エンタープライザーショップの特性を比較する：イノベーション推進型経済の比較

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Entrepreneurship Characteristics of Japan  ⚓
Comparison among Innovation-Driven Economies

Mitsuhide Hoshino

Abstract
This study surveys Japan’s entrepreneurship characteristics compared to other innovation-driven economies. The results indicate that generally speaking, Japan exhibits low levels of entrepreneurial indicators. Internal market dynamics and openness and physical infrastructure are valued most positively whereas regulation and primary and secondary education are valued most negatively. New findings contributing to the literature are as follows. Although their level is low, total entrepreneurial activity, entrepreneurial intention, and international orientation exhibit an overall increasing tendency. Job growth expectation is high and exhibits an increasing tendency, suggesting that entrepreneurship contributes to increased employment. New product activity is average and exhibits a declining tendency, suggesting declining innovation capability.

Key words: entrepreneurship, startups, international comparison
JEL classification: L 60, M 01

1. Introduction

This study graphically represents the characteristics of Japan’s entrepreneurship among innovation-driven economies from international perspectives, utilizing data from the Global Entrepreneurship Monitor GEM. Specifically, this study presents the most recent cross-section comparison of innovation-driven economies and compares time series trends of six-innovation-driven economies France, Germany, Italy, Japan, UK, and USA for the most recent decade. This study presents the big picture on the basis of straightforward observed facts without applying econometric methods.

1 I have followed Isobe and Yahagi for economy selection.
2. Data

The study uses data from the GEM, which is the world’s largest study of entrepreneurial dynamics\(^2\). GEM has grown into an association of more than 1,200 researchers from approximately 170 economies over its 20-year history. The GEM comprised economies\(^0\). The GEM database provides internationally comparable data beginning from 1999. This database is available for free at http://www.gemconsortium.org. Data and provides important international public goods. The database indicators encompass entrepreneurship activity, attitudes, and aspirations\(^0\). Xavier et al. also describes framework conditions. The present study focuses on the economies identified as innovation-driven economies\(^2\) in Xavier et al. because many experts, e.g., Venture Enterprise Centre have expressed the opinion that international comparison is needed among economies in the same general stage of economic development.

3. Activity Related Indicators

Figure 1: TEA comparison among Innovation-Driven Economies in 2012

Source: GEM Database

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2 GEM
3 Xavier et al., *Global Entrepreneurship Monitor Global Report*.
4 All the data sourced from the GEM Database were accessed and downloaded from the GEM homepage in March 2012.
5 GEM classifies economies into three groups by stage of development: factor-driven, efficiency-driven, and innovation-driven. The latter represents a more advanced stage.
Total Entrepreneurial Activity (TEA) is a key indicator signifying the percentage of the population aged 20-64 that are either a nascent entrepreneur or owner-manager of a new business. It represents the level of entrepreneurial activity. Figure 1 reveals that Japan’s TEA is the lowest among innovation-driven economies in 2000. This finding indicates stagnant entrepreneurial activity in Japan, as many experts have noted.

Figure 2 depicts TEA trends of six innovation-driven economies from 2000 to 2012. Japan’s TEA has consistently been stagnant compared with the USA and UK because its figures have always been lower than those economies. However, we could argue that the TEA of France, Germany, Italy, and Japan have been rather similar and stagnant compared to the USA and UK since 2000 because figures for those countries have clustered between 0% and 6% lower than those of the UK, and markedly lower than those of the USA. Japan, however, has exhibited an overall increasing trend, especially since 2005, compared with Italy’s decreasing trend since 2003.

Informal Investors Rate

The informal investors rate signifies the percentage of the population aged 20-64 that have personally provided funds for a new business started by someone else in the preceding three years. Figure 1 reveals that Japan’s informal investors rate is the lowest among innovation-driven economies. As Takahashi suggests, a stagnant informal investment rate might contribute to stagnant entrepreneurial activity because those two indicators are closely related.

Figure 2 depicts trends of informal investors rate in five economies from 2000 to 2012.

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6 Data for Germany in 2001 and Italy in 2002 are missing.
7 Data for Germany, Ireland, and Singapore are missing.
8 The graph for Germany is omitted because its data in 2001, 2004, and 2007 are missing. Data for Italy in 2002 are missing.
Japan’s informal investors rate has consistently been stagnant compared with the USA, France, and Italy because its figures have always been lower than those economies. The UK’s figures have been higher than Japan’s with the exception of the UK, France, and Italy.

Figure 3 reveals that the data from Xavier et al. indicate that Japan’s business dis-
continuity is the lowest among innovation-driven economies in [447, 667]. Takahashi [447, 667] suggests that low business discontinuity could be honorable.

4. Attitude Related Indicators

Perceived Opportunities

Perceived opportunities signify the percentage of the population aged 18-64 that see good opportunities to start a firm in their locality. Figure 5 reveals that Japan’s perceived opportunities are the lowest among innovation-driven economies in [447, 667]. Isobe and Takahashi [447, 667] report that preceding GEM surveys have revealed a close relationship between perceived opportunities and entrepreneurship. Therefore, low perceived opportunities might contribute to a
low level of entrepreneurship.

Figure 7 depicts trends of perceived opportunities in the six economies from 2001 to 2012. Japan’s perceived opportunities exhibit a decreasing trend and have consistently been lower than the other five economies since 2003. We observe an overall increasing trend for France and Germany since 2004.

Figure 7  Trends of Perceived Opportunities of 6 economies from 2001 to 2012

Perceived Capabilities

Perceived capabilities represent the percentage of the population aged 25-64 who believe they have the required skills and knowledge to start a business. Figure 8 reveals that Japan’s

Figure 8  Comparison of Perceived Capabilities among Innovation-Driven Economies in 2012

Data for Germany in 2005 and Italy in 2004 are missing.
perceived capabilities are the lowest among innovation-driven economies in Japan. Isobe and Yahagi report that perceived capabilities are very important for entrepreneurs. Therefore, low perceived capabilities might contribute to a low level of entrepreneurship activity.

Figure 1 depicts trends of perceived capabilities in the six economies from 2001 to 2012. Japan’s perceived capabilities have mostly been clearly consistently lower than other economies.

**Figure 9 Trends of Perceived Capabilities of 6 economies from 2001 to 2012**

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**Fear of Failure Rate**

The fear of failure rate signifies the percentage of the population aged 16-64 with positive perceived opportunities who indicate that fear of failure would prevent them from starting a business. Figure 2 reveals that Japan’s fear of failure rate ranks third among the innovation-driven economies in Japan.

Figure 2 depicts trends of the fear of failure rate in the six economies from 2001 to 2012. We can observe Japan’s high level and overall increasing trend. The Venture Enterprise Centre suggests that Japan’s increasing trend of entrepreneurial activity and intention might contribute to an increasing tendency of fear of failure.

**Entrepreneurial Intention**

Entrepreneurial intention signifies the percentage of the population aged 16-64 excluding individuals involved in any stage of entrepreneurial activity that intend to start a business.

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*Data for Germany in 2011 and Italy in 2012 are missing.*
within three years. Figure 10 reveals that Japan’s entrepreneurial intention is the lowest among innovation-driven economies in 2012. As Isobe and Yahagi report a positive correlation between entrepreneurial intention and business discontinuity, Japan’s low entrepreneurial intention could be related to its low discontinuity of business.

Figure 11 depicts trends of entrepreneurial intention in the six economies from 2001 to 2012. Japan’s entrepreneurial intention has consistently been stagnant compared with other economies. Data for Germany in 2011 and Italy in 2006 are missing.
economies, although we observe an overall increasing tendency.

Know Startup Entrepreneur Rate

The know startup entrepreneur rate signifies the percentage of population the aged 20-64 that personally know someone who started a business in the preceding two years. Figure 12 reveals that Japan’s know startup entrepreneur rate is the lowest among innovation-driven economies in 2012. As Isobe and Yahagi report that this rate reflects the level of entrepreneurship. Data for Germany, Ireland and Singapore are missing.

Figure 12 Comparison of Entrepreneurial Intention among Innovation-Driven Economies in 2012

Source: GEM Database

Figure 13 Trends of Entrepreneurial Intention of 6 economies from 2002 to 2012

Source: GEM Database
the entrepreneur network, we can infer that Japan’s level of entrepreneur network is low.

Figure 14 depicts trends of the know startup entrepreneur rate of five economies from 2001 to 2012. Japan’s know startup entrepreneur rate has consistently been stagnant compared with other economies and exhibits an overall declining tendency.

Figure 15 depicts trends of the know startup entrepreneur rate of five economies from 2001 to 2012. The graph for Germany is omitted because its data in 2008, 2009, and 2010 are missing. Data for Italy in 2004 are missing.
5. Aspiration Related Indicators

Job Growth Expectation

Job growth expectation signifies the percentage of TEA that expect to employ a workforce of at least five people within five years. Figure 16 reveals that, unlike other indicators, Japan’s entrepreneur job growth expectation ranks third among innovation-driven economies. This finding indicates that entrepreneurial activity might contribute to increased employment in Japan. We also observe the even higher rate of other Asian economies.

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Data for Germany, Ireland, and Singapore are missing.
Figure 18 depicts trends of job growth expectation in five economies from 2003 to 2012. Japan’s job growth expectation has been consistently higher than other economies and exhibits an overall increasing tendency.

New Product Activity

New product activity signifies the percentage of TEA that indicate that their product or service is new to at least some customers. Figure 18 reveals that Japan’s entrepreneur new product activity ranks 10th among innovation-driven economies in 2012. This finding indicates that Japan has average new product activity.

Figure 18 depicts trends of new product activity in five economies from 2003 to 2012. Japan’s new product activity exhibits an overall declining tendency. This trend might indicate declining innovation capability.

International Orientation

International orientation signifies the percentage of TEA that indicate at least 50% of their customers are in other countries. Figure 18 reveals that Japan’s international orientation ranks 10th among innovation-driven economies in 2012. This finding indicates that Japan has low international orientation.

The graph for Germany is omitted because its data in 2003, 2005, and 2008 are missing. Data for Italy in 2008 are missing.

Data for Germany, Ireland, and Singapore are missing.

The graph for Germany is omitted because its data in 2003, 2005, and 2008 are missing. Data for Italy in 2008 are missing.

Data for Germany, Ireland, and Singapore are missing.
Figure 19 depicts trends of international orientation in five economies from 2002 to 2012. Japan’s international orientation exhibits an overall increasing tendency, although at a lower level than the other economies.

The graph for Germany is omitted because its data in 2002, 2005, and 2006 are missing. Data for Italy in 2002 are missing. 

Source: GEM Database
6. Framework Conditions Related Indicators

Table compares framework conditions valued most positive (labeled as positive) and most negative (labeled as negative) of the six economies. Conditions valued most negative in Japan are finance, regulation, and primary and secondary education. Those valued most positive are the internal market (both dynamics and openness) and physical infrastructure. Note

Table Comparison of Framework Conditions Valued Most Positive and Most Negative of Six Economies

<table>
<thead>
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<tbody>
<tr>
<td>Japan</td>
<td>Negative</td>
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<td>Negative</td>
<td>Negative</td>
<td>Positive</td>
<td></td>
<td></td>
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<tr>
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<td>Positive</td>
<td>Positive</td>
<td>Negative</td>
<td>Negative</td>
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<td>Positive</td>
</tr>
<tr>
<td>Germany</td>
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<td>Positive</td>
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<tr>
<td>Italy</td>
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<td>Negative</td>
<td>Positive</td>
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<tr>
<td>UK</td>
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<td>Negative</td>
<td>Positive</td>
<td>Positive</td>
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</tr>
</tbody>
</table>

Source: Xavier et al.
that primary and secondary education is valued most negative and physical infrastructure is valued most positive in all six economies. Japan’s positive evaluation of the internal market (both dynamics and openness) is encouraging.

7. Summary and Conclusions

Table summarizes Japan’s entrepreneurship characteristics.

Table Summary of Japan’s Entrepreneurship Characteristics

<table>
<thead>
<tr>
<th>Activity Related Indicators</th>
<th>The most recent level</th>
<th>The preceding year trends</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Entrepreneurial Activity</td>
<td>Low</td>
<td>Increasing</td>
</tr>
<tr>
<td>Informal Investors Rate</td>
<td>Low</td>
<td>Unchanged</td>
</tr>
<tr>
<td>Discontinuity of Business</td>
<td>Low</td>
<td>N/A</td>
</tr>
<tr>
<td>Attitude Related Indicators</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perceived Opportunities</td>
<td>Low</td>
<td>Decreasing</td>
</tr>
<tr>
<td>Perceived Capabilities</td>
<td>Low</td>
<td>Unchanged</td>
</tr>
<tr>
<td>Fear of Failure</td>
<td>High</td>
<td>Increasing</td>
</tr>
<tr>
<td>Entrepreneurial Intention</td>
<td>Low</td>
<td>Increasing</td>
</tr>
<tr>
<td>Know Startup Entrepreneur Rate</td>
<td>Low</td>
<td>Decreasing</td>
</tr>
<tr>
<td>Aspiration Related Indicators</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Job Growth Expectation</td>
<td>High</td>
<td>Increasing</td>
</tr>
<tr>
<td>New Product Activity</td>
<td>Average</td>
<td>Decreasing</td>
</tr>
<tr>
<td>International Orientation</td>
<td>Low</td>
<td>Increasing</td>
</tr>
<tr>
<td>Framework Conditions</td>
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<td></td>
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<td>Finance</td>
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<tr>
<td>Regulation</td>
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<tr>
<td>Primary &amp; Secondary Education</td>
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<tr>
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<td>Internal Market Openness</td>
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</tr>
<tr>
<td>Physical Infrastructure</td>
<td>Valued Most Positive</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Source GEM database, Xavier et al.

Overall, Japan has exhibited low entrepreneurial indicator levels, as many experts have observed. Xavier et al. found that Internal market dynamics and openness and physical infrastructure are valued most positively whereas regulation and primary and secondary education are valued most negatively. The present study contributes the following new results to the literature. Although their level is low, total entrepreneurial activity, entrepreneurial intention, and international orientation exhibit an overall increasing tendency. Job growth expectation is high and exhibits an increasing tendency, suggesting that entrepreneurship contributes to increased employment. New product activity is average and exhibits a declining tendency, suggesting declining innovation capability.
References


* References in Japanese were translated by the author.