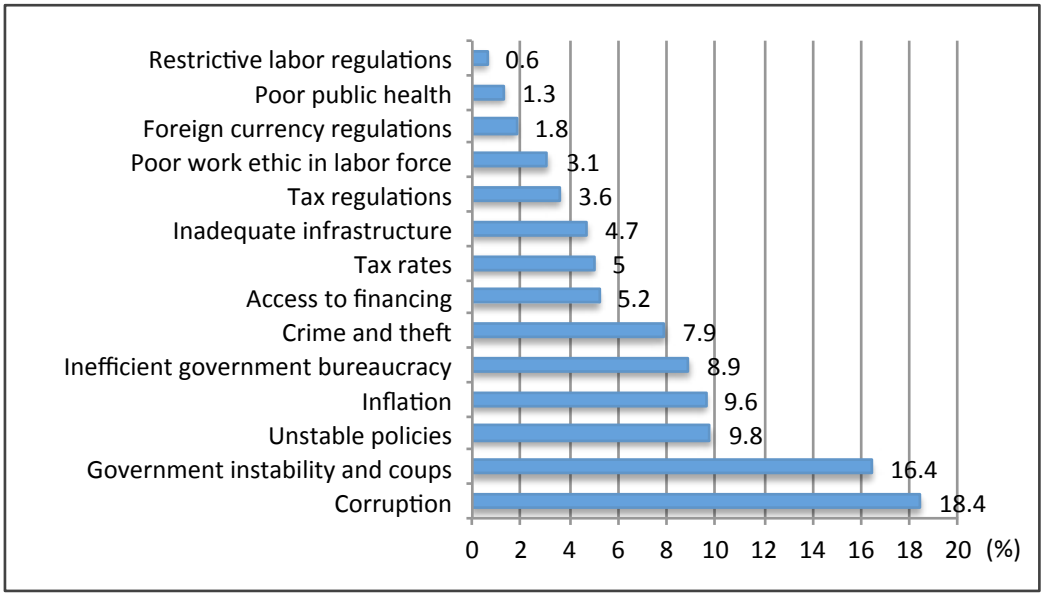

Figure 2. The most problematic factors for doing business in Pakistan (2010).
Source: Framework for Economic Growth (2010), Planning Commission of Pakistan [9].

Attraction of Rents

Firms expect some kind of favor from the government. For example, Haque [13] shows that businessmen have demanded protection against Chinese goods (and even protection in general), tariff subsidies, and concessionary credit. Haque also shows that firms seriously lack knowledge of financing instruments and that there is an excessive focus on bank financing. Rents constrain the competitive environment, which is the lifeline of the growth of entrepreneurship. This also constrains innovation.

Innovation

One reason against entrepreneurial activities in the public sector is the possible failure of the private sector. However, innovation is crucial to growth and the relevant literature unambiguously testifies to the fact that the public sector is inherently unsuitable for encouraging innovation. For example, the innovator cannot reap the full rewards from his or her innovation while innovating for the public sector. Secondly, efforts to innovate involve risk and public employees do not possess the right kind of incentives to bear such risk where failure may be heavily penalized. The nationalization that occurred in the 1970s adversely influenced innovation due to the risk-averse nature of public-sector jobs. Public-sector enterprises are causing a loss of around USD5 billion to the exchequer and have a presence in manufacturing, transport, banking, warehousing, and a number of other sectors, which typically are the domain of the private sector in a capitalist economy.

To permit innovation, the public sector must cease entrepreneurial activities typically considered the domain of the private sector.

Contract Enforcement

The importance of contract enforcement cannot be over-emphasized. Poor enforcement constrains contestability, increases project risk, and restricts technology transfer, especially from foreign partners. This also constrains access to finance, especially if the legal and judicial framework is not supportive, titles to assets are not clear, or movable assets under lien can be pilfered.

The present state of contract enforcement leaves much to be desired. A survey of 300 firms [14] conducted in one city in Pakistan shows that firms do not easily accept "returns" if the customer is not satisfied with quality; at best they exchange goods for similar goods but rarely return cash. Similarly, not many firms offer guarantees or warranties in the first place, and those that do honor these instruments with reluctance.

The time and cost of enforcing contracts vary widely between the major cities of Pakistan (Figure 3). However, the simple step of improving the performance of the least efficient to meet the standard of the most efficient will dramatically reduce the time and cost of contract enforcement. It will also encourage investment by new firms and the expansion of old ones.

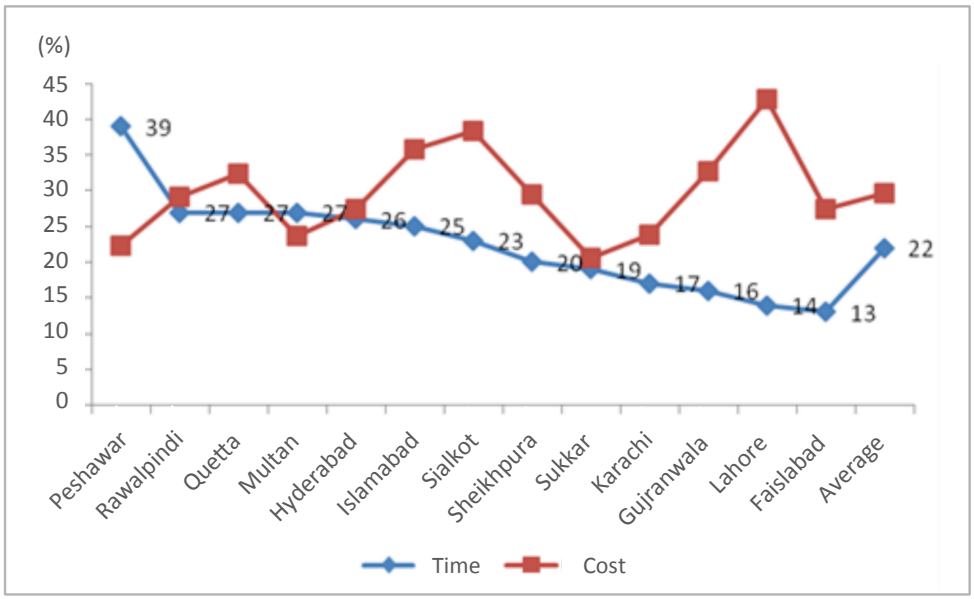

Figure 3. Time and cost of enforcing contracts.
Source: Planning Commission of Pakistan [9].

Security Profile

Lately, two relatively new constraints to doing business have emerged: terrorism and energy. Terrorist activities, especially outright extortion, increase the risk of firms beyond manageable levels and therefore constrain business. Some firms are leaving troubled cities, such as Karachi, and some are even leaving the country. Similarly, almost all businesses have been facing lengthy power outages and high costs of energy for the last few years. If entrepreneurship is to develop, the energy crisis must be resolved and outright extortion must come to an end.

Land Transfer

Several issues related to land constrain entrepreneurship. Besides the transfer of land in a standard form, the law also allows oral transfer of land. The oral transfer, when practiced, creates confusion as to the title of land, which in turn constrains the availing of several benefits attached to owning land, e.g., its use as collateral for securing bank finance to establish or expand businesses. Tenancy laws do not encourage entrepreneurship. At times it happens that a shop tenant running an established business is evicted and the owner then starts the same business in that shop. Tenancy laws need to be revisited to stop such practices.

Registration and Permits

Registering a business and obtaining construction permits require longh bureaucratic procedures. Collaboration between the Ministry of Commerce, the Chamber of Commerce, and sub-national governments can help establish a single-window operation for firm registration. The registration authorities should be conscious of the different needs of large and small firms. Large units require more scrutiny relative to small firms that are establishing a small retail outlet. The registration authority needs to simplify and speed up the process for small firms.

PROPOSALS FOR EFFECTIVE APPROACHES TO NURTURE ENTREPRENEURSHIP

Development primarly happens in cities and is strongly grounded in domestic trade. It is apparent that openness allows the right signals to filter through from the international

market. In open cities markets develop rapidly, learn from the global knowledge pool, find business processes, and develop brand names that are able to compete in the global market as follows:

1. The importance of domestic commerce should be stressed to all town and city administrations.

2. The town and city administrations should revise the zoning and commercialization rules and regulations to make them pro-commerce.

3. Every main town in every district should think about establishing the following:

    - A market for agricultural produce
    - Warehouses, modern shopping malls, and retail places
    - Upgrade the outdated and dilapidated retail markets
    - Hotel and leisure spaces (theatres, cinemas, etc.)
    - Spaces for sports and cultural activities
    - Small stalls and barrows (*rehris*) in every area of the city
    - Offices and apartment blocks in close proximity to the shopping and business spaces.

4. Commercial activity should be treated on a par with industrial activity in terms of taxation and other government policies.

5. Domestic commerce should be made pro-poor by allowing the poor enough space for entrepreneurial activities in all towns and cities. Currently, none of the high-end markets, such as Liberty in Lahore, the Super Market in Islamabad, or the Defense Market in Karachi, allows space to poor entrepreneurs. The question is why? Bangkok and Singapore found space for *khokha* (kiosks) and small stalls, while Pakistan officially prohibits it.

Promotion of domestic trade will allow Pakistan to exploit its large market of 180 million. A policy framework for promotion of domestic commerce is required and all levels of government need to collaborate on this.

Besides the above measures, which would specifically cater to promoting domestic commerce, the country needs to undertake the following measures to alleviate the general constraints discussed earlier.

Privatize State-Owned Enterprises

The government should follow the paradigm "it is not the business of government to do business." This implies that the government should privatize all enterprises that would typically be within the private sector, e.g., steel mills and banks. This would curb rent-seeking to the extent afforded by the public-sector enterprises. However, institutions such as regulatory authorities and antitrust authorities, which curb the possibility of market failure, need to be strong enough to enforce their authority. This is especially desirable in cases where there is the possibility of cartel formation.

Improving Attitudes towards Entrepreneurship

More than anything else, the country needs to improve its attitude towards entrepreneurship, which at present is significantly less favorable than that of comparable factor-driven economies. A number of measures are required in this regard, including reducing job opportunities in the public sector, and shaking off the undue prestige accorded to public-sector jobs (e.g., undue prestige is attached to government housing and official cars). The monetization of these benefits has already been advocated to curb rent-seeking and inefficiencies. Taking away the element of social status attached to these benefits will reduce the race for public-sector jobs and encourage people to adopt entrepreneurship as a career.

Sector Picking

Again, to curb rent-seeking, the government should stop favoring sectors by way of subsidies, and tax and tariff concessions. The practice of sector-picking encourages the private sector to indulge in lobbying.

Conflict of Interest

A law governing conflict of interest needs to be introduced, which would serve as a check on politicians with regard to the kind of business they can engage in while holding office.

Problematic Factors for Doing Business

Some constraints such as corruption are endemic, while others such as government instability and policy instability have political dimensions and are not very easy to address in the context of encouraging entrepreneurship alone. However, problems such as

crime and theft, access to financing, tax rates and tax regulations, foreign currency regulations, and restrictive labor regulations can be addressed with sufficient resolve.

Improving Contract Enforcement

Commercial courts that exclusively look into commercial disputes should be set up to speed up commercial litigation. Moreover, as shown earlier, the state of contract enforcement varies widely across the major commercial cities of Pakistan. Efforts need to be made to bring all cities up to the level of the best city in terms of contract enforcement.

Innovation

Firms based on innovative products run a high risk of failure. Start-ups in developed countries are typically financed by venture capitalists (VC), however VCs are almost entirely absent in Pakistan. Appropriate incentives are needed to encourage the development of this sector.

Education

A large number of people might be reluctant to take on entrepreneurship because they feel that they know little about doing business. The business schools that have mushroomed in the country primarily cater to jobseekers. Someone needs to encourage the establishment of institutes that teach individuals how to become entrepreneurs.

Land Titling

Titles to land need to be made clearer, especially in rural areas. This would encourage the banks to lend.

Introducing New Products to Increase Access to Financing

A survey of 300 small retail firms [14] conducted in one city in Pakistan showed that only 12% of the surveyed firms had approached some formal source, primarily a bank, for financing. Those that did not pursue financial backing were asked the reason and 82% of them stated that they "do not need finance."

However, at least 55% of those surveyed were part of an arrangement called the "committee." The committee is a sort of credit union, in which members pool equal funds

at periodic intervals, e.g., each month. One member takes all the pooled funds each month, and that member is established by a draw. Typically, the draw is held the same day on which the funds are pooled. As the deposit of the funds by all the members and their disbursement to a single member takes place almost simultaneously, it appears that no interest charge is involved. However, a closer look at the arrangement shows that this is not the case.

For instance, let us say a committee has 12 members and the duration of the arrangement is 12 months, with members pooling USD100 monthly and one member taking all USD1,200 pooled in one particular month. The member who takes the pooled funds in the first month is in fact borrowing USD1,100 for 11 months, while the member who takes the pooled funds in the final month is in fact lending for 11 months, with the rest of the members lending for various periods depending upon when they draw the pooled funds. The salient feature of the arrangement worth noting is that although there is no explicit interest charge involved, there is still an opportunity cost. For example, the member who lent for 11 months could have deposited this money in a bank and earned interest.

The point here is that entrepreneurs are in fact borrowing and lending with the committee system that is used to borrow and lend, but this realization demands insight into the subject of finance. What lessons do we learn from this about entrepreneurship in the context of financing? The committee arrangement is constrained and depends on finding a person who agrees to manage the committee and who can be trusted with money. Finding such a manager from among the members may not always be easy for entrepreneurs. Then what is the solution?

If the bank can take on the role of the committee manager, this could give a large boost to the committee system. The advantage is that many people trust banks more than they do their fellow entrepreneurs. The incentive for the fellow entrepreneur manager to organize the committee is that the committee manager is the first member to draw the pooled funds. But what would be the incentive for the bank to engage in arranging the committee? The bank can organize the committee for a certain charge, which should be enough to cover expenses and also yield a certain profit to the bank. However, the real benefit to the bank and the economy would come from the interface that this practice would provide between the entrepreneurs and the bank. This would encourage the committee members to engage in banking in the future.

It is worth mentioning here that the survey referred to above also reveals that a large percentage of retailers do not hold bank accounts. Branchless banking, recently

introduced in Pakistan, could easily facilitate the bank adopting the role of committee manager. Branchless banking refers to a new system introduced by the banks in Pakistan for the transfer of money from one account to another and the collection of utility bills. Under this system a retailer receives the money from the remitter and uses a mobile phone to transfer the money. The same retailer could then act as manager of the committee on behalf of the bank, collect the money from the entrepreneur and transfer it to the bank (committee manager) using a mobile phone.

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PHILIPPINES

Renato M. Pleno

ENTREPRENEURSHIP IN THE PHILIPPINES

The Philippines was a colony of Spain for almost 400 years, from the 16th to the end of the 19th century. For most of the first half of the 20th century, it became a colony of the USA after a short-lived period of independence from Spain.

One of the harmful effects of colonization was convincing the colonized that they were incapable of charting their own destiny. Except for a small minority, most Filipinos could not imagine themselves running a business beyond making a product and letting someone else market it. This opened that role to Chinese traders who settled in Manila and eventually controlled most of the commercial and manufacturing businesses in the country. To most native Filipinos then, a bright future lay in employment with foreign business establishments or successful careers as doctors, lawyers, accountants, or some other profession.

Against this history, the trend of entrepreneurship as a career choice is a recent one. Most often, people have turned to entrepreneurship to find a livelihood when they could not find employment elsewhere.

Start-up Rates

There is no government or private organization collating the number of new business start-ups in the Philippines (verified with the National Statistics Office, Government of the Philippines and further research).

2006 Global Entrepreneurship Monitor Survey

In a national report by the Global Entrepreneurship Monitor (GEM), the Philippine Report 2006–2007 by Madarang and Habito [1], it was stated that about 20.44% of the population, that is 10 million Filipinos, aged 18–64 years, were engaged in Total Entrepreneurial Activities (TEA), including nascent and new business ownership as defined by GEM. This is a very high figure in comparison with other countries, and was the result of a survey completed with a sample size of 2,000 randomly selected Filipinos in the target age group nationwide. It is interesting to note, however, that 63% of those who completed the survey own businesses that do not have any employees [1]. At present, one of the most pressing issues in the Philippines is that employment has not trickled down to those below the poverty line, even with the high GNP growth of recent years.

This GEM report does not establish a meaningful TEA rate as it only represents findings from one particular point in time and not a series of observations over a prolonged period.

NSO List of Establishments

This researcher studied the yearly "List of Establishments" to determine the net start-up rate over the 10-year period from 2002 to 2011. The list is published by the National Statistics Office (NSO) of the Government of the Philippines, and provides the number of establishments by industry and employment size. Table 1 shows the definition by NSO of employment size, and Table 2 shows the breakdown of the total number of establishments by employment size. Figure 1 shows the total number of business establishments in the Philippines from 2002 to 2011 (furnished by NSO upon request).

Table 1. Definition of terms

	Employment size
Micro	1–9
Small	10–99
Medium	100–199
Large	>200

Source: National Statistics Office [2].

Table 2. Breakdown of total establishments by size

Size	**Number in 2011**	**Percentage of Total**
Large	3,496	0.4
Medium	3,287	0.4
Small	70,222	8.6
Micro	743,250	90.6
Total	820,255	100

Source: National Statistics Office [2].

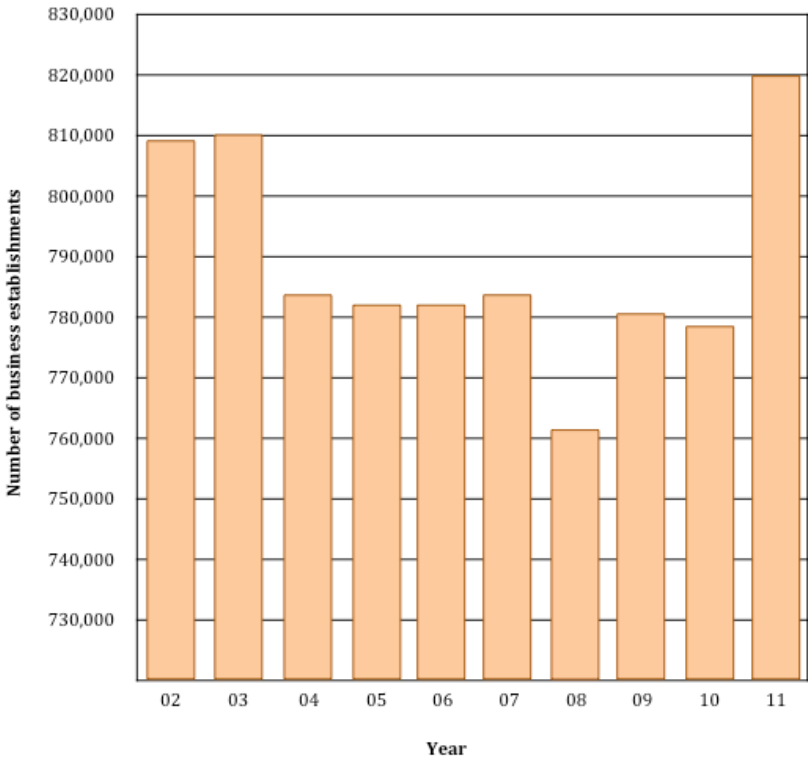

Figure 1. Total number of business establishments (2002–11).
Source: National Statistics Office [2].

Unfortunately, as the figures show, none of these businesses show a period of steady growth. Generally, there was a modest decline in most years punctuated by a recovery in 2011. There was a change in government administration in 2010 that may account for the increase seen in 2011. However, no meaningful start-up rate can be determined due to the unpredictable nature of national politics, which greatly influences the external environment for businesses.

Gender

In the 2006–07 GEM report on the Philippines by Madarang and Habito, it is reported that 69% of nascent businesses are run by women, as well as 51% of new businesses, while men dominate established businesses (66%) [1].

Habito theorizes that this gender gap reflects "the unique role that women play in starting up a business during the critical and fragile stage, until such time that stability is achieved and the husband takes over" [1]. In the Philippines, most wives are in charge of running the family's finances. Also, a number of micro finance organizations in the Philippines prefer female loan applicants over men, as the latter tend to spend loan proceeds outside of the business.

Age

Of the adults surveyed, the age range around which most entrepreneurs were clustered, was between the ages of 25 and 44. Very few (12%) were younger than 24 years old, and beyond 44 years old, the number of entrepreneurs gradually declined [1].

Discontinuance Rate

There have been no data collated or made available on this subject by either the government or the private sector. In the Madarang and Habito report, the surveyed population reported an 8% discontinuance rate in the last 12 months [1].

Comparisons with Other Countries Using GEM Data

The Madarang and Habito report compared the Philippines with the other countries monitored by GEM in 2006 and found that [1]:

Start-up rate: With 20.4% of TEA, the Philippines was ranked third highest, after Peru (40.2%) and Colombia (22.5%).

Start-up by age: Only 12% of those aged 18–24 are engaged in business, despite the fact that one-third of those entering college drop out before graduation. Among Asian countries, PR China has the highest number of youths in this age group engaging in start-ups. The Philippines ranks fourth, but with a rate much lower than PR China (12% versus 25%).

Start-up by gender: While the global trend shows that men are more likely to start a business, this trend is reversed in the Philippines. Globally in 2006, the country had the second-highest percentage of entrepreneurially active females, next only to Peru. More than half of nascent business owners (69%) and new business owners (51%) are female.

Discontinuance rate: At 8.2%, the Philippines ranked sixth globally among countries with high rates of discontinued businesses, second only to India in Asia. Among its Asian neighbors, Thailand, Singapore, and Malaysia seemed to nurture entrepreneurs better, while Japan leads the group in providing stability to its entrepreneurial activities.

Monitoring Entrepreneurship in the Philippines

Dr. Aida Licaros Velasco is currently the team leader for GEM activities in the Philippines. The last GEM activity in the Philippines took place in 2006–07 when an adult survey was conducted and a country report was written by Dr. Cielito Habito and Imelda Madarang. Dr. Velasco is an Associate Professor in the Decision Sciences Department of De La Salle University. She is also an authority on entrepreneurship and a consultant to an NGO providing financial assistance, training, monitoring and mentoring to small businesses outside Metro Manila. Currently, there is no database for entrepreneurship in the Philippines to enable monitoring.

Dr. Velasco spent two months working with GEM and completed a National Expert Survey (NES) with 36 respondents. The survey tackles issues such as: availability of adequate funding; national and local government support; ease of obtaining permits, licenses, taxes, education, and training; available research and development; infrastructure adequacy; and services [3].

Unfortunately, the results were not reported until January 2014, too late for inclusion in this report. Dr. Velasco hopes that through the GEM project, a database on SME entrepreneurial firms can be developed. This would enable market research and analyses that will be provided to GEM-sponsoring organizations. This will also sustain the continued operation of GEM in the Philippines, while also providing the necessary data for a central government office to develop plans and programs for SMEs.

SOCIAL ENTREPRENEURSHIP

Analysis

The challenge to serve the less fortunate, while achieving sustainability, has become a more popular trend in the Philippines. Business schools and NGOs have stimulated youthful idealism towards entrepreneurship in business management courses. Large corporations and chambers of commerce have likewise provided rewards and recognition in this area, while international organizations have also contributed worthwhile initiatives. These opportunities, coupled with the frustration of most well-educated and well-meaning Filipinos over the prevalence of poverty in their society, have seen an increase in social enterprises, a trend that will likely continue into the future.

Case Studies

The Center for Agriculture and Rural Development (CARD) – Mutual Reinforcing Institutions (MRI): CARD is the brainchild of Jaime Aristotle Alip (Aris), a community organizer who has worked for many years at the Philippine Business for Social Progress (PBSP). As PBSP's policy focused on working with land-owning farmers, Aris was unable to satisfy his own desire to help the poorest in the community who were those hired by the farmers as field workers. He resigned in 1986 to form CARD, together with two other staff members from PBSP.

With a battered old typewriter, Aris wrote project proposals to international donor agencies he had come across during his work at PBSP, asking them for financial assistance. He envisioned forming a bank to be owned by them, inspired by the example of Muhammad Yunus and the Grameen Bank. After several failed attempts, he succeeded in convincing Takayoshi Amenomori of the Asian Community Trust (ACT) in Japan to donate USD20,000 to his project.

Using these funds, he set up two pilot areas in Laguna province, providing livelihood assistance to landless coconut farmers. Following the Grameen lending model, he was able to achieve a 100% repayment rate.

From its headquarters in San Pablo City, Laguna, CARD slowly rolled out into other provinces. With more donors, he expanded operations. By 1998, CARD already had 28,000 clients, but encountered a problem with the Grameen solidarity-group-lending model. Smaller borrowers were becoming discouraged as some larger borrowers were defaulting on loans, sometimes intentionally, and passing on the burden of repayment to them.

Hence, in 2000, CARD decided to shift from the Grameen model to one developed by Shafiqual Haque Choudhury, founder of the Association for Social Advancement (ASA) in Bangladesh. Here, the responsibility for loan repayment lay entirely with the borrower, and not the group (the borrower still had to be a member of a group). Eight years after the shift, the number of clients ballooned to 706,800 and CARD still maintained a repayment rate of 99%. In 1997, Aris realized his dream for the landless farmers. He secured a license from the Central Bank to operate a rural bank, called "Landless Bank." Previously, as a microfinance institution, he could only lend out money; now he could accept savings from members and outsiders, and help stabilize funding for CARD's programs.

From extending micro-credit, CARD organized the CARD Mutual Benefit Association (CARD MBA) in 1999 and secured a license in 2001 from the Insurance Commission to offer micro-insurance. CARD's borrowers had earlier expressed their desire to be protected from the vagaries of illnesses and death in the family and calamities such as typhoons. CARD MBA provides death benefits, medical subsidies, as well as pension and loan redemption policies. It prides itself on its quick payment policy compared to competitors. In its 1-3-5-payment plan, payments are made within a day of an incident affecting their clients; if there is a major problem, the payout is moved to three days; and if additional requirements are necessary, moved to five days [4].

As of August 2013, CARD, through its rural bank and micro-finance institution, has served a total of 920,020 clients, 659,744 of whom are active clients with loans. The total value of loans disbursed is PHP9 billion (USD225 million) with outstanding loans at PHP3.3 billion (USD80 million). It has PHP1.6 billion in savings, and enjoys a repayment rate of 99.58%. It employs 3,393 staff in 810 offices with liaison offices and partnerships in Cambodia, Lao PDR, Vietnam, Indonesia, and Myanmar [5]. As of June 2013, its micro-insurance arm, CARD MBA, has 1.7 million active members with 8.5 million insured individuals [6].

Apart from these two main businesses, CARD has also established a training institute for developing and training its staff. According to Aris, its three training centers turn out 120 loan officers and 30 branch managers every month [7].

In 2008, CARD took over control of an ailing rural bank in Batangas province and renamed it CARD SME Bank. This bank serves the credit needs of previous micro-finance borrowers who graduated into the small business category and agribusiness and agriculture borrowers – both areas largely underserved by the formal banking sector. For small businesses, many engaged in handicraft production, the average size of loans is PHP200,000 (USD5,000) and these loans are collateral-free or under-collateralized. In August 2013, the International Finance Corporation (IFC) of the World Bank chose to partner with CARD SME to expand credit services to the agriculture sector [7].

Aris Alip's success in helping to alleviate poverty in the Philippines is a phenomenal achievement. Furthermore, he voluntarily turned over 51% ownership of CARD Bank's assets and 90% of its management to the landless mothers who comprise his client group. This is proof of his belief that the powerless must be empowered to decide what is best for them [7].

Hybrid Social Solutions, Inc.: This case involves the use of modern technology by people who have already reached the top of the corporate ladder to uplift marginalized communities. One of the most prestigious business awards of the year in the Philippines went to social entrepreneur Jaime "Jim" Ayala, who believes that his company should not be driven by profit. "We are profitable because if we're not, we can't continue our work. But we look at profit as 'gas in the tank' that allows us to go further and faster. It's not our mission. Twenty-five percent of the country has no access to electricity or water. Most of the traditional solutions are to connect them to the grid but it will take a very long time to connect the communities in remote islands and mountains," said Ayala [8].

Ayala is president and founder of Hybrid Social Solutions, Inc., a for-profit organization that he founded in 2010 and brings essential goods and services to poor rural villages in the Philippines. Their first product was a solar lantern with a 10-year lifetime. The company is also tasked with bringing eye-glases to remote areas. Ayala is also the former CEO of Ayala Land, the largest real-estate development company in the Philippines, and a former director of the consulting firm McKinsey & Company. A change of heart came to Jim Ayala while working for McKinsey. Based in the USA for 19 years, he returned to his native Philippines to open an office in Manila, and later joined Ayala Land. Living and working in the Philippines "surrounded by poverty," he began asking, "Why am I not spending my energy helping people who need it more?" So he left the corporate world in 2010 to focus on issues that face the poor, such as lack of access to clean water, sanitation, electricity, and health care.

"Part of the problem in remote, poor communities," he says, "is that there's a dearth of distributors, technicians, and financiers willing to service those areas and therefore no sustainable supply chain. Roughly a third of humanity is ignored by most businesses." To rectify that, Ayala is organizing companies to service those remote marketplaces, and working with business people whose mission involves serving those at the bottom rung of society. This is his "new social solution."

"About 20% of the Philippines population," he says, "live off the electricity grid and use candles, batteries, and kerosene for energy. The typical household spends about USD6,000 over 10 years on those items. Two solar lanterns and replacement batteries cost just USD200." The company's other products include a USD30 water-purifier system and USD10 adjustable eyeglasses that do not require a doctor's visit. "The key to systematically solving the issues facing the poor is to enlist businesses and innovators in such a way that they don't lose track of social and developmental goals," says Ayala [9].

One of the solar lantern models is also a cellphone battery charger, which is essential in a community with no electric power. Thus, mobile banking can be made available to these communities as well [10].

Rags-2-Riches: This case reflects the involvement of a younger generation of business school graduates getting involved in social entrepreneurship. Rags-2-Riches Inc. (R2R) is a for-profit social enterprise based in Manila, creating eco-ethical fashion and home accessories out of up-cycled scrap cloth, organic materials, and indigenous fabrics by working with artisans (mostly women) living in the poor communities across the country. Rags-2-Riches' philosophy stands upon its four bottom lines: people, profit, planet, and positive influence.

This eco-ethical business model was developed in 2007 in Payatas, one of the Philippines' largest dumpsites and home to close to half a million people. An informal cottage industry of rug-weavers grew from the many women who used the craft as a means to earn a living by scavenging waste to recycle scrap pieces of fabric. The fabric enabled them to participate in handicraft production such as rug and rag weaving, while taking care of their children at home. Over time, the industry became exploited by a series of middlemen who controlled both the supply of scrap fabric and the women's access to the market, which created an unfair value chain for the women who earned less than USD0.20 per day.

R2R was created to provide these artisans with fair access to the market and the formal economy, as well as with additional skills-based, financial, and health training so that they could maximize their career potential towards long-term financial and personal well-being. R2R integrated a design solution by partnering with well-known influential fashion designers including Rajo Laurel, Amina Aranaz-Alunan, Olivia d'Aboville, and Oliver Tolentino, to turn scrap materials into fashion handbags. After four years, R2R has already trained 800 artisans across 21 communities in the Metro Manila area and continues to expand its social impact and eco-ethical footprint throughout the country.

The Rolex Foundation in Switzerland selected R2R founder-partner and current CEO, Reese Fernandez-Ruiz, as one of the five inaugural Rolex Young Laureates. In 2010, R2R linked up with its current investor-partner, Liechtenstein Global Trust Venture Philanthropy (LGT VP) [11].

Reese Fernandez-Ruiz describes in her own words what led her to start R2R: "looking back, my life before Rags-2-Riches prepared me for my life in Rags-2-Riches. I grew up as a little missionary worker (my mom was a missionary worker), going around different

churches, and witnessing the realities of poverty and lack of opportunities from a young age. My experiences as a child ignited my passion for service. Because of this passion for service and a strong sense of 'paying it forward'. I joined socially oriented organizations and initiatives while I was in university. It was actually because of this inclination that I eventually found myself on the path towards the founding of Rags-2-Riches.

"A few months before graduation, I joined an elective in business innovation. One of the main projects of the class was to create a business innovation for a rag-making community residing near one of the biggest garbage dumpsites in the Philippines. Of course, I did not hesitate to take on this project with a team! This class was my first exposure to the would-be Rags-2-Riches. Another group of young professionals were also looking into the same area. Together, we realized that the rag-making community members are victims of unfair trade as they do not have access to financing, raw materials, or market connections. We worked together to solve this specific social problem by forming Rags-2-Riches, Inc. But what started out as a specific solution to a specific social problem … grew into a sustainable platform for artisans to get out of poverty" [12].

PERCEPTION OF ENTREPRENEURSHIP IN PHILIPPINE SOCIETY

Entrepreneurship is perceived very positively in Philippine society. The media, whether print, radio, television, or the Internet, feature successful entrepreneurs and their success stories. Newspaper and magazine articles, as well as radio and TV programs, encourage people to enter into business to share tips and know-how. Madarang and Habito report that Filipinos have a predominantly positive attitude towards entrepreneurship and entrepreneurs. Regardless of whether they are in business or not, a dominant 80%–83% of those surveyed considered starting a business as a good career choice, and 80%–82% accorded high status to successful entrepreneurs. The mass media may be a major contributor to this sentiment, with 73%–76% indicating the perception that there is ample media attention for entrepreneurship in the country.

However, survey results tend to affirm the common notion that the typical Filipino businessperson is risk-averse and lacking in originality and innovation [1]. Being risk-averse hinders the would-be entrepreneur from taking the plunge into the unknown. The lower the uncertainty involved in the business venture, the more likely to attract the Filipino investor or entrepreneur. This explains the rapid success of the franchising

industry in the Philippines with local brand stores proliferating in major urban malls. "For 2013, we are looking at 20% growth in franchises, and 30% for 2014, the projection compares with at least 10–20% annual growth posted in the last five years" says Philippine Franchise Association chairman emeritus Samie Lim, who is considered the "Father of Philippine Franchising" [13].

The Filipinos have a "holding by the hand" mentality as far as entering a new business is concerned. Therefore, a pre-packaged business proposition with a track record of success such as a good franchise is ideally suited to Filipino culture.

REPRESENTATIVE CASES OF ENTREPRENEURSHIP IN THE PHILIPPINES

CJR Junk Shop (Factor-Driven)

CJR Junk Shop is a family-owned small business enterprise registered with the Department of Trade and Industry as a sole proprietorship and has been in operation since 2003. Based in the town of Cainta in Rizal province, it also has a branch in Antipolo, Rizal. CJR Junk Shop buys scrap materials from various sources such as large manufacturing and construction companies and walk-in customers in the area. It then processes these scrap materials and sells them to manufacturing plants concentrated in the nearby city of Valenzuela. It is the leading junk shop in the area and has earned the trust of its customers for accurate weighing and the good quality of its scrap materials. It is aggressive in bidding for scrap materials and usually offers a few cents more per unit of measure than competing bidders. Furthermore, it also pays in full in cash, making it the preferred junk dealer in the community.

The current owner is the widow of the founder, who passed his trade secrets on to his wife before passing away [14]. This entrepreneur was given credit assistance along with management training, monitoring, and mentoring by the Foundation for Enterprise Management Innovations, Inc. (FEMI). Previously she was paying an interest rate of 10% per month from local moneylenders, but FEMI only charged her 2%. With this assistance, she was able to grow the business. Prior to FEMI's assistance, she had one employee and no utility truck of her own. With the assistance, she was able to grow the business, hire more employees, and now owns three utility trucks [15].

Jollibee Foods Corporation (Efficiency-Driven)

Jollibee is the largest fast food chain in the Philippines, operating a nationwide network of over 750 stores. A dominant market leader in the Philippines, Jollibee enjoys the lion's share of the local market – this is more than all the other multinational brands combined. The company has also embarked on an aggressive international expansion plan in the USA, Vietnam, Hong Kong, Saudi Arabia, Qatar, and Brunei, firmly establishing itself as a growing international quick serve restaurant (QSR) player.

Jollibee was founded by Tony Tan Caktiong and his family in 1975 and was initially an ice cream parlor. At the heart of its success is a family-oriented approach to personnel management, making Jollibee one of the most admired employers in the region. The company has won several employer-based awards: Employer of the Year Award from the Personnel Management Association of the Philippines, Best Employer in the Philippines Award from Hewitt Associated, and a Top 20 Employers in Asia citation from the *Asian Wall Street Journal* [16].

Jollibee has successfully competed against leading international brands including McDonald's, Burger King, and Wendy's by adapting the common items in the QSR menu to suit the Philippine consumers' tastes. Moreover, it has added items to its menu that other international brands do not have, thus providing a more "homely" atmosphere that the majority of the Filipino population can relate to. One competitive advantage a locally owned fast food chain has over its international rivals is that it can adopt menu changes faster than the latter. Lastly, its marketing efforts focus on Filipino family values, knowing that the most treasured aspect of Filipino life is love for family.

From its first store in 1975, Jollibee had opened 10 by 1981, 100 by 1991, and 500 stores by 2004. To support this rapid growth in the volume of business, Jollibee built its largest and most modern commissary in Canlubang, Laguna. The chicken marinade line can produce as many as 150,000 pieces a day while about 480,000 hamburger patties a day are turned out by the frozen patty line.

Jollibee is one of the few international companies that are Philippine-owned. It has 26 stores in the USA, mostly in California (the state with the largest concentration of Filipino-Americans), 12 stores in the Middle East (Saudi Arabia, Qatar, and Kuwait where a large number of overseas Filipino workers are employed), 32 stores in Vietnam, 13 in Brunei, and 1 in Hong Kong [16].

In 2008, the Jollibee Corporation's corporate social responsibility arm, the Jollibee Foundation, launched its Farmer Entrepreneurship Program, providing a bridge to farmers to market their produce directly to the Jollibee food supply-chain. Together with the help of local government authorities, the Catholic Relief Services, the National Livelihood Development Center, and the Department of Agriculture, farmers were provided with effective farming technologies to grow onions, tomatoes, lettuce, and red peppers; provided access to credit; and directly linked to Jollibee's supply chain. This provides the farmers with an assured and consistent market for their produce while Jollibee is assured of its supply of high-standard quality produce [17].

Pintar International Corporation (Innovation-Driven)

Pintar International Corporation started as a backyard operation with a handful of workers and a small kiln to produce bone china (bone porcelain). Brothers Manuel and Renato Pleno founded Pintar; Manuel is a ceramic engineer who learned how to make a special type of ceramic ware while training in New Zealand at a ceramics factory, while Renato obtained an MBA from Stanford University. This executive case study covers the 1979–89 period (Figure 2) and highlights some of the opportunities and challenges that Pintar faced in growing its bone china ceramics business in the Philippine context [18].

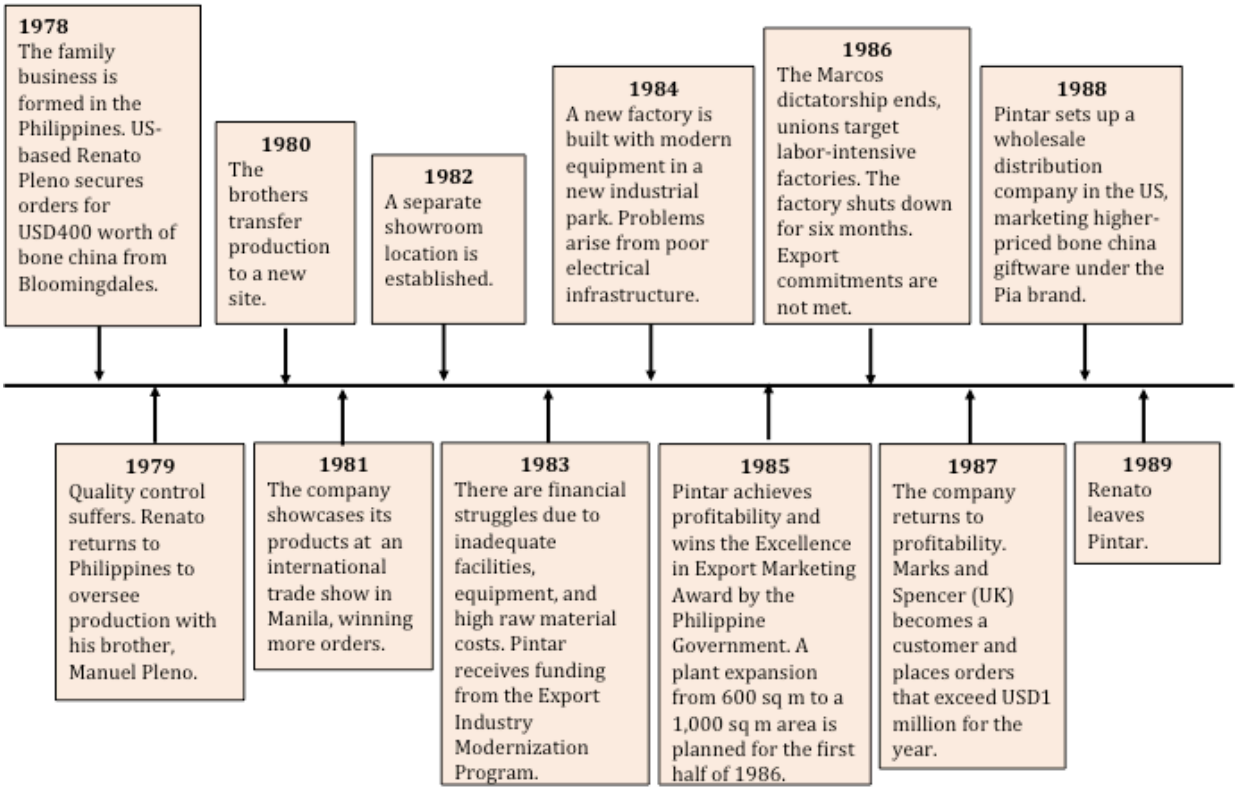

Figure 2. Timeline and key events – Pintar International Corporation.

Renato was interviewed by George Foster on Pintar's challenges and success for the Executive Case Study for the World Economic Forum on Global Entrepreneurship in July 2013. An excerpt from the interview is shown below [18]:

Q1*: What was the source of the initial idea, and how did that idea evolve into a viable growing company? How did it change over time?*

A: The source of the initial idea was that we had a special capability in making bone china decorative products that was possessed only by very few companies worldwide. These companies were mostly in the United Kingdom where it was invented, with Wedgwood as the most famous maker. The world ceramic industry is very wide in product scope, from building materials (bricks), sanitary ware (water closets), dinnerware, and gift and decorative accessories as the main categories. The gift/decorative accessories category required little capital investment and was very labor-intensive, an ideal situation for a start-up in a developing country such as the Philippines. One special attribute of the Filipino people is their creativity and artistic bent, which further strengthened the competitiveness of an enterprise run by Filipinos.

The world market for bone china decorative wares was mostly concentrated in the US, the UK and Germany. The English makers had already developed a sizeable market for their decorative bone china. At the time Pintar entered the market, there were a Japanese maker and several Taiwanese makers offering a less expensive product due to significant wage differentials between the United Kingdom and the Asian countries.

Deciding what to produce, creating innovative and attractive designs and correctly pricing them, given our production limitations at the start, was critical. Fortunately, we mostly made the right decisions and the company grew. From fashion jewellery pendants to napkin rings, we graduated into bathroom accessories (tumblers, toothbrush holders, soap dishes), and then to larger vases, footed bowls and dishes. We also went in new directions, like Christmas ornaments.

As our production facilities improved and our ovens became larger, we were able to introduce more items into our product lines and also achieve economies of scale to make it economically viable. (Pintar's growth by sales and headcount is shown in Figure 3.)

Q2*: What were the major growth accelerators for your company in the early years of high growth?*

A: Finding large customers was the most important accelerator for our company in the early years of high growth. Being a small start-up company, our size was a challenge compared to our potential buyers' requirements. Servicing the orders to our customers' satisfaction and getting repeat orders, that's really the name of the game. Consistent and dedicated work, with no let-up, was essential for Pintar. We also developed our business with smaller customers to grow them into medium-sized companies. We were continuously product developing with them, some ideas coming from them and others from us. Also, by having satisfied customers, word goes around the buying community, and referrals from existing customers brought in more customers.

Finally, we had unexpected sales that helped us grow and build stature. An example was when an NGO approached us to provide employment for resettled squatters (slum dwellers) from Metro Manila who lived near our factory. They were taught how to make bone china roses (small ones that could be transported in boxes without crumbling) to attach to our vases. Pintar designed a range of gift items with at least a dozen roses attached to each item. These products were very successful at the Frankfurt show. Our sales jumped and we were able to provide a livelihood to quite a number of people outside our factory.

Q3*: What role did key aspects of the entrepreneurial eco-system surrounding your company play in the growth of your company?*

A: The ecosystem in the Philippines was not manufacturing-friendly when Pintar started. We encountered politicians' grandstanding and passing 20% increases in minimum wages without regard to labor-intensive export industries such as Pintar's. Over-regulation drove up the cost of doing business. Advance taxes on imports, automatic surrendering of foreign exchange to the central bank and buying again when needed to import raw materials became part of doing business.

Nonetheless, there were also positives from the government for a small start-up during our early years. They helped us participate in international trade fairs. The Department of Trade and Industry helped us negotiate ways to satisfy some government regulations.

A major positive for Pintar was the opening up of the special funding for export industries called the Export Industry Modernization Program. The Japanese government provided

long-term money (up to seven years at 7.3%–8% per annum interest rate) to Philippine exporting companies. In the Philippines, even today, there really is no long-term financing available to manufacturers. A one-year loan is already considered long term. At the time Pintar needed the financing, interest rates were running at 20–30%. Later, government administrations frowned on this type of financial intervention (sadly) and wanted the regular banking channels to provide the needed financing.

Q4: *What key aspects of the entrepreneurial eco-system surrounding your company, previously absent (or existing only in a weak form), created the greatest challenges for growth? Please describe and discuss how you met/were impacted by these gaps in the eco-system and their resultant challenges?*

A: Normally, in a well-developed economy, there is a lot of horizontal integration among industries. Thus, if I were a ceramic factory, there would be clay-mining companies, clay-formulating companies, glaze-making companies, color makers, kiln manufacturers, and kiln furniture makers. In a developing country, when one starts a new industry, there are no support industries. You have to source them abroad. This is feasible if you can bring in materials and equipment freely into your country. However, usually, developing countries have very stringent rules about importing materials and tax them very heavily. To overcome this, one has to register with the government as an export company, which requires a lot of paper work and time. My MBA background helped in negotiating with the government.

Your ability to create innovative products is often hampered in developing countries. For instance, we had one customer, The San Francisco Music Box Company. The music movements for this product category are only available from Switzerland and Japan. Bringing them into the Philippines required so much effort that we could not really exploit this business fully.

Another example is packaging. There is a local packaging industry in the Philippines, but the quality does not pass the requirements of Marks & Spencer. However, the government protects the local industry. The result was large amounts of effort to justify importing the gift boxes from Hong Kong [18].

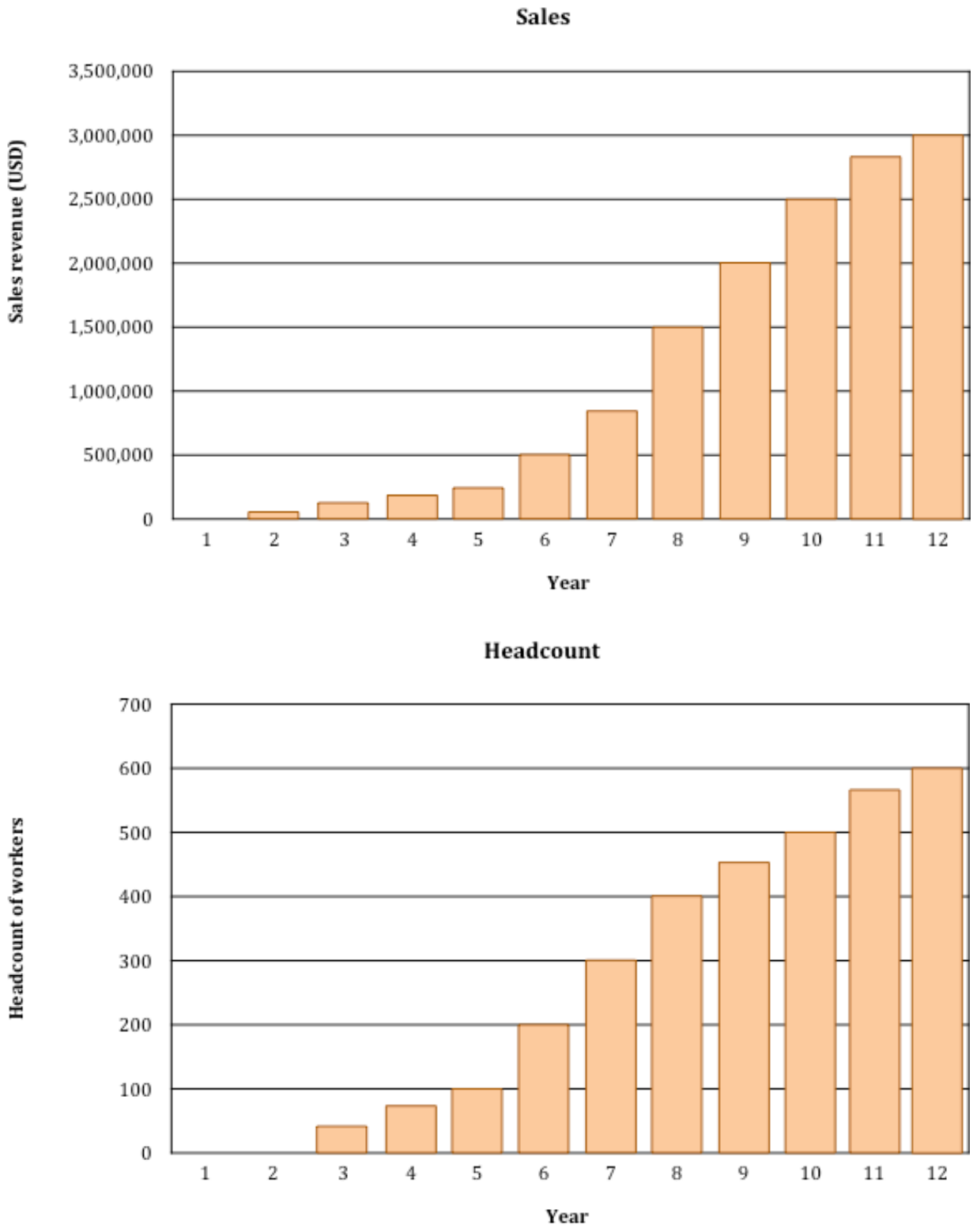

Figure 3. Key operating results.

Source: Foster and Pleno [18].

EXISTING POLICIES, PROGRAMS, AND PROJECTS IN SUPPORT OF ENTREPRENEURSHIP

Philippine Government

Legislation: The Philippine Congress has passed several laws in recent years to promote entrepreneurship growth. One of these is the Magna Carta for Micro, Small, and Medium Enterprises passed in 1991, amended in 1997, and further amended in 2008. This law had two very important objectives:

1. Create an enabling and conducive business environment; and
2. Improve access to financing for MSMEs.

A major provision of the act was to create a council, which is tasked with facilitating and coordinating national efforts towards promoting, growing, and developing MSMEs in the Philippines. Another provision was the creation of the Small Business Guarantee and Finance Corporation (now called the SB Corporation), which was charged with the primary responsibility of implementing comprehensive policies and programs to assist MSMEs in all areas including, but not limited to, financing and information services, training, and marketing. Thirdly, all lending institutions, public and private, were required to set aside at least 8% of their total loan portfolio for micro- and small enterprises and at least 2% for medium enterprises. Lastly, a six-year development plan for MSMEs was required to be prepared by the Department of Trade and Industry to form part of the Medium Term Philippine Development Plan to be implemented by the government [19]. The Magna Carta Law, if implemented fully, would enable great progress in entrepreneurial activity and economic development. Unfortunately, this did not happen. Banks could be exempted from the loan portfolio requirement by buying a certain amount of treasury bills of the Philippine Central Bank (BSP). The council to develop the MSME sector rarely met and did not initiate major programs. The SB Corporation, as a funding institution, could not embark on a major collateral-free lending program, which was what the micro- and small entrepreneurs needed. As a guarantee institution, they were not able to guarantee loans, which commercial banks would not issue due to insufficient collateral.

A second law that could have benefitted a lot of micro- and small enterprises was the Republic Act 9178, the Barangay Micro Business Enterprises (BMBEs) Act of 2002, which provided incentives to micro-enterprises registered under the law, through income tax exemption, minimum wage law exemption, and providing a special window for financing,

production, technology, management training, and marketing assistance. Unfortunately, once again, this law was not widely disseminated, and registration was made extremely difficult both by local governments and the Department of Finance that was, in principle, against tax exemptions.

Dr. Velasco exposed the government's lack of focused and serious effort to promote and nurture entrepreneurship. She believes that the government has not widely disseminated the laws and, moreover, has not implemented them with resoluteness.

Dr. Velasco emphasized the need for the government to nurture the business community by having a long-term economic development plan with the following two properties:

1. Determined through national consensus; and
2. Implemented with policies and programs, and backed up by the political will of succeeding governments, regardless of personalities [3].

Support by government line agencies: The Bureau of Micro Small and Medium Enterprises (BMSMED), under the Department of Trade and Industry (DTI), is the primary body responsible for supporting and developing entrepreneurship. During a visit with Jerry Clavesillas, officer-in-charge of BMSMED, the author was handed a list of activities that the bureau was engaged in for promoting the MSME sector. Foremost among these were coordinating with the Department of Interior and Local Governments (DILG) to streamline the procedures for registering and licensing new businesses, and liaising with the Department of Science and Technology (DOST) to increase the efficiency and productivity of these enterprises. Related to the second objective, DTI recently launched a Shared Service Facility (SSF) project for nine priority industry clusters to provide common service facilities for these clusters.

Critical evaluation of government support: Unfortunately, the national government has not prioritized the promotion and development of entrepreneurship in the country, neither has it nurtured business development and inclusive economic growth. There has been no real long-term economic plan that has survived changing governments. In the cases mentioned above, we see good intentions enacted into laws, but not effectively implemented by the executive arm of the government.

The Department of Trade and Industry, the foremost agency for the development of economic activity, has one of the smallest budgets among the ministries, and more than 80% of its budget goes to staff salaries and regular operating expenses. Therefore, there is

no adequate fund to address the needs of the MSME sector. In stark contrast, billions of government funding has gone into the pockets of senators and congressmen in bogus projects purported to aid the poor and distressed, as recent scandals have revealed.

Fortunately, through dedicated individuals, NGOs, international aid, and development agencies, civil society has played an impressive role in addressing the needs of micro-entrepreneurs in what is still a largely factor-driven economy.

International Agencies for Development

While there are a number of international agencies and foreign NGOs funding livelihood projects to alleviate poverty, due to limited space, this paper will focus on the United States Agency for International Development (USAID) and one of its current pilot projects.

The Investment Enabling Environment (INVEST) Project is a two-year pilot project funded by USAID, later renamed the Cities Development Initiative (CDI), which is based on a new approach. The CDI follows a development approach that works strategically in selected Philippine cities. This initiative is built on the premise that economic growth and job creation are closely linked to urban development, where cities act as engines of economic growth. CDI seeks to promote economic growth outside of Metro Manila to disperse economic opportunity throughout the Philippines [20]. USAID selected three second-tier cities in each of the main island groups: Batangas (Luzon), Iloilo (Visayas), and Cagayan de Oro (Mindanao). Working with local government officials headed by their mayors, the project sought to establish two main objectives:

1. Simplify, shorten and streamline business registration procedures, obtain mayors' permits to transact business, and project customer-friendly environments for business people; and
2. Establish an investment planning and promotion office in the city to stimulate more investments from within and outside the city.

On a national level, the government has been working with INVEST to simplify the business registration process. After gaining cooperation from local government officials and making the process much easier, total business registrations for the month of January 2013 increased by 84% for the three cities. How much of this represents an increase in business start-ups is still being evaluated and will be published. Ms. Ofelia Templo, the project manager, is nevertheless quite sure that there has been a sizeable increase in new businesses in these three cities [21].

Philippine Non-Government Organizations

Micro-finance institutions: In the Philippines, government figures indicate that microfinance now reaches seven million individuals through 500 microfinance institutions (MFIs) with a combined portfolio of PHP12 billion (USD300 million). The microfinance industry also directly employs about 35,000 people and an additional 1,400,000, indirectly, through the micro-enterprises financed by the industry [22]. CARD NGO, the largest MFI, reaches out to 920,020 clients with a loan portfolio of PHP3.3 billion, while ASA Philippines has 718,310 clients with loans outstanding of PHP3.0 billion [23].

Although micro-finance has played an important role in poverty reduction, many of the rural poor, particularly those in agriculture, have yet to be reached. The majority of micro-finance funds have gone to urban areas in the richest part of the country, in stark contrast to the poorest provinces. Thus, micro-finance has so far been an urban phenomenon linked largely to retail or trading micro-enterprises. As 70% of the poor in the country live in rural areas, the challenge for micro-finance is reaching this population.

A growing number of MFIs have latched on to the trend of providing services beyond micro-credit, including micro-insurance, microhousing, and business development services (BDS). This trend reflects a growing sensitivity to client needs as MFIs experience success in repayment rates. Thus, microfinance is evolving into microenterprise development, which combines financial and non-financial services in helping the poor integrate more fully into the formal economy [22].

Graduated micro-finance institutions: Micro-finance institutions are restricted by Philippine banking laws from receiving deposits, and thus do not enjoy the additional revenue-generating instruments of rural banks. However, several MFIs have managed to grow and acquire rural bank status, while some rural banks have begun serving the micro entrepreneur market.

In 1987, CARD NGO acquired a rural bank license from the Bangko Sentral ng Pilipinas (BSP), the Philippines Central Bank, and acquired an ailing rural bank in 2008. The new bank was renamed CARD SME Bank to service the credit needs of enterprises that had graduated from the micro level, which were borrowing loans of PHP5,000–PHP100,000 and above. This level of borrowers is also underserved, as the risks are greater to the lender and more intensive monitoring, mentoring, and training are required. This is the segment Dr. Velasco has termed the “missing middle.”

Most micro-finance institutions are very wary of serving the needs of the "missing middle." Rural banks, however, have a better capability to handle these kinds of loans due to various income streams that can compensate for any exigencies.

Entrepreneurship and GEM Economic-Level Analysis

As defined by GEM, the Philippine entrepreneurial class can be described as predominantly factor-driven. Most of the entrepreneurs in the country became so out of the need to earn a living: jobs are scarce and there are many people looking for work.

The labor laws of the Philippines are patterned after those of the USA and Western Europe. Many of these labor laws are more suited to a well-developed, industrialized country than to an under-developed country with a large labor surplus. Organized labor accounts for only a small minority of the workforce but has successfully intimidated previous governments to mandate large increases in the minimum wage. The result is that small entrepreneurs following the law find themselves uncompetitive in the world market, where lower-priced goods produced by lower-cost labor countries predominate.

Hence, referring back to the List of Establishments from the NSO mentioned earlier, we see the types of entrepreneurial activity that predominate in the Philippines (Table 3). It should be noted that this does not include farmers and fishermen, as they do not usually have employees.

Table 3. Breakdown of micro businesses by industry – 2011

Industry	Number
Agriculture, forestry, and fishing	3,559
Mining and quarrying	356
Manufacturing	100,837
Electricity, gas, steam, and air conditioning supply	212
Water supply, sewerage waste management	533
Construction	1,602
Wholesale and retail trade, motor vehicle repair	362,159
Transportation and storage	4,243
Accommodation and food service activities	93,690

(continued on next page)

Industry	Number
Information and communication	18,085
Financial and insurance activities	23,435
Real estate activities	5,094
Professional, scientific, and technical activities	16,287
Administrative and support service activities	15,884
Education	8,371
Human health and social work activities	29,145
Arts, entertainment, and recreation	12,163
Other service activities	47,595

Source: National Statistics Office [2].

BASIC CONCEPTUAL FRAMEWORK: ENTREPRENEURSHIP AND THE NATIONAL ECONOMY

The relationship between entrepreneurship and the national economy is one of direct proportionality: the greater the entrepreneurial activity in society, the greater the growth and progress of the national economy and the country's people. GEM has developed a conceptual framework that accurately and comprehensively captures this relationship in detail. However, the author feels some additional factors should be included in this framework if entrepreneurship is to be stimulated to grow.

For there to be a vibrant interaction between entrepreneurship and the national economy, there must be focus and determination on the part of the national and local governments to encourage, provide assistance (technical and financial), and facilitate meeting government requirements to nurture these start-ups to higher levels of development where possible. Once these enterprises reach the large company category, the government still has to provide support in the way of making trade agreements with other countries, finding export markets, etc.

The best indicator of this focus and determination is whether the government has one coordinating office under which all activities fall, and is adequately funded. Additionally, the government should identify the areas in which the country has a competitive advantage, i.e., which sectors. If none are identified, effort should be put into developing

one. Finally, there seems to be too much focus on promoting start-ups after the GEM model but not enough on how to nurture and grow start-ups into SMEs and finally into large established firms (e.g., by provision of long-term capital at reasonable rates, common R&D facilities, support industries, etc.).

The GEM framework does not differentiate between countries' differing levels of economic development (factor-driven, etc.). Start-ups springing from financial necessity (factor-driven) have different needs and capabilities compared to those based on desire for improvement or fulfillment (innovation-driven). Nurturing each type will require different specific approaches: more intensive assistance and monitoring/mentoring for the first; more focus on easing regulatory requirements for the latter, as well as honing their competitive advantage.

Rather than pushing the donkey to the water (start-ups), emphasis should be put on growing established entrepreneurs to expand and become rich, thus inspiring potential entrepreneurs with their success (pulling).

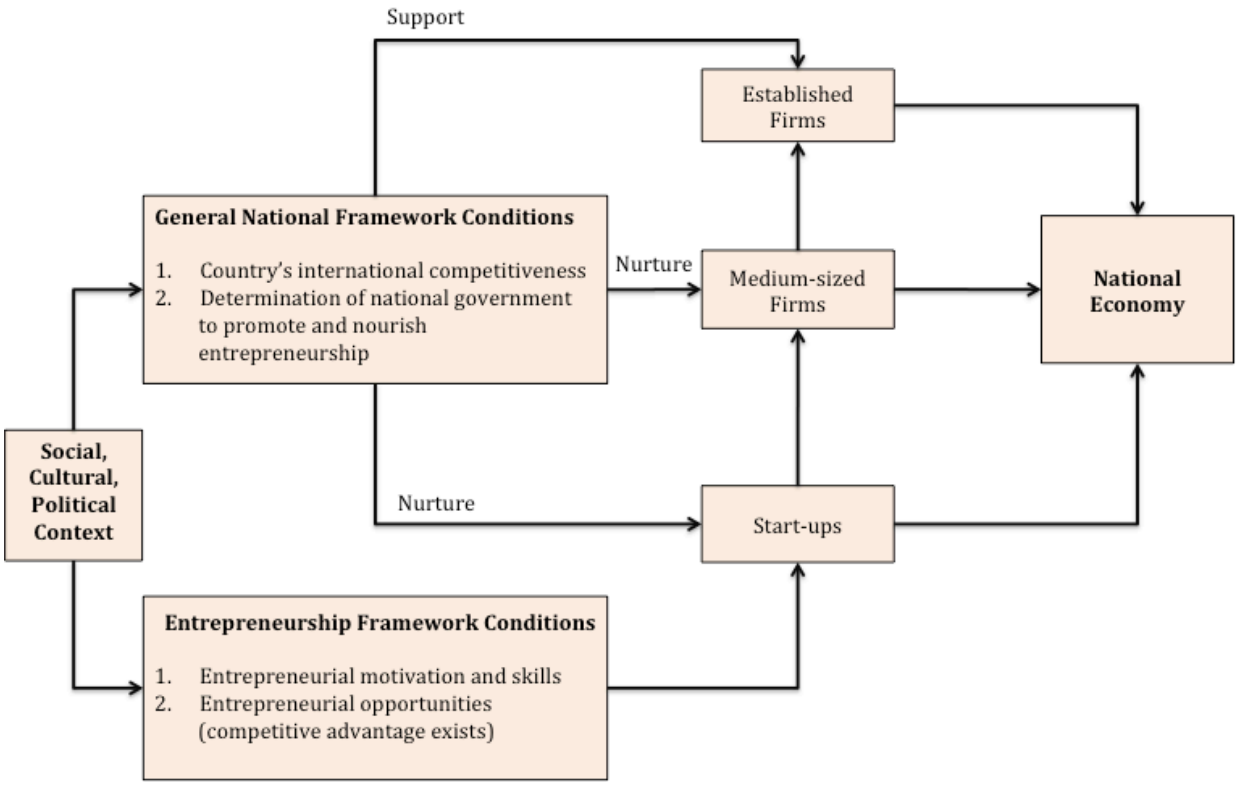

Figure 4. Suggestions to improve the GEM framework.

ENHANCING ENTREPRENEURSHIP AND MEETING ECONOMIC GROWTH OBJECTIVES

Inclusive Economic Growth

Under the present administration, the Philippine economy has outperformed most of the economies in Asia and the world, with GNP growing at 7% per annum. Yet the unemployment situation, one of the worst in the Asian region, has not significantly improved. Therefore, the government is now focusing on achieving an inclusive growth rate, meaning that growth must be experienced even at the bottom of the economic pyramid. Furthermore, there must be an overall improvement in the quality of life for the entire population.

Enhancing Micro-Entrepreneurship

In pursuing this objective, the government must focus on enhancing micro-entrepreneurs. These individuals, if we include farmers and fishers, account for the vast majority of the population and their major constraint is obtaining affordable credit for production inputs. Enhancing growth would mean removing the obstacles that hinder these micro entrepreneurs from growing into small enterprises, from small enterprises into medium ones, and finally into large enterprises where possible.

The government must identify which of the listed 750,000 micro-enterprises have the potential to grow. They must be encouraged to train, study, obtain management capabilities, and acquire better technology to expand, as well as provided the necessary financing. Even if the growth potential looks limited, the government can help improve the consumption expenditure pattern of the poor to help them raise and educate their children for a better future.

The experience of the largest micro-finance institution in the country found that prior to intervention in a poor community, only 20%–30% of the families could send their children to school. After providing credit assistance to the community, 80% of the community could send their children to school [7].

ISSUES AND CHALLENGES IN ENHANCING ENTREPRENEURSHIP

In General

To enhance entrepreneurial activity in the Philippines and new entrepreneurships, there must be a serious long-term national economic development plan with entrepreneurship as an essential and vital component. At present, there is no national measurement for entrepreneurial activity, and this reflects the level of inattention being given to this important activity.

Financing

Professionals and entrepreneurs in the Philippines interviewed in the GEM survey of 2006 regarded financing as the most limiting factor in the entrepreneurial environment and further cited the lack of financial resources and access to institutional credit as the main reasons for these difficulties [1].

Since most of the business establishments in the Philippines are micro-enterprises (90.6% of total), focus on the part of the government and civil society should be on providing them with affordable financing.

Financing agricultural and agri-based micro-enterprises: Due to the great success of micro-financing institutions in the Philippines over the past two decades, industry experts say that the small retail subsector (mostly located in urban areas) now has adequate and reasonably priced financing resources. The focus should now be on the agricultural and agri-based micro-enterprises [24]. Although 70% of the poor reside in rural areas, the agriculture sector has consistently lagged behind in development. One essential element of agricultural/rural development is access by poor farmers and rural households to affordable financial services. Nearly two-thirds of rural persons borrow from usurious informal sources.

Micro-finance is looking for ways to foray into the rural areas. Although it has great potential to close the funding gaps in rural finance, MFIs are ill-equipped to handle the risks of agriculture. Because of the different nature of micro agricultural projects, Mr. Dan Songco, CEO of PinoyME Foundation (financial consultants to MFIs), advocates the use of a financial value-chain model [24]. This model identifies different types of financial service providers at each link in the chain to mitigate risk. A critical point in this regard is creating

an effective system of insuring against crop losses due to bad weather, while funding it adequately has been identified as the main issue.

Financing small enterprises: Most providers of micro-finance focus on loans averaging PHP5,000 (USD120) to many micro-entrepreneurs, and use the law of numbers to ensure very high repayment rates, typically 99%.

Dr. Velasco (GEM coordinator) is consultant to one of the few NGOs specializing in lending to small firms, which lack the traditional real estate collateral required by the formal banking sector. Velasco's NGO provides loans ranging from PHP100,000 (USD25,000) to PHP500,000 (USD125,000).

Manuel Quezon founded the Foundation for Enterprise Management Innovations, Inc., (FEMI; http://femiinc.wordpress.com/) in 1991 to provide credit to this unserved subsector of the SME market. Few NGOs go to this level of lending because the risk of even one borrower defaulting could result in serious financial losses to the entire organization: the law of numbers does not apply here. However, the next level of borrowers, the small industries, have a greater potential for employing poverty-stricken persons who were unable to receive a proper education. These "middle" entrepreneurs need additional working capital, equipment, or fixed assets to expand or modernize their operations, but cannot access the formal banking sector or even the government's financial institutions.

FEMI only deals with enterprises that have existed for a minimum of 1–3 years, rather than start-ups. This ensures that the enterprises have achieved some sort of market acceptance and survived the rigors of infancy. Dr. Velasco stated that in spite of the higher risk, FEMI has managed to maintain a repayment rate of 98% over the years. She explained how this was achieved: at the very outset, FEMI recognized that it had to combine its lending operations with a very intensive training, monitoring, and mentoring package to ensure that the money was spent effectively and would be repaid [25].

Business registration and securing business permits: The experience from the USAID project INVEST shows how simplifying government requirements can greatly accelerate the start-up of new businesses. There is therefore a need to expand this project to cover more cities, as has been done for the initial three, and stimulate new business start-ups.

RECOMMENDATIONS FOR MORE EFFECTIVE APPROACHES AND POLICIES TO ENHANCING ENTREPRENEURSHIP

Approaches

Long-term development plan for entrepreneurship: The six-year development plan for MSMEs, as mandated by the Magna Carta for MSMEs, will be incorporated into the 6-year Philippine Development Plan. For maximum effectiveness, the plan should be implemented by a single agency and adequately funded. This plan should be the product of consultative meetings with all the stakeholders, including the MFIs and rural banks, as well as cooperatives and micro entrepreneur groups. The plan should also include metrics for evaluating the success or failure in implementing the plan on a regular and frequent basis.

USAID approach – urbanization for economic growth: The approach adopted by USAID to target economic growth in the countryside was to anchor growth in selected second-tier cities all over the Philippines. This is a novel and effective approach for several reasons:

- It highlighted that being focused and effective with existing limited resources was more effective at promoting faster business processing requirements and investments than nation-wide campaigns; the latter spread attention out too thinly.

- INVEST managed to inspire people at the local government level to develop their city's economies and provide business people with attentive customer-oriented services as the INVEST project has managed to do.

- One can see the impact that the opening of SM malls (the largest mall developer in the Philippines) has had in these second-tier cities. It has raised the quality of services and products made available to the neighboring rural areas, and broadened the market economy throughout the country. It has also helped make supply chains more efficient, with businesses such as Jollibee Foods developing in league with farmers' groups.

Focus on nurturing existing entrepreneurs over start-ups: Existing entrepreneurial firms have already proved their courage by diving into uncertainty. Rather than expanding resources for additional people to take the plunge, resources should be channeled to ensure that existing entrepreneurs are given every opportunity to succeed and to grow.

Success stories from these existing entrepreneurs will inspire those still thinking about it to take the plunge.

The key factors that hinder existing entrepreneurs are lack of credit at affordable rates, management training, mentoring, and lack of technology upgrading. The first three factors are being addressed by some NGOs, but the last one is outside the limits of their skills set. A thorough study of existing micro-entrepreneurial firms should be conducted, industry groups should be clustered and finally, all four aspects of the sector should be evaluated and solutions found for any identified issues.

The Department of Science and Technology has a project called the Small Enterprise Technology Upgrading Program (SETUP), intended to provide assistance to small industries in upgrading their technology, including financial assistance to acquire modern equipment [26]. However, this project has a very limited budget and is more focused on small, rather than micro-businesses. It should be expanded.

Expanding credit assistance and management support to small (not micro) businesses: Because of the more intensive monitoring, training, and mentoring of its borrowers, FEMI cannot rapidly expand its lending operations. Currently, it has a staff of 10 and a loan portfolio of approximately PHP30 million. Dr. Velasco estimates a maximum growth rate of 10% per annum in terms of increasing its lending staff who have acquired their special skills through "osmosis."

As for financial resources, FEMI was financed through the limited personal funds of its founders and a Belgian NGO. FEMI intends to research the needs of graduating micros, develop modes of assistance, and design appropriate management tools to assist entrepreneurs in running their businesses. After, it plans to publish, share, and circulate these studies and results for other interested parties to replicate whatever successes FEMI may have. This way, FEMI can expand its reach and impact more effectively [26].

Franchising in smaller cities: Greater economic growth in the countryside can be achieved by followed the USAID approach – national mall chains expanded and promoted the franchising of local brands to wide market acceptance amongst rural folk.

GOVERNMENT POLICIES

Taxation: As MFIs become more successful lending to micro-entrepreneurs, there is a danger that the government will decide to tax them, especially with the outbreak of scandals involving fake NGOs. This measure should be strongly opposed.

Incentives: To encourage the entry of MFIs and rural banks into unserved communities in rural areas, Aris Alip has suggested that the government provide MFIs with proven track records, a two-year community development subsidy at a total cost of PHP2 million per community. The largest factor in the CARD credit assistance program's success was developing a solid foundation in building the community. The personal encounter between borrower and lender on a weekly basis, and the trust that is built over time is CARD's strongest suit.

Credit bureau: MFIs have expressed the need for a national credit bureau that serves both MFIs and government agencies. This will address a growing problem in areas where there are more than adequate numbers of credit providers and where borrowers have begun to borrow from more than one lender, thus assuming more debt than necessary.

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THAILAND

Dr. Thanaphol Virasa

ENTREPRENEURIAL SITUATION IN THAILAND

In Thailand, as well as in other emerging economies, small and medium-sized enterprises (SMEs) and entrepreneurship are fundamental drivers of the national economy. SMEs and entrepreneurship enhance the exploitation of available resources, create innovation, and provide jobs and income for large numbers of people in the country. Since 2002, Thailand has been reported as having one of the highest levels of entrepreneurial activity in the world, as measured by the Global Entrepreneurship Monitor (GEM) total early-stage entrepreneurial activity (TEA) indicator [1].

Thailand's national teams participated in the GEM Project in 2002, 2005–07, and 2011. The adult population survey (APS) data were annually collected from 2,000 adults (defined as those aged 18–64 years) across all regions in the country. The standardized data were used to measure entrepreneurial activity at the early stage through to the established stage across, to assess perception and attitudes of the adult population to entrepreneurship. Thailand had an average TEA of 20.5% from 2002 to 2007. From the 2011 GEM study, Thailand had a TEA of 19.5% among the adult population actively engaged in starting and operating new businesses. According to the OECD, Thailand's TEA rate is above average (14.1%) among efficiency-driven economies [2].

The TEA rates by gender are shown in Table 1. Thailand's female TEA rates assert that Thailand has a high rate of female entrepreneurial activity with a relatively small gender gap. Thailand has roughly an equal proportion of female and male entrepreneurial activities. This is extraordinary among GEM-observed economies. The rates of established business ownership have continuously increased over the past seven years, from 14.1% in 2005, to 17.4% in 2006, 21.3% in 2007, and 30.1% in 2011.

Table 1. Entrepreneurial activity in Thailand (2002, 2005–07, and 2011)

	2002	2005	2006	2007	2011
Nascent entrepreneurship rate	–	9.7	4.1	9.4	8.3
New business ownership rate	–	13.1	11.5	18.6	12.2
Total early-stage entrepreneurial activity	18.9	20.7	15.2	26.9	19.5
TEA (male)	19.3	22.2	16.2	22.8	18.0
TEA (female)	18.5	19.3	14.2	26.9	21.0
Established business ownership rate	–	14.1	17.4	21.3	30.1

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	2002	2005	2006	2007	2011
Discontinuation of businesses	–	–	–	3.4	4.5

Source: Global Entrepreneurship Monitor Thailand Reports 2002, 2005–07, 2011 [3–6].
Note: TEA, total early-stage entrepreneurial activity.

The results of the 2007 GEM study also show that Thai entrepreneurs operate and serve domestic rather than international markets. Consumer-oriented services, such as personal services, accounted for 64% of the TEA and 50% of established business activities. Transformative sectors, which are manufacturing, retail and wholesale trade, hotels, and restaurants, accounted for only 18% of the TEA [5].

The GEM study revealed that most entrepreneurial activities in Thailand do not focus on innovation. About 93% of entrepreneurs (both new and established) offer products or services that are already known by customers. Approximately 90% of Thai entrepreneurs choose to operate their businesses in competitive markets. In this ituation, entrepreneurs have difficulty differentiating their products and services to attract customers.

The Office of Small and Medium Enterprises (SME) Promotion of Thailand, is tasked with promoting SMEs and entrepreneurship in Thailand. The office measures SME activity by gathering data and information from various public sources. They found that in 2009, Thailand had 2.9 million SMEs, accounting for 99.5% of total enterprises in the country.

Thailand formally defines SMEs in the SME Promotion Act of 2000 and ministerial regulation of 11 September 2002, and furthermore categorizes them by the number of employees and the amount of fixed assets owned by the enterprise. Micro-enterprises are included in the small enterprise category. Table 2 shows the definition of SMEs categorized by size and economic sector [7].

Table 2. Definition of SMEs by size and economic sector

	Number of employees		Fixed assets (million baht)	
	Small	Medium	Small	Medium
Production sector (includes manufacturing, agriculture, mining)	50 or less	51–200	50 or less	>50–200
Service sector	50 or less	51–200	50 or less	>50–200
Trade sector (wholesale)	25 or less	26–50	25 or less	>50–100
Trade sector (retail)	15 or less	16–30	30 or less	>30–60

Source: Thai SME Promotion Act BE 2543 [7].
Note: SMEs, small and medium enterprises.

Enterprise establishment (birth or entry) and "dissolution" (exit or death) in Thailand, as registered and published by the Department of Business Development, Ministry of Commerce, are presented in Table 3. From the vibrant entrepreneurial culture and relatively high levels of entrepreneurial activity measured in the GEM study, it might be expected that Thai SMEs would exhibit a high level of dynamism and churn. However, entry and exit rates of registered enterprises are actually quite low compared with the level of entrepreneurial activities in the country. Thai entrepreneurs who discontinued their business cite problems in obtaining finance as their main reason. In other Asian countries, such as the Republic of China (ROC) and India, entrepreneurs tend to cite "competitive pressure" as the main reason to discontinue business activity. In addition, the gross birth rate of registered SMEs in Thailand has declined steadily over the past 10 years from 2.1% of 1.65 million in 2002, to 1.5% of 2.8 million in 2008, and 1.4% of 2.9 million enterprises at present.

Table 3. Establishment and dissolutions of SMEs in Thailand, 2006–10

	2002	2003	2004	2005	2006	2007	2008	2009	2010
Births	35,691	44,000	47,643	49,602	46,881	40,723	42,746	41,220	50,891
Deaths	28,065	29,584	24,815	26,575	19,890	21,636	27,206	63,007	33,336
Net births	7,626	14,416	22,828	23,027	26,991	19,087	15,540	–21,787	17,555
Total SMEs (million)	1.646	–	2.210	2.249	2.287	2.375	2.836	2.900	–
Gross births (as % of SMEs)	2.17	–	2.16	2.20	2.05	1.71	1.51	1.42	–
Net births (as % of SMEs)	0.46	–	–	1.02	1.18	0.80	0.55	–0.75	–
SME growth (% per annum)	–	–	–	1.76	1.66	3.86	19.41	2.27	–

Source: Department of Business Development, Ministry of Commerce, and the Office of Small and Medium Enterprises Promotion 2009 White Paper [8].

Note: As noted by OSMEP, the sudden rise in deaths of SMEs in 2009 was a result of the Department of Business Development clearing inactive enterprises from its database.

Attitudes and Perceptions Towards Entrepreneurship

In Thailand, the perception of the adult population towards entrepreneurial activity is both strong and positive. From the results of the 2011 GEM survey, 77% of the Thai adult population stated that entrepreneurship is a good career choice, and 79% perceive successful entrepreneurs as having a high status (Table 4). However, 55% of the Thai adult population stated that fear of failure would prevent them from starting a business. The reasons for quitting their businesses are lack of profitability, followed by problems in getting finance, and personal reasons.

However, while 70%–80% of the adult population expressed a willingness to start new businesses, only 43% are confident that they have the requisite skills and capability to do so. It should be noted that the entrepreneurial intention rate is only 26%, and much lower than the willingness rate to start a new business. This implies that most Thai entrepreneurs perceive themselves as unable to start and grow a business.

The result of these perceptions is that most of the ventures from the majority of Thai entrepreneurs are small and mainly in the economy's consumer service sector. Examples of entrepreneurial activity in the consumer services sector include:

- Small retail outlets;
- Outlets for food and other consumables; and
- Personal health and beauty services such as spas, hairdressers, and healthcare specialists.

There also seems to be extensive activity in self-employment on commission-only contract terms, for example through the direct selling of consumer household products, insurance services, and other similar network marketing ventures.

Table 4. Entrepreneurial attitudes and perceptions in Thailand in 2005–07 and 2011 (%)

	2005	2006	2007	2011
Perceived opportunities	18	20	19	40
Perceived capabilities	44	34	43	43
Fear of failure	50	54	42	55
Entrepreneurial intentions	–	–	21	26

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	2005	2006	2007	2011
Entrepreneurship as a good career choice	87	84	87	77
High status to successful entrepreneurs	75	74	82	79
Media attention for entrepreneurship	83	82	82	84

Source: Global Entrepreneurship Monitor Thailand data 2005–07, 2011 [4–6].

REPRESENTATIVE ENTREPRENEURIAL START-UPS IN THAILAND

Each of the entrepreneurs described in the following short case studies took their leaps amidst economic and political uncertainty. They broke the mold by starting business ventures differently from most Thai entrepreneurs, facing difficult business problems and making hard decisions to overcome these problems with resilience. Two of the entrepreneurial ventures (Human Touch and I+MED) succeeded by developing products new to the Thai market; while Harnn and Thann developed products that were new to international consumers.

Human Touch

Human Touch is a design and marketing company that was founded in 1998 by three advertising copywriters. The starting point of the venture came when they were discussing their business experiences as copywriters – they usually played with words for creating campaign slogans or advertising materials for customers. In the advertising industry, people use the phrase "human touch" to assess whether print advertising "touches" or reaches human feeling.

At first, the three founders did not quit their jobs to set up their new venture. Rather, they approached it as a hobby. After a while, they realized it was something they loved and that working together as entrepreneurs could be their future. To realize this vision, they needed to nurture their ideas, grow their business, and strive to make it better. With concerted effort, this is what they did. Only when they were sure of success did they quit their day jobs to become full-time entrepreneurs.

Their first product idea was Think Glass, a collection of glassware that uses clever wordplay and design. For example, looking at a glass from different angles alters the meaning of the words printed on the transparent surface. The founder-entrepreneurs

used their first batch of Think Glass products to test the market potential. The response was excellent, especially from foreign buyers who appreciated the elegance of the design coupled with the perceived value for money.

Figure 1. The "Think Glass" product by Human Touch.
Source: Global Entrepreneurship Monitor Thailand Report 2007 [5].

To follow up on this idea, Ms. Zwani Chaviwan, co-founder of Human Touch, attended a training course conducted by the Department of Export Promotion (now the Department of International Trade Promotion) and the Institute of SME Development. There, a government officer recommended she set up a registered company in order to gain a higher profile in the international business environment. Next, the company attended the Bangkok International Gift Fair to develop business connections and to attract more orders from overseas clients. Most of the company's customers are foreign buyers who appreciate affordable yet attractive designs. Following their export success, the founders decided to launch a lifestyle shop in Thailand as a showroom for their products. While retaining the range of glassware, the company recently expanded its product line to include pillows, office accessories, children's toys, and fiberglass chairs.

I+MED Laboratories

Founded in 2001 by two MBA graduates, I+MED Laboratories is a successful technology venture. It is a Thai medical supply company engaged in the development and manufacture of high-quality rapid diagnostic tests for pregnancy, fertility, infectious diseases, and drug abuse. The company focuses on three business segments:

1. Diagnostic products;
2. Medical supplies; and
3. Bio-business services.

Its manufacturing facilities are located on the Eastern Seaboard Industrial Estate in Rayong province. The company's mission is: "To be the leader of bio-business companies in Southeast Asia."

The two founding entrepreneurs met while working together on a business plan project for their MBA class. They came from differing backgrounds: Mr. Komkrit Sajjaanantakul's professional background is in architecture, while Mr. Witune Arayapipatkul's background is in medical technology. Notwithstanding these differences, they shared the same vision for the future of biotechnology in Thailand and decided to pursue their dream together. Acknowledging his lack of knowledge in the industry, Komkrit spent a lot of time studying basic chemistry as well as global trends in the biotechnology sector. After thorough preparation, the two entrepreneurs chose the niche area of in-vitro diagnostics within the healthcare industry.

Figure 2. Production facilities of I+MED laboratories.
Source: Global Entrepreneurship Monitor Thailand Report 2007 [5].

Mr. Komkrit and Mr. Witune started their company in 2001 by developing a pregnancy-detection test kit. The development of this, their first new product, failed for two reasons: firstly, the specialized chemical solution for the test kit proved to be extremely costly; secondly, there were differences in sensitivity requirements for the tests as per the Thai Food and Drug Administration (FDA) and the World Health Organization (WHO). Consequently, the entrepreneurs could not continue developing their product to the next stage. In fact, in Thailand there is no certified body for international standards such as the European conformity mark (CE-Mark) for the European Union (EU), or the Food and Drug Administration (FDA) in the USA. The entrepreneurs next turned their focus from developing novel products to producing commodity products. They recruited a new staff member who also worked with a university professor as a research assistant. The entrepreneurs then established a collaborative partnership with the National Center for Genetic Engineering and Biotechnology (BIOTEC) network on a joint research project with a university professor at Chiang Mai University.

Recently, the company launched the Alpha Thalassemia diagnostic test kit, an innovative product for the global market, which enables I+MED to access international marketing channels. These channels can also support marketing strategies for other new products from Thai researchers in the future. Multinational biotechnology companies focus more on advanced technology equipment and facilities, and are less interested in designing and manufacturing diagnostic test kits for tropical diseases. Similarly, newly industrialized countries (NICs) such as Singapore, the ROC, and the Republic of Korea (ROK) tend to specialize in particular technologies. Singapore and the ROC focus on electronics, while the ROK specializes in stem cell research. Within the next two years, the existing patents on rapid diagnostic test platforms will expire. This will enable Thai companies to seize the opportunity to tap into these platform technologies and use them for developing new applications for diagnostic test kits.

Harnn & Thann

Founded in 1999 by two partners, Harnn & Thann began by producing rice-bran-oil soap under the name of Harnn Natural Home Spa. They now produce and distribute skincare, spa, and beauty products in more than 20 countries around the world. In Thailand, the products are distributed through 14 in-store outlets and through flagship stores, as well as premium spa services in leading department stores such as the Siam Paragon, Siam Discovery, and the Gaysorn Plaza. The company now employs more than 100 staff and grew by almost 20% in 2007.

The Asian financial crisis of 1997–98 greatly impacted many design companies in Thailand; most had little choice but to dismiss employees. Sensing the inevitable, other employees quit their jobs and sought new directions. Having quit his job, Mr. Vudhichai, a professional architect, joined a new business with colleagues to produce home furniture and home decorative products. However, he was not happy and decided to pursue his own interest in producing natural soap. He started his experiment in his mother's kitchen and later moved into his father's garage. His only employee was the family's maid.

Vudhichai's company started producing natural-based soap on a sub-contracting basis for leading department stores overseas. Sensing a growing trend, he filed a patent for rice-bran-oil soap and rice-grain-shaped soap. After gaining a better understanding of consumers and markets, Vudhichai developed his own products under the Fong brand. To build up brand recognition as a heritage brand, the 'Fong' brand was discarded and replaced by Harnn.

The first sales counter for Harnn's products was at the Zen Department Store in Bangkok. At that time, most Thai people did not fully accept natural skincare and spa products. Although his new products were well-received, in the first few years, Vudhichai had to spend most of his time educating Thai customers about natural extracts, essential oils, and aromatherapy. His experience of exporting his products to international markets provided Vudhichai with invaluable information. For example, he was able to recognize the emerging market trend for natural-based products and could start developing his company's own brands to compete internationally.

Figure 3. An example of Harnn's natural soap products.
Source: Global Entrepreneurship Monitor Thailand Report 2007 [5].

TREND OF SOCIAL ENTREPRENEURSHIP IN THAILAND

Social enterprises and social entrepreneurship are not new phenomena in Thailand. For many years, they have operated in the form of cooperatives, community savings banks, or community enterprises. According to the Thailand Social Enterprise Office (TSEO), there are about 116,298 enterprises that can be defined as social enterprises, 49% of which are local community enterprises and 98.4% are located outside Bangkok.

Social enterprise activities in each region are different based on geographical location, local culture, and abundance of national resources in the environment. For instance, community enterprises in the northern region focus on conserving local culture and helping minority groups through manufacturing handicraft products. In the northeast, the major problems are agriculture and poverty. Community enterprises in this region aim to create knowledge networks for the transfer of technologies such as organic fertilizers and multiple-crop farming.

Recently, the Thai government recognized the importance of social enterprises and their contribution to economic and social development. TSEO was established in 2010 and has operated under the First Master Plan for Promoting Social Enterprise Buddhist Era (BE) 2553–2557 (2010–14) [9]. The plan aims to develop social innovation networks and a model for sustainable development by focusing on six areas of business:

1. Organic farming;
2. Culture and community products;
3. Micro-finance;
4. Alternative energy and environment;
5. Health-related; and
6. Education.

ENTREPRENEURSHIP SUPPORT POLICIES

The Thai government has given high priority to SME development. After the establishment of OSMEP by the Ministry of Industry in 2001, many supporting measures were initiated and implemented over the past 12 years to stimulate new venture creation and local economic activities. More than 400 projects have been implemented under the SME Master Plan [10]. A summary of major projects and programs for promoting SME and entrepreneurship development in Thailand is presented in Table 5.

Table 5. Projects and programs for supporting SMEs and entrepreneurship

Projects and programs	**Description**
One Tambon-One Product (OTOP)	OTOP was originally based on the Japanese model of One-Village-One-Product (OVOP), which encouraged specialization in local communities to develop local and cottage industries. A budget of THB1 billion per annum was allocated and co-ordinated by the Office of Small and Medium Enterprise Promotion (OSMEP) from 2001 to 2010 to promote the use and application of local wisdom, strengthen the community to be self-reliant, and reinforce the process of local development.
New Entrepreneurs Creation (NEC)	The Department of Industrial Promotion has operated NEC since 2002. NEC provides training programs on business planning, managerial skills, advisory services, and access to market channels to support new start-ups and nascent entrepreneurs to get through the early stage of business.

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Projects and programs	Description
University Business Incubator (UBI)	UBI was developed in 2002 and coordinated by the Office of Higher Education Commission and Universities. The incubators provide mentoring and advisory services to stimulate and support university students, researchers, and innovators who expect to start new ventures from research outputs. Thirty-five incubation centers have been initiated and operate across all regions.
Information and knowledge	A database of Thai SME suppliers for 10 target industries: leather, textiles and garments, gems and ornaments, printing, tourism, furniture and handicrafts, beverages, medicines, herbs and medical supplies, crispy snacks, and processed seafood has been set up and used for OTOP.
Finance	The SME Bank was established in 2002 as an arm of the government policy for business development. The bank lends to OTOP, franchises, informal debts, and special sectors such as alternative energy businesses, agricultural processed products, and creative businesses. In 2009, the SME bank had extended loans totaling THB44 billion to about 25,000 SMEs or less than 1% of all SMEs.
Market access and development	OSMEP initiated four projects geared towards the ASEAN market to support SMEs to organize trade exhibitions and match compatible businesses: 1. The ASEAN SME Partnership Roadmap – ASEAN Design and Crafts Sourcing Hub; 2. SMEs Flying Geese; 3. SME Capacity Building: Winning for the ASEAN Market; and 4. The SME Consortium Network
Technology and innovation-Industrial Technology Assistance Program (ITAP)	ITAP is delivered and coordinated by the National Science and Technology Department Agency (NSTDA) of the Ministry of S&T through nine university networks across all regions. ITAP has three major aims: to increase the level of industrial technology development; build up SME technological capabilities; and stimulate technology development and R&D activities for SMEs in the manufacturing sector. In 2006–10, 1,841 projects were implemented, including process improvement and R&D projects.
Science Parks	The first Thailand Science Park (TSP) was initiated by NSTDA and began operating in 2002. TSP provides research facilities, linkages between industry and national research institutes, and soft loans and incubations for stimulating innovation and technology ventures. The first phase was completed in 2007. The second phase is to establish northeastern and southern science parks, and create four technology business incubators.

Source: Office of Small and Medium Enterprises Promotion 2007 [10].
Notes: ASEAN, Association of Southeast Asian Nations; ITAP; Industrial Technology Assistance Program; NEC, New Entrepreneurs Creation; NSTDA, National Science and Technology Department Agency; OSMEP, Office of Small and Medium Enterprise Promotion (OSMEP); OTOP, One Tambon-One Product; OVOP, One Village-One Product; TSP, Thailand Science Park.

In order to increase the effectiveness of the third SME Promotion Master Plan (2012–16), OECD and OSMEP evaluated the key issues and policies for SME and entrepreneurship in Thailand, and proposed a framework for assessing and managing a portfolio of policies and programs for the Thai government [2, 11]. This framework was very useful

in clarifying where policy efforts were being focused, and for comparing results across activities.

It can be seen that the policies for promoting start-ups focus on education and training. The New Entrepreneurs Creation (NEC) project is the only major program for early-stage economic development. The existing measures mainly support established enterprises rather than new ventures.

The NEC Project increased the capacity for entrepreneurship for 60,473 individuals willing to be entrepreneurs or wishing to expand their existing businesses, and also build up knowledge networks among 73 participating units from academic institutes, industry associations, and financial institutes. The government consistently allocated a budget of THB120–200 million per year from 2002 to 2011. The project provides seven modules of training on basic business knowledge and entrepreneurial skill development, such as business-plan development, advice on enterprise formation, and field trips. The project can support 11,728 cases of newly established firms and business expansions, and create a total investment of THB19,639 million. It should be noted that in 2011, the College of Management at Mahidol University reviewed the NEC project's performance for the period of 2002–10 for the Office of Industry Promotion, Ministry of Industry. They suggested new supporting measures and key performance indicators for the project to develop new supporting schemes and prepare for the next stage.

Government support for entrepreneurial start-ups is mostly related to capacity-building and development programs [12]. The related support programs include the NEC Project, the Entrepreneurship Development Program, the Consultancy Fund, and the University Business Incubators Program, which were implemented by academic professors and government officers. The Department of Industrial Promotion, Ministry of Industry played an active supporting role for more than 20 years, while receiving only a limited amount of the annual budget. The content of the programs mainly focused on basic business training and management for small businesses, rather than high-impact business ventures, particularly technology-based ones.

ENTREPRENEURSHIP AND ECONOMIC LEVEL

In 2011, the WEF and GEM classified Thailand as an efficiency-driven economy. ADB reported that the total population of Thailand in 2012 was 67 million, and the annual population growth rate was 0.8%. There are 22.8 million people or 34.1% of the total population living in urban areas [13]. In the labor market, 41.7% of the total participate in the agricultural sector, 37.3% in the services sector, and 21.0% in the industrial sector. The unemployment rate has remained at a low level (1.5% in 2009, 1.0% in 2010, and 0.7% of the labor force in 2011–12) compared to the 3%–10% rate in other Asian countries. The real GDP growth rate was 6.4% in 2012. GNI per capita accounted for USD4,440 in 2011, which is classified by OECD as that of a middle-income country. Finally, the inflation rate was 3.0% in 2012 [2, 14].

Table 6. Thailand's economic indicators (2008–12)

	2008	2009	2010	2011	2012
GNI per capita Atlas method (USD)	3,640	3,730	4,150	4,440	–
GDP growth (% change per year)	2.5	–2.3	7.8	0.1	6.4
CPI (% change per year)	5.4	–0.9	3.3	3.8	3.0
Unemployment rate (%)	1.4	1.5	1.0	0.7	0.7
Fiscal balance (% of GDP)	–1.3	–4.8	–2.7	–1.3	–4.1
Export growth (% change per year)	15.9	–13.9	27.1	14.3	3.2
Import growth (% change per year)	26.7	–25.1	37.0	24.9	7.8
Current account balance (% of GDP)	0.5	8.3	3.1	1.7	0.7

Source: ADB country report 2013 [13].
Notes: CPI, consumer price index; GDP, gross domestic product; GNI, gross national income.

From 1999 to 2007, Thailand rapidly recovered from the Asian financial crisis of 1997–98, enjoying robust economic growth, with real GDP per capita reaching nearly one-fourth of the OECD average by 2008. A highly competitive goods and service market, flexible labor market, and a vibrant entrepreneurial culture supported the country's resilient economy [2]. However, difficult international economic conditions following the economic crisis of 2007–09, the worst flooding in history in 2011, and political disturbances have undermined Thailand's economic growth performance.

The GEM and OECD results show that the high level of entrepreneurial activity in Thailand does not correspond with the level of national income. Activities undertaken by participating entrepreneurs do not generate or contribute to a high value addition to the economy. Eighty percent of entrepreneurial start-up and established activities are in

consumer-oriented services and the extractive sector, and products and services for the domestic markets. It should be noted that 97% of new businesses in Thailand have no customers overseas. A comparison with other participating countries can be seen in Figure 4 below.

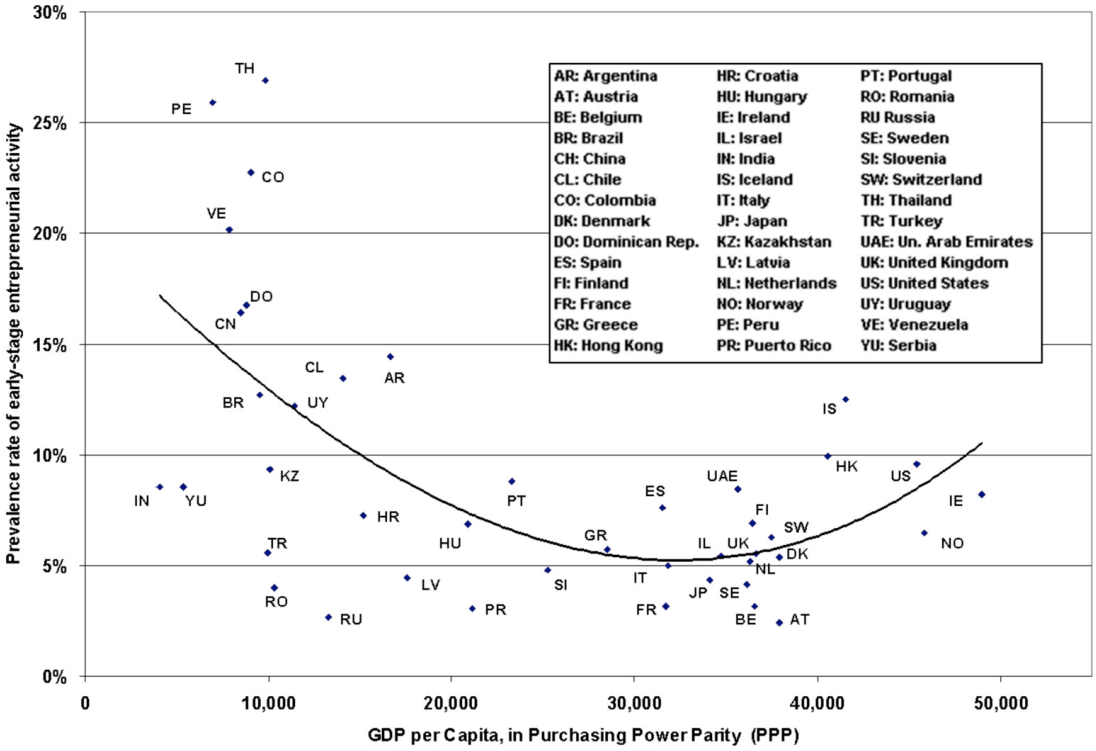

Figure 4: Total early-stage entrepreneurial activity (TEA) and gross domestic product (GDP) per capita – national economies in 2007.

Source: Global Entrepreneurship Monitor 2008 Executive Report [15].

BASIC CONCEPTUAL FRAMEWORK MODEL OF ENTREPRENEURIAL ACTIVITIES AND NATIONAL ECONOMY

The GEM model can explain the basic conceptual framework model of entrepreneurial activities and the national economy. The model in Figure 5 illustrates the entrepreneurial environment, the effect it has on entrepreneurship and, in turn, economic development. According to this model, social, cultural, and political contexts influence the national framework and entrepreneurial framework conditions.

Two sets of conditions, basic requirements and efficiency enhancers, broadly impact entrepreneurial activities in a society. Furthermore, nine entrepreneurship framework conditions influence an individual's decision to pursue entrepreneurial initiatives and,

hence, the rate and profile of entrepreneurship in different economies. The model also acknowledges the efforts of employee entrepreneurs – those who develop and lead new business activities for their employers.

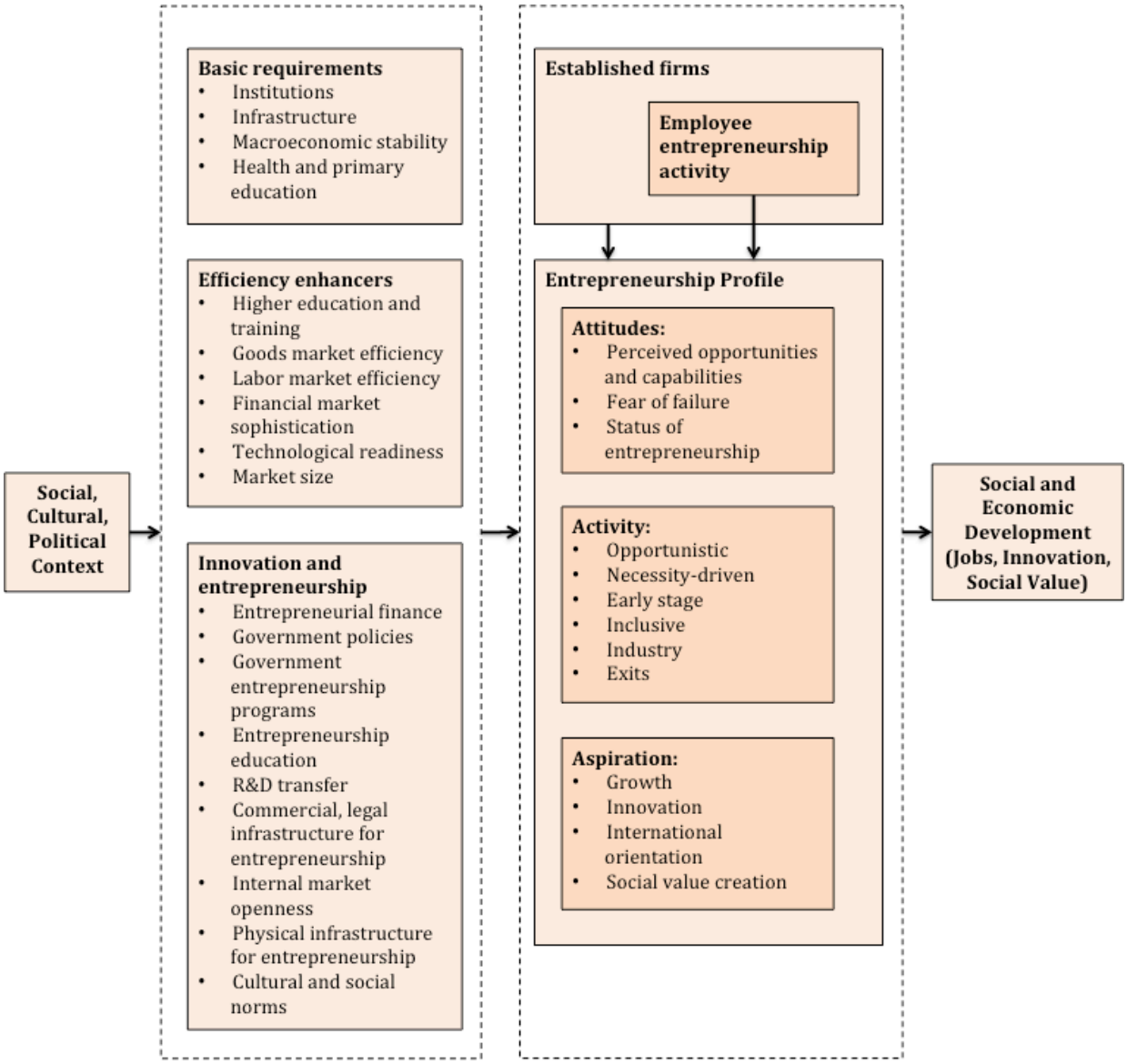

Figure 5. The institutional context and its relationship to entrepreneurship.
Source: Global Entrepreneurship Monitor 2011 Global Report [16].

GEM classifies the economies that participate in the study as factor-driven, efficiency-driven, or innovation-driven. These categories are based on the WEF Global Competitiveness Report, which identifies three phases of economic development, based on GDP per capita and the share of exports comprising primary goods.

According to WEF classification, the factor-driven phase is dominated by subsistence agriculture and extraction businesses, with a heavy reliance on (unskilled) labor and natural resources. The focus of development efforts tends towards building a sufficient foundation of basic requirements. In the efficiency-driven phase, an economy has become more competitive, with further development being accompanied by industrialization, an increased reliance on economies of scale, and capital-intensive large organizations become more dominant. This phase is generally accompanied by improved (and improving) basic requirements, and attention is then directed toward developing efficiency enhancers. As development advances into the innovation-driven phase, businesses are more knowledge-intensive, and the service sector expands. While entrepreneurship and innovation factors are more dominant in this phase, these conditions rely on a healthy set of basic requirements and efficiency enhancers.

In Thailand, the most important negative factors include a lack of sufficient capacity for entrepreneurship in political, institutional, and social contexts; inadequacy of education and training for entrepreneurial capacity building; and limited access to technologies and market information. On the other hand, the most important positive factors from the national expert survey include good social and cultural norms, a strongly supportive environment for female entrepreneurs, stable economic climate over the past five years, government policies on a number of supporting programs, and the ease of access to physical and business infrastructure.

The economic development stage requires an increasing supply of potential entrepreneurs in order to facilitate a steady stream of new businesses [12]. To do so, governments should focus their effort on developing a capacity within the population to recognize and pursue opportunity [17]. The demand side of entrepreneurship, availability of resources for potential entrepreneurs, entrepreneurial values, and the risk–reward profile of entrepreneurship are also important and should be focused on.

To facilitate the opportunity-recognition process, the linkage between supply and demand in new firm creation is another important element for entrepreneurial activity [18]. Studies imply that the creation and development of new entrepreneurial firms depend heavily on the existing supply of entrepreneurs, demands for new firm creation, and the interactions between this supply of entrepreneurs and demand from the economy.

Figure 6 depicts the relationship between these determinants of new firm creation and national development.

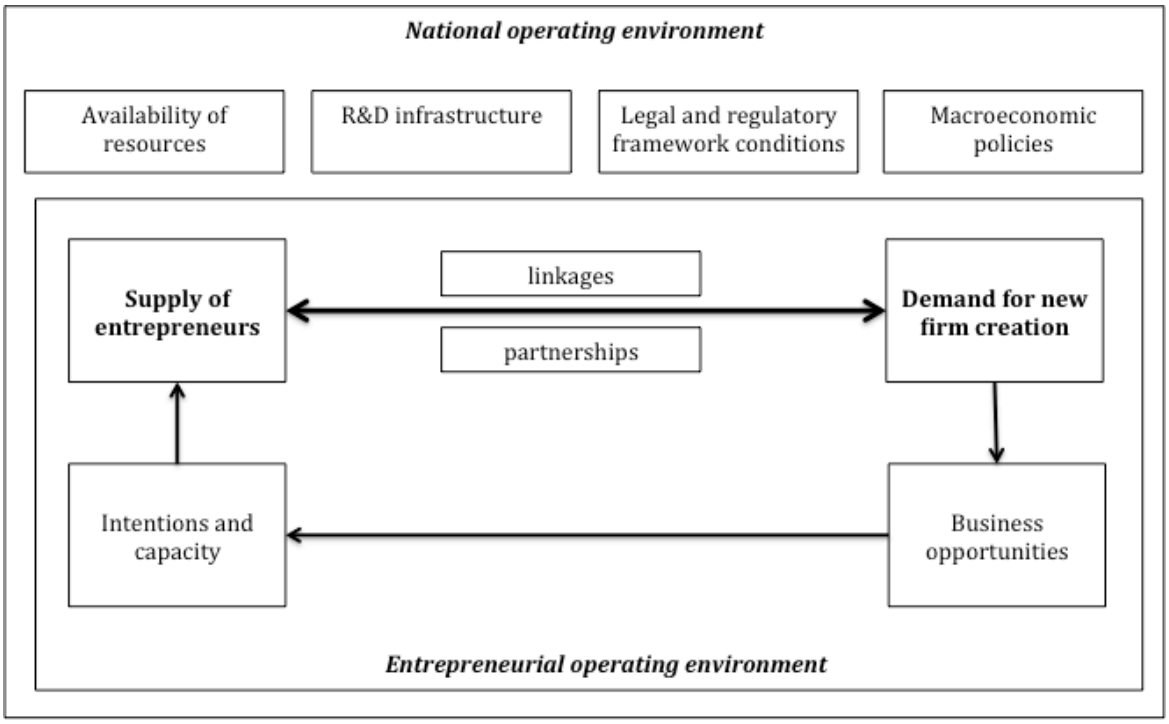

Figure 6: A proposed model of entrepreneurial activities and national economy.
Source: Virasa 2007 [12].

Their decision to participate in entrepreneurial activity depends, crucially, on entrepreneurial intentions and a capacity that is based on motivation and skills, availability of resources (capital, educated personnel, technology, and business services), acquisition of resources, and research and technology capacity [19]. According to the entrepreneurial behavior process, it also depends on how technology-based entrepreneurs can get opportunity-oriented exposure, and how it is framed. This opportunity recognition will in turn influence the entrepreneurial intentions of technology-based entrepreneurs.

The central part of the model depicts the operating environment for new firm creation and development. The focus of this part is the interaction process between demand and supply for new firms, combining the entrepreneurial behavior process and key actors of new firm formation and development. This opportunity-oriented behavioral process does not occur in isolation. It takes place in a given industry, national, and cultural context. The industry context will influence the formation of a business and innovation network, and create market opportunities. In the greater context, availability of financial and human resources, legal and regulatory framework conditions, macroeconomic policies, and technology developments will influence the innovation and entrepreneurial framework conditions that the entrepreneurial firms operate within.

Based on the GEM study and entrepreneurship process in Figure 7, Thai entrepreneurs perceive several weaknesses in starting a new business venture: they lack confidence in expected business conditions, fear business failure, and/or lack the required knowledge and skills. Most of all they lack entrepreneurial intentions.

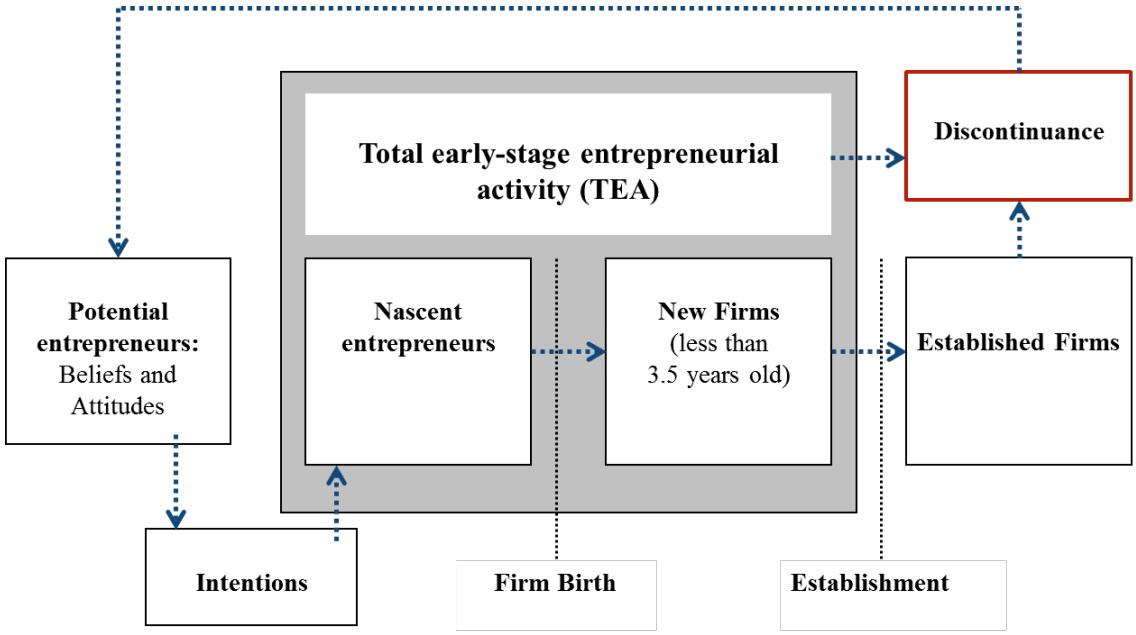

Figure 7: Entrepreneurship process.
Source: Global Entrepreneurship Monitor 2011 Global Report [16].

PHILOSOPHY OF NATIONAL ECONOMIC GROWTH AND ENTREPRENEURSHIP ENHANCEMENT POLICIES

Small businesses and entrepreneurship have been widely recognized by many developed economies in the OECD since the 1980s [20]. Stagflation and high unemployment increase the importance of small businesses in such economies, thus OECD governments have attempted to find ways of stimulating economic growth through small businesses and entrepreneurial activities. Many scholars claim that small firms play an important role in the economy, serving as agents of change through their entrepreneurial activity, being the source of innovation, stimulating industry evolution, and creating an important share of newly generated jobs [21–23].

Wennekers and Thurik [20] reviewed the role of entrepreneurship in economic literature and synthesized the definition of "entrepreneurship" from economic perspectives as follows:

"Entrepreneurship is the manifest ability and willingness of individuals, on their own, in teams, within and outside existing organizations:

1. To perceive and create new economic opportunities (new products, new production methods, new organizational schemes, and new product market combinations) and;

2. To introduce their ideas in the market, in the face of uncertainty and other obstacles, by making decisions on location, form and the use of resources and institutions."

To measure entrepreneurship, Wennekers and Thurik [20] suggest developing entrepreneurship typologies at the micro level, and operationalizing a multi-dimensional concept of entrepreneurship at higher levels of aggregation, such as industries and national economies. Other determinants of entrepreneurship include the conditions of both culture and institutional frameworks, and the way in which entrepreneurs operate in practice. Technological, demographic and economic forces are also important.

The government's role is to create the appropriate institutional framework at the national level to stimulate the supply side of entrepreneurship. At the same time, governments should focus their efforts on creating a culture that develops a capacity within the population to recognize and pursue opportunity. A government should therefore design and create policies and programs specifically targeting the entrepreneurial sector. Also of importance is to increase the overall education level of the population, specifically ensuring that entrepreneurship training is readily accessible to develop the skills and capabilities to start a business.

Recently, the Thai government has shifted away from a policy of competition towards a new approach that focuses on building platforms for multiple industries and enabling the commercialization of local knowledge. In fact, while this policy encourages innovation and new firm start-ups, entrepreneurship policy is still not a distinct policy domain at the national level: there is no statement of measurement for entrepreneurial development in the government policy evaluation.

A number of issues may detract from the intended success of these policies. Firstly, it remains unclear how entrepreneurship and SME agendas relate to each other. From the

proposed framework of Wennekers and Thurik [20], linking entrepreneurship to economic growth means linking the individual level, the firm level, and the macro level. Secondly, in participating institutions, managerial arrangements appear disintegrated and discontinuous. The impacts and outcomes of the projects and programs are fully taken into account in the planning process.

Figure 8 illustrates the current institutional infrastructure in place to support SMEs and entrepreneurship at the policy and implementation levels. OSMEP serves as a secretariat of the National SME Promotion Committee and a coordinating body at the policy level. Under this arrangement, OSMEP's ability to achieve policy coherence across government ministries and agencies is limited. Moreover, it is difficult for a new agency such as OSMEP to coordinate with other authorities within the Ministry of Industry. Additionally, measures to support entrepreneurship at the grassroots level seem ill-conceived and lack sound underpinnings such as concerted research into entrepreneurship.

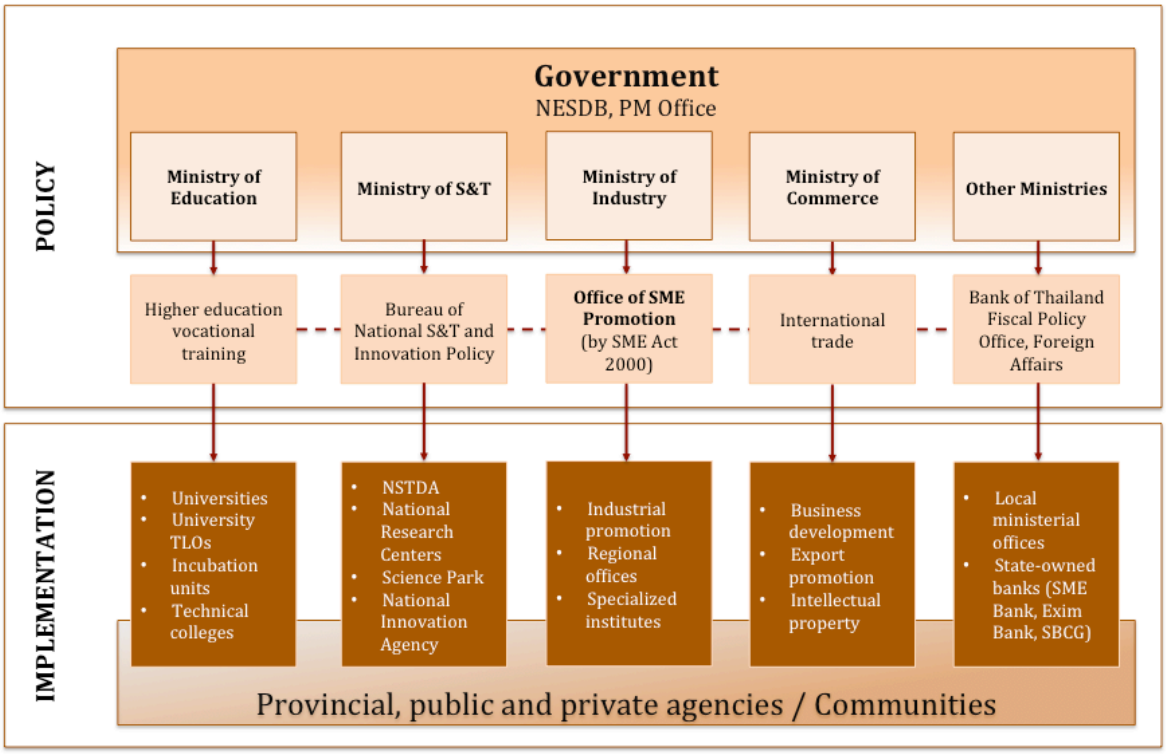

Figure 8. Institutional infrastructure for supporting SMEs and entrepreneurship in Thailand.

Source: From author. NESDB, the National Economic and Social Development Board; NSTDA, National Science and Technology Development Agency; PM, Prime Minister; SBCG, Small Business Credit Guarantee Corporation; S&T, science and technology; TLO, Thailand licensing office.

ISSUES AND CHALLENGES IN THE NATIONAL PROCESS OF ENHANCING ENTREPRENEURSHIP

Issues Related to Entrepreneurial Framework Conditions

Government policy and support: The Thai Government's initiatives focus on entrepreneurship in its post-start-up phases. This is when the entrepreneur has already surmounted the early obstacles to success, including the overwhelming likelihood of failure. Many intending entrepreneurs fail to reach even this early stage. Moreover, efforts to promote and support entrepreneurial activity may be less than efficient due to a lack of concerted effort and coordination across the various government sectors responsible for providing support for entrepreneurship. Therefore, it is important for policymakers to recognize that the process of entrepreneurship commonly passes through a number of phases.

Access to sources of financing: From the review of the OECD report, the available evidence suggests that less than about half of 2.8 million Thai SMEs can access formal financial mechanisms [2]. Furthermore, bank financing to these enterprises appears to have declined in real terms in recent years. Commercial banks in Thailand, as in other countries, give greater credence to the expansion of existing businesses or new investment opportunities than to new business. To assess business potential, bank-lending officers assess collateral and past business experience more favorably than the potential business opportunity. Entrepreneurs are likely to regard such an environment as less than favorable for financing entrepreneurial risk-taking. Business angels and venture capitalists, unlike in other countries, are not active in providing investment capital to fund entrepreneurs.

The Thai Government established the SME Bank in 2002 to finance Thai SMEs. Unlike a commercial bank, the SME Bank operates as an arm of government policy for business development. As such, it tends to tolerate business risk because it supports government policies by lending to: OTOP, franchises, informal debts, and special sectors that are the main focus of the government: alternative energy businesses, agriculturally processed products, and creative businesses. In 2009, the SME Bank's total loans to SMEs amounted to approximately THB44 billion, providing about 7% of the total SME lending by banks in Thailand, with about half of its new loans outside the Bangkok municipal area. The SME Bank appears to address a relatively small segment of the SME market [2].

Research, development, and innovation: Innovation is not a major element of entrepreneurial activity in Thailand. Some 50% of new businesses offer products already known to their customers, and 40% offer products new to some customers. Additionally, 70% of new businesses have products similar to those of other firms, while 50% of early-stage entrepreneurial activity and 80% of established businesses use no new technology. By international comparison, new Thai businesses offer a higher proportion of products that are new to some customers, products that are similar to those of other firms, and use new technology that has been available for 1–5 years.

Structural Challenges

Lack of middle-sized enterprises that have potential to grow and compete internationally: Thailand appears to have a shortage of medium-sized firms with the capability to grow [2]. Thailand has only 0.4% medium-sized firms, compared to about 10% for Japan, 6% for the ROK, and 3% for Germany. There is a shortage of middle-sized, growth-oriented SMEs functioning as leading subcontractors and venture firms in their own right, with hopes of developing highly integrated industries such as in the ROK and ROC.

Regional Distribution of SMEs: in 2006, approximately 40% of all Thai SMEs were located in the Bangkok region and its environs, with only 10% of Thailand's population located in the Bangkok region. The northeastern area has another 32% of Thailand's SMEs, and the remainder are found in the north and south. The average SME density (the number or SMEs per 100 people) is a crude proxy measure of the level of entrepreneurial activity. It appears to vary substantially between the different regions in Thailand: it is highest in Bangkok (where it is increasing), and lowest in the south, north, and northeast. SME density in 2006 was 10.1 SMEs per 100 people in the Bangkok area, compared to only 2.2 in the southern region, and only 2.7 in the north and northeastern regions. Furthermore, the study indicates that growth in SME numbers has been more rapid in Bangkok than in other regions, and much faster than its rate of population increase.

PROPOSAL FOR EFFECTIVE APPROACHES AND POLICIES TO NURTURE BETTER ENTREPRENEURS IN THAILAND

Entrepreneurship moves through a number of phases. Entrepreneurs must plan, conceptualize, and develop their business ideas. Planning and conceptualization takes place in the pre-operational phase. This is followed by the start-up phase in which the

entrepreneur readies the resources needed to begin commercial activity. This is followed by the post-start-up phase, in which the business ideas and concepts are put into operation. In this phase, entrepreneurs transform their ideas and concepts into a functioning business organization. These phases are sequential and take time, and require different types of support at each phase.

Adoption of Portfolio Approach

Current government support for start-ups focuses on education, training and the lack of systematic monitoring and evaluation (Table 7). It is also important for the government to promote high value-added entrepreneurial activity, which may be achieved through increasing the capacity for marketing, business management, and business innovation. Successful entrepreneurs know how to use knowledge and local wisdom to further their success; shaping their products to meet customer expectations; entering new markets where their R&D indicates a niche for their products and services; gaining a competitive advantage. Of equal importance is the need to advance entrepreneurial activity through incubation activities and develop the required infrastructure for formal and informal investment in entrepreneurial ventures.

Table 7: SME and entrepreneurship projects and programs by business life stages

Business life stages	Education training, human resources	Information knowledge	Finance	Market access and development	Technology innovation	Regulatory compliance and assistance
Pre-nascent	• Junior entrepreneur creation program	–	–	–	–	–
Nascent	• New entrepreneur creation (NEC) project • Freelance promotion project	–	–	–	–	–
Start-up	• NEC project	–	–	• Trade fair and exhibition	–	–
Operation	• Entrepreneur training programs by related agencies	–	• SME credits • Credit guarantee • MAI • SME VC funds • Competitiveness fund • Innovation fund • Asset conversion project	• Trade centers • Thailand's Brand Distribution channel development	• Safety and health development • Consulting and advisory services • ITAP • Energy saving for SMEs • Supply chain cluster development • ISO quality system	• One stop service
Growth	–	• Economic info • Status and outlook	–	–	–	–
International	• Service business development for export • Exporter training programs	• Export market information • International market research	–	–	–	• One stop service for export
Adjust/exit	–	–	–	–	–	–

Source: Organization for Economic Cooperation and Development [2].

Notes: HR, human resources; ITAP, industrial technology assistant program; MAI, market of alternative investments; SME, small and medium-sized enterprise; VC, venture capital.

For improved impact and effectiveness, the Department of Industry Promotion should upgrade the NEC Project by classifying participants with respect to their needs such as nascent, start-up, or high-growth business ventures. Participating units should acquire experienced and professional business consultants and offer different packages of services to each group of participants and measure the impact of each package differently.

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PROFILE OF EXPERTS

CHIEF EXPERT

Dr. Tsuneo Yahagi

Dr. Yahagi is Professor Emeritus and ex-Provost of Keio University, Japan. He is currently serving as Provost and Professor for Sakushin Gakuin University and is the Dean of the Graduate School of Business for the same University. He is also Chairman of Yahagi and Associates, Inc. and serves as a board member of several companies. After receiving his BS from Keio University, he worked for the Mitsubishi Corporation and later at Fuji Die Co., Ltd. as a Managing Director. He acquired his MBA, MS (Statistics) and Ph.D. (Management) from Stanford University, USA. Dr. Yahagi has published widely on Corporate and Competitive Strategy, Entrepreneurship and New Business Development. He was the major contributor to develop the Conceptual Model of the Global Entrepreneurship Monitor (GEM). He is a member of the Strategic Management Society (SMS, USA).

NATIONAL EXPERTS

Dr. Chea Peou (Cambodia)

H.E. Dr. Chea Peou has worked for the Cambodian Government in the Office of the Council of Ministers (OCM). He is an adviser to the OCM and the General Department of Internal Audit. He is also a visiting faculty member for several universities in Cambodia, including Phnom Penh International University, Panhasastra University of Cambodia and the National University of Management. Dr. Chea Peou earned his MBA (International Business Management) from the Asian Institute of Technology, Thailand, and his PhD (Entrepreneurship and Small Business Management) from University Utara Malaysia (Malaysia) in 2010.

Dr. Chih-Yen Huang (Republic of China)

Dr. Huang is an Assistant Professor of Feng Chia University. He holds a PhD in Urban and Public Affairs from the University of New Orleans, USA. In addition to teaching entrepreneurship and social innovation at the university level, he has also spent more than 15 years serving as a consultant and incubation expert for SMEs. He won two champions in two nationwide entrepreneurship competitions, TiC100 and We Win, in

the Republic of China (ROC). Dr. Huang also works with many government agencies on innovation activities including entrepreneurship policy, innovation projects such as the Small Business Innovation Research Program, industrial exhibitions, patent and technology licensing, R&D funding and loan committees, and business incubation. He has given many talks and conducted training in business incubation and entrepreneurship in Russia and across Asia, based on the ROC experience.

Dr. Sudipto Bhattacharya (India)

Dr. Bhattacharya is an Associate Professor of VIT Business School, VIT University. He completed his bachelors in Textile Technology, his masters in Management and was awarded a PhD in International Strategy. He has 23 years of experience in industry and academia and is certified as both an Entrepreneurship Educator from the Stanford Technology Ventures Program of Stanford University and a Start-up Mentor from the London Business School. He is a member of the Board of Studies in several universities. He is also active in several steering committees aimed at developing both entrepreneurial ecosystems in institutions of higher learning, as well as mentorship in Technology Business Incubators. He has served as a consultant for a few start-ups and family-owned businesses in their second and third generation, helping them to diversify and scale-up their businesses.

Dr. Aji Hermanwan (Indonesia)

Dr. Hermawan is the Director of the Recognition and Mentoring Program, Bogor Agricultural University (RAMP-IPB), a program that facilitates the development of technology and business innovation to solve societal problems. Since 2006, he has trained more than 6,000 university students across Indonesia, mentored more than 20 new social technology-based student entrepreneurs, and facilitated social and technology-based entrepreneurship curriculars in more than 30 universities in Indonesia. He has more than 20 years of teaching experience in the field of change management and innovation. He received his PhD in People and Organization Management from Manchester Business School, The University of Manchester in 2005.

Kikuko Harada (Japan)

Kikuko Harada is the Chief Executive Director of the Center for Entrepreneurship Development. Previously, she worked for the Stanford Center for Technology and Innovation as a Project Manager and at the Consulting Department of the Kyoto Research Park as a Manager.

Dr. Muhammad Idrees Khawaja (Pakistan)(*1)

Dr. Idrees Khawaja is the Senior Research Economist at the Pakistan Institute of Development Economics (PIDE). He earned his PhD (Economics) in 2007 from the same Institute and has been through post-doctoral fellowships at the University of Oxford and the University of California, Los Angeles (UCLA). He also holds an MBA degree and was a development banker for several years before opting for teaching and research as a profession. His research interests include institutional economics, development, entrepreneurship and decentralization. Dr. Khawaja also heads the School of Public Policy at PIDE and teaches Institutional Economics and Public Policy to graduate students at PIDE.

Renato M. Pleno (Philippines)

With an MBA from Stanford University, USA, Renato Pleno co-founded and grew an export-manufacturing firm in decorative ceramics from a backyard operation, to a medium-sized company that employed 600 workers. At the same time, he was the President of the Ceramic Export Manufacturers Association from 1984 to 1999. As a former trustee of the Philippine Exporters Confederation, he has advocated policies and programs aimed at growing SME firms.

Dr. Thanaphol Virasa (Thailand)

Dr. Virasa is an Associate Dean and an Assistant Professor in the College of Management at Mahidol University, Thailand. He graduated with a bachelor degree in Economics from Thammasat University, Thailand, earned an MSc in Industrial Engineering and Management, as well as a PhD in Management of Technology, from the Asian Institute of Technology (AIT), Thailand. Dr. Virasa joined the Thailand Development Research Institute as a senior researcher, and later the National Science and Technology Development Agency as Chief of Industry Research. He served as project manager for the Thai team in the Global Entrepreneurship Monitor research project. He has also served as a local consultant for entrepreneurship and SME studies for the OECD, World Bank, and Thai government agencies. He teaches foundations of new ventures, introduction to business planning, and research seminars. His research areas are on entrepreneurship and innovation management, public policy in science and technology management, and the innovation system.

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Contributed to the research as the co-author, assisting Dr. Muhammad Idrees Khawaja (Pakistan)

Rabia Jamil is the Head of International Relations at the National Productivity Organization in the Ministry of Industries & Production, Government of Pakistan and holds the honorary position of APO Liaison Officer for Pakistan. She is the Secretary General of the Productivity Association of Pakistan and a human resource development consultant and trainer. Jamil has a Masters in Business Administration from the Institute of Management Sciences, Pakistan. She has authored and co-authored papers on development–related issues, has successfully initiated and completed many development-related projects (especially on SME development and female entrepreneurship); and is a member of several academic, trade, and public policy bodies, both national and international.