<table>
<thead>
<tr>
<th>項目</th>
<th>内容</th>
</tr>
</thead>
<tbody>
<tr>
<td>題名</td>
<td>長崎大学経済学部研究年報 29巻 3号 pp.29-44 2013年6月30日</td>
</tr>
<tr>
<td>作者</td>
<td>長崎大学経済学部研究年報 29巻 3号 pp.29-44 2013年6月30日</td>
</tr>
<tr>
<td>引用</td>
<td>長崎大学経済学部研究年報 29巻 3号 pp.29-44 2013年6月30日</td>
</tr>
<tr>
<td>月日</td>
<td>長崎大学経済学部研究年報 29巻 3号 pp.29-44 2013年6月30日</td>
</tr>
</tbody>
</table>
| 右記 | NAOSITE: Nagasaki University’s Academic Output SITE
http://naosite.lb.nagasaki-u.ac.jp
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:

1. Although their level is low, total entrepreneurial activity, entrepreneurial intention, and international orientation exhibit an overall increasing tendency.
2. Job growth expectation is high and exhibits an increasing tendency, suggesting that entrepreneurship contributes to increased employment.
3. New product activity is average and exhibits a declining tendency, suggesting declining innovation capability.

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

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 to the present. 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. GEM has grown into an association of more than researchers from approximately economies over its year history. The comprised economies. The GEM database provides internationally comparable data beginning from . This database is available for free at http://www.gemconsortium.org. The database indicators encompass entrepreneurship activity, attitudes, and aspirations. Xavier et al. also describes framework conditions. The present study focuses on the economies identified as innovation-driven economies 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

Total Entrepreneurial Activity

Figure 1 TEA comparison among Innovation-Driven Economies in 2012

Source: GEM Database

---

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.
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 18-64 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. This finding indicates stagnant entrepreneurial activity in Japan, as many experts have noted.

Figure 1 depicts TEA trends of six innovation-driven economies from 2001 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 2001 because figures for those countries have clustered between % and % lower than those of the UK, and markedly lower than those of the USA. Japan, however, has exhibited an overall increasing trend, especially since 2004, compared with Italy’s decreasing trend.

Informal Investors Rate

The informal investors rate signifies the percentage of the population aged 18-64 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 1 depicts trends of informal investors rate in five economies from 2001 to 2012.

---

6 Data for Germany in 2004 and Italy in 2005 are missing.
7 Data for Germany, Ireland, and Singapore are missing.
8 The graph for Germany is omitted because its data in 2004, 2006, and 2007 are missing. Data for Italy in 2004 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 Ireland, Sweden, and Slovakia.

**Business Discontinuity**

Figure 4 reveals that the data from Xavier et al. indicate that Japan’s business dis-
continuity is the lowest among innovation-driven economies in 2012. Takahashi suggests that low business discontinuity could be honorable.

4. Attitude Related Indicators

Perceived Opportunities

Perceived opportunities signify the percentage of the population aged 18-30 that see good opportunities to start a firm in their locality. Figure 6 reveals that Japan’s perceived opportunities are the lowest among innovation-driven economies in 2012. Isobe and Takahashi 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 2001. We observe an overall increasing trend for France and Germany since 2008.

![Figure 7: Trends of Perceived Opportunities of 6 economies from 2001 to 2012](image)

Source: GEM Database

### Perceived Capabilities

Perceived capabilities represent the percentage of the population aged 18–64 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](image)

Source: GEM Database

---

9 Data for Germany in 2003 and Italy in 2002 are missing.
perceived capabilities are the lowest among innovation-driven economies in 2011. 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

![Graph showing trends of perceived capabilities from 2001 to 2012 for USA, UK, Italy, Germany, France, and Japan.](image)

### Fear of Failure Rate

The fear of failure rate signifies the percentage of the population aged 18–64 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 2011.

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 18–64 excluding individuals involved in any stage of entrepreneurial activity that intend to start a business.

---

*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 Figure 10. 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 2005 and Italy in 2003 are missing.

Figure 10: Comparison of Fear of Failure Rate among Innovation-Driven Economies in 2012

Figure 11: Trends of Fear of Failure Rate of 6 economies from 2001 to 2012
economies, although we observe an overall increasing tendency.

**Know Startup Entrepreneur Rate**

The know startup entrepreneur rate signifies the percentage of population the aged that personally know someone who started a business in the preceding two years. Figure reveals that Japan’s know startup entrepreneur rate is the lowest among innovation-driven economies in . As Isobe and Yahagi report that this rate reflects the level of

---

Data for Germany, Ireland and, Singapore are missing.
the entrepreneur network, we can infer that Japan’s level of entrepreneur network is low.

Figure 14. Comparison of know startup entrepreneur rate among innovation-driven economies in 2012

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. Trends of know startup entrepreneur rate of 5 economies from 2001 to 2012

Note: The graph for Germany is omitted because its data in 2002, 2009, and 2012 are missing. Data for Italy in 2002 and 2009 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 reveals that, unlike other indicators, Japan’s entrepreneur job growth expectation ranks third among innovation-driven economies in . This finding indicates that entrepreneurial activity might contribute to increased employment in Japan. We also observe the even higher rate of other Asian economies.

Data for Germany, Ireland, and Singapore are missing.
Figure depicts trends of job growth expectation in five economies from 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 reveals that Japan's entrepreneur new product activity ranks among innovation-driven economies in. This finding indicates that Japan has average new product activity.

Figure depicts trends of new product activity in five economies from 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 % of their customers are in other countries. Figure reveals that Japan's international orientation ranks among innovation-driven economies in. This finding indicates that Japan has low international orientation.

The graph for Germany is omitted because its data in and are missing. Data for Italy in are missing. Data for Germany, Ireland, and Singapore are missing. The graph for Germany is omitted because its data in and are missing. Data for Italy in 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 2004, 2008, and 2010 are missing. Data for Italy in 2008 are missing.
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>
<thead>
<tr>
<th></th>
<th>Finance</th>
<th>General National Policy</th>
<th>National Policy (Regulation)</th>
<th>Government Programs</th>
<th>Primary &amp; Secondary Education</th>
<th>R&amp;D Transfer</th>
<th>Commercial Infrastructure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Japan</td>
<td>Negative</td>
<td>Negative</td>
<td>Negative</td>
<td>Negative</td>
<td>Negative</td>
<td>Negative</td>
<td>Negative</td>
</tr>
<tr>
<td>France</td>
<td>Positive</td>
<td>Positive</td>
<td>Positive</td>
<td>Negative</td>
<td>Negative</td>
<td>Negative</td>
<td>Negative</td>
</tr>
<tr>
<td>Germany</td>
<td>Positive</td>
<td>Positive</td>
<td>Negative</td>
<td>Negative</td>
<td>Positive</td>
<td>Positive</td>
<td>Positive</td>
</tr>
<tr>
<td>Italy</td>
<td>Negative</td>
<td>Negative</td>
<td>Negative</td>
<td>Negative</td>
<td>Positive</td>
<td>Positive</td>
<td>Positive</td>
</tr>
<tr>
<td>UK</td>
<td>Negative</td>
<td>Negative</td>
<td>Negative</td>
<td>Negative</td>
<td>Positive</td>
<td>Positive</td>
<td>Positive</td>
</tr>
<tr>
<td>USA</td>
<td>Negative</td>
<td>Negative</td>
<td>Negative</td>
<td>Negative</td>
<td>Positive</td>
<td>Positive</td>
<td>Positive</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Internal Market Dynamics</th>
<th>Internal Market Openness</th>
<th>Physical Infrastructure</th>
<th>Cultural and Social Norms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Japan</td>
<td>Positive</td>
<td>Positive</td>
<td>Positive</td>
<td></td>
</tr>
<tr>
<td>France</td>
<td>Positive</td>
<td>Positive</td>
<td>Negative</td>
<td></td>
</tr>
<tr>
<td>Germany</td>
<td>Positive</td>
<td>Positive</td>
<td>Positive</td>
<td></td>
</tr>
<tr>
<td>Italy</td>
<td>Positive</td>
<td>Positive</td>
<td>Negative</td>
<td></td>
</tr>
<tr>
<td>UK</td>
<td>Positive</td>
<td>Positive</td>
<td></td>
<td></td>
</tr>
<tr>
<td>USA</td>
<td>Positive</td>
<td>Positive</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Xavier et al. (2016)
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>
<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>NA</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>
<td></td>
<td></td>
</tr>
<tr>
<td>Finance</td>
<td>Value Most Negative</td>
<td>NA</td>
</tr>
<tr>
<td>Regulation</td>
<td>Value Most Negative</td>
<td>NA</td>
</tr>
<tr>
<td>Primary &amp; Secondary Education</td>
<td>Value Most Negative</td>
<td>NA</td>
</tr>
<tr>
<td>Internal Market Dynamics</td>
<td>Value Most Positive</td>
<td>NA</td>
</tr>
<tr>
<td>Internal Market Openness</td>
<td>Value Most Positive</td>
<td>NA</td>
</tr>
<tr>
<td>Physical Infrastructure</td>
<td>Value Most Positive</td>
<td>NA</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

Global Entrepreneurship Monitor (GEM), February. What is GEM? GEM (http://www.gemconsortium.org/What-is-GEM)


Isobe, T., and Yahagi, T., Entrepreneurship and Economic Growth (Kigyo to Keizaiseicho) in Japanese, Keio University Press, p 159, p 229, p 249, p 253


References in Japanese were translated by the author.