

Japan Unchanged 14th Place

The Potential Competitiveness

- The potential competitiveness ranking of 50 nations and territories has been compiled. Potential competitiveness here denotes the extent to which a nation or a region will be able to increase per capita Gross Domestic Product (GDP) in the coming decade or so.
- Hong Kong has remained on top for six consecutive years. And Singapore was in 2nd place and the United States was in 3rd place.
- Taking total population factor into account, China was in 1st place, United States was in 2nd place, India was in 3rd place, Japan was in 4th place.
- The United States remains 3rd place. It has declined in “government” and “finance” because of the crisis, but, it maintains competitiveness in “science and technology”, “internationalization” and “education”.
- Japan was in 14th place in the 2010 survey, the same position in the 2009 survey. Ranking of Japan was calculated without taking the effects of the Great Tohoku-Kanto Earthquake into account.

* The ranking adopted the factors (data of indices) that accelerate the economic growth by the theories. It shows the reason for the choice of each index.

1. Ranking Results

United States remain 3rd

The latest potential competitiveness ranking shows that Hong Kong has remained in 1st place for six consecutive years (Table 1 and Figure 1). Singapore was in second place and the United States was in third place.

After the global financial crisis, United States has moved down by two steps in “government” but it has moved up by two steps in “finance”. It ranked high in “internationalization”, “education” and “science and technology”. It indicates the United States still maintains long term potential competitiveness.

In this survey, we used the data of 2008 and 2009, so that reflected the global financial crisis. Indicator of each nation and territory showed large change, but the relative position did not change to a large extent.

When we examine Hong Kong by items, it is in first place in “internationalization” and “finance” and in second place in “enterprises” and “infrastructure.” Market capitalization per GDP dropped sharply in 2008, but increased again in 2009 and the level rose beyond the position before crisis. Singapore, which comes second in overall competitiveness, is in first place in “enterprises” and “infrastructure.”

China has recovered from 35th place to 34th place. China became second biggest nation in the world in terms of scale of GDP. But the level of GDP per capita is still very low. The reason of relatively low ranking attributes the character of China. This survey measured all of the regions including the hinterlands, which have lagged behind in economic development.

We attempt to make another type of ranking which we take population factor into account. The 1st place is China, followed by United States in 2nd place and India in 3rd place. Surprisingly Japan retains 4th place. Because Japan's population is in 8th place during 50 nations and regions, and its size is larger than European countries and city states such as Hong Kong and Singapore.

Table 1 Rankings of the top three countries

	Hong Kong	Singapore	United States
Overall	1 (1)	2 (2)	3 (3)
Internationalization	1 (1)	3 (3)	2 (2)
Enterprises	2 (2)	1 (1)	4 (4)
Education	26 (26)	39 (38)	2 (2)
Finance	1 (1)	3 (5)	28 (30)
Government	6 (3)	3 (2)	34 (32)
Science and technology	24 (24)	21 (21)	1 (1)
Infrastructure	2 (2)	1 (1)	13 (11)
IT	3 (5)	13 (10)	14 (14)

Note: Numbers in parentheses are 2009 rankings

Population Adjusted Ranking (for reference)

Ranking	nations and territories	Potential Competitiveness Ranking (deviation)	Population (2008, 100million)	Population Adjusted Index (Japan=100)
1	China	44.9	13.2	591
2	United States	66.5	3.0	312
3	India	34.9	11.4	204
4	Japan	57.5	1.3	100
5	Russia	48.6	1.4	78
6	Germany	60.6	0.8	71
7	Brazil	40.5	1.9	63
8	Indonesia	37.7	2.3	58
9	United Kingdom	58.6	0.6	50
10	France	57.6	0.6	49

Note: Population Adjusted Index is obtained by multiplying Potential Competitiveness Ranking (deviation) by population.

Japan's Competitiveness still weak

In the 2010 survey, Japan was in 14th place (Table 2), the same ranking as previous year's. It was in the 6th place in 1980, 9th place in 1990, but it dropped considerably to 15th place in 2000. It recovered in 12th place in 2008, but after that it could not move up.

But, all of these rankings (including Japan's) were calculated and arranged by the data before The Great Tohoku-Kanto Earthquake. So, they did not reflect the impact of the earthquake.

Table 2 Japan's ranking

	Deviation			Ranking		
	2009	2010	Change	2009	2010	Change
Overall	57.8	57.5	-0.3	14	14	0
Internationalization	50.1	49.2	-0.9	16	18	2
Enterprises	65.7	65.7	0.0	5	5	0
Education	57.5	57.7	0.2	14	14	0
Finance	44.8	44.1	-0.6	41	42	1
Government	51.7	52.0	0.3	30	26	-4
Science and technology	69.0	68.8	-0.2	2	2	0
Infrastructure	48.9	48.9	-0.1	27	27	0
IT	56.2	54.8	-1.4	20	21	1

Note: - (minus) indicates a rise in ranking.

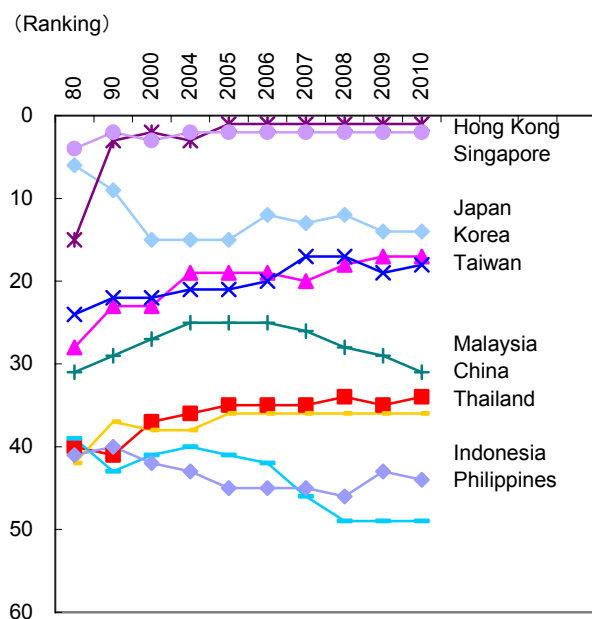
Korea and Taiwan gradually going up

The latest findings on the potential competitiveness of Asian countries and regions show that Hong Kong is at the top (Figure 1). Singapore is also strong at 2nd place, followed by Japan.

South Korea and Taiwan are about the same ranking. In the long run, South Korea and Taiwan are going up gradually. The indices in "Finance" and "IT" have moved up in 2010 compared to in 2000.

In the Association of Southeast Asian Nations (ASEAN), the ranking is Singapore, Malaysia, Thailand, Indonesia and the Philippines in descending order. The Indonesia's ranking has improved, while Philippine's ranking made no improvement.

Figure 1 Rankings of Potential Competitiveness in Asian countries or regions



Decline of Ireland and Greece in ranking

Regarding competitiveness of “government”, Ireland has dropped by seventeen steps to 27th place. Greece dropped by five steps (29th place), and Spain dropped five steps (12th place). Ranking of Ireland and Greece in “Finance” also dropped. In this survey, we used the fiscal deficit data in 2008. In 2009, deficit of these nations may increase and this will lead to a negative impact on their competitiveness.

Germany has improved by one step (4th place) compared to previous survey, and France has moved up by two steps (13th place).

2. Ranking Method

Significance of Potential Competitiveness

In this project, we have adopted per-capita GDP as an overall competitiveness indicator. The greater the per-capita capital and the higher the productivity for a given period, the growth of per-capita income would grow more. A competitive country is one that can provide products or services to domestic or foreign markets efficiently. An appropriate comprehensive indicator that measures such competitiveness should be based on per-capita output.

Determining factor for competitiveness

We have selected factors that increase the per-capita of GDP pursuant to economic theory. Based on eight determinants of competitiveness: (1) internationalization, (2) enterprises, (3) education, (4) finance, (5) government, (6) science and technology, (7) infrastructure, and (8) IT (information technology), we have generated overall potential competitiveness indices using Principal Component Analysis.

Competitiveness is measured in various ways. This project discusses “potential competitiveness”, which is defined not as an outcome of economic growth, but as an ability to be competitive in future.

The measure primarily seeks to determine if a country is equipped with the necessary groundwork for future improvement in competitiveness. For example, high-level education and good infrastructure mean strong potential competitiveness.

Table 3 Indicators adopted for each item

Item	Indicator			
Internationalization (average)	Export of goods and services (ratio to GDP and absolute amount)	Import of goods and services (ratio to GDP and absolute amount)	Outflow of direct investment (ratio to GDP and absolute amount)	Inflow of direct investment (ratio to GDP and absolute amount)
Enterprises (estimate)	Ratio of combined exports & imports to GDP (adjustment of GDP factor)	Labor productivity of manufacturing industry	Developing country dummy	
Education (estimate)	Rate of enrollment in higher education	TOEFL scores	Average years of school attendance	Ratio of government education expenditure to GDP
Finance (estimate)	Ratio of bank liquidity reserves to its assets (opposite sign)	Ratio of credit to private sector to total domestic credit	Ratio of stock market capitalization to nominal GDP	
Government (estimate)	Ratio of customs duties to tax revenue (opposite sign)	Ratio of budget balance to GDP	Inflation (opposite sign)	
Science and Technology (product log)	Cumulative number of patents granted to U.S.	Number of R&D researchers per population		
Infrastructure (estimate)	Aircraft departures per capita	Containers handled per capita	Rate of power transmission/distribution loss	Ratio of paved roads
IT (principal component analysis)	Rate of fixed-line phone diffusion	Rate of mobile phone diffusion	Rate of PC diffusion	Rate of Internet diffusion
	Rate of broadband diffusion			

Note: The above indicators have been used to compute competitiveness for the latest period.

3. Thoughts on competitiveness

Competitiveness may be defined in many ways. When an indicator is assumed to express competitiveness, it is important to determine if it represents the “cause” or the “effect” of competitiveness. For example, high-level education or labor productivity is a cause of a nation’s strong competitiveness, while an increase in income is an indicator that represents the effect of such competitiveness.

One of the existing, representative competitiveness indicators is provided by The World Competitiveness Yearbook, published by the International Institute for Management Development (IMD) in Switzerland. The IMD develops rankings of competitiveness using a variety of different indicators but does not give reasons for its selection of such indicators. While the IMD uses questionnaire surveys, our project features quantitative analyses based on available socio-economic data.

4. Time relationship between potential competitiveness and

Per-capita GDP increment

Potential competitiveness computed with various indicators shows the potential capabilities of a country at a given moment to compete over the next ten years. For instance, the potential competitiveness indicator as of 1980 indicates a country's ability to increase per-capita GDP during the 1980s.

Potential competitiveness as of '80 → influential on competitiveness in the 1980s
Potential competitiveness as of '90 → influential on competitiveness in the 1990s
Potential competitiveness as of the latest period
→ will be influential on competitiveness over the next 10 years

Potential competitiveness and realized competitiveness do not correspond completely because potential competitiveness indicators are based on data provided at the initial point in time of the period under measurement and we need to acknowledge the possibility of unforeseen events occurring over the next ten years. For example, Japan's potential competitiveness, which ranked ninth as of '90, resulted in realized competitiveness falling to 14th place as measured by the '90-'98 per-capita GDP due to the collapsed financial bubble and the delayed disposal of subsequent non-performing loans.

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Appendix Table 1 Overall Ranking

	80		90		2000		2005		2010	
1	United States	73.0	United States	70.1	United States	69.4	Hong Kong	71.3	Hong Kong	76.2
2	Switzerland	66.4	Singapore	64.8	Hong Kong	68.6	Singapore	68.7	Singapore	71.5
3	Sweden	63.6	Hong Kong	63.1	Singapore	67.5	United States	67.7	United States	66.5
4	Singapore	63.0	United Kingdom	62.9	Switzerland	63.5	Switzerland	62.7	Germany	60.6
5	Germany	62.6	Germany	62.8	Norway	61.8	Sweden	61.0	Switzerland	60.5
6	Japan	62.0	Norway	62.5	Sweden	61.4	Germany	60.6	Sweden	60.0
7	Netherlands	61.9	Switzerland	62.1	United Kingdom	61.1	United Kingdom	60.5	Netherlands	59.5
8	Denmark	61.4	Netherlands	61.6	Netherlands	61.1	Netherlands	60.3	Norway	59.1
9	Canada	61.0	Japan	61.5	Finland	60.7	Canada	59.8	United Kingdom	58.6
10	Norway	60.5	Sweden	61.1	Germany	60.7	Ireland	58.9	Belgium	58.4
11	United Kingdom	60.5	Canada	61.0	Canada	59.6	Belgium	58.6	Canada	58.0
12	Finland	60.0	France	59.7	Ireland	59.4	Denmark	58.2	Ireland	57.9
13	France	59.9	Belgium	59.4	Belgium	58.2	Finland	58.0	France	57.6
14	Austria	59.3	Denmark	58.7	Denmark	58.0	Norway	57.9	Japan	57.5
15	Hong Kong	59.0	Ireland	57.9	Japan	58.0	Japan	57.9	Denmark	57.2
16	Australia	57.8	Finland	57.7	France	57.5	France	57.4	Finland	56.3
17	Belgium	57.2	Australia	57.5	Australia	56.1	Australia	56.7	South Korea	55.9
18	Italy	55.3	New Zealand	57.2	New Zealand	55.7	New Zealand	56.1	Taiwan	55.8
19	New Zealand	54.9	Austria	55.0	Austria	54.2	South Korea	55.4	Australia	55.3
20	Czech Rep.	53.7	Israel	53.9	Israel	54.0	Austria	55.3	New Zealand	53.9
21	Ireland	52.8	Italy	53.3	Italy	53.6	Taiwan	54.8	Austria	53.5
22	Russia	52.3	Taiwan	53.3	Taiwan	53.4	Israel	54.6	Spain	53.1
23	Israel	50.4	South Korea	51.3	South Korea	53.1	Spain	53.6	Israel	52.8
24	Taiwan	50.2	Spain	51.0	Spain	52.6	Italy	53.1	Italy	51.6
25	Spain	49.4	Russia	49.5	Greece	48.5	Malaysia	49.5	Hungary	51.1
26	Greece	49.0	Czech Rep.	48.8	Czech Rep.	48.5	Czech Rep.	48.2	Saudi Arabia	50.2
27	South Africa	48.1	Saudi Arabia	47.6	Malaysia	48.0	Greece	48.1	Czech Rep.	50.0
28	South Korea	47.4	South Africa	47.5	Portugal	46.9	Hungary	47.5	Russia	48.6
29	Hungary	47.1	Malaysia	47.1	Hungary	46.6	Russia	47.1	Greece	48.3
30	Portugal	45.8	Greece	46.9	Russia	46.5	Portugal	46.4	Poland	47.3
31	Malaysia	45.6	Hungary	45.4	Poland	46.5	Poland	46.1	Malaysia	47.1
32	Argentina	44.4	Portugal	45.1	South Africa	46.2	South Africa	45.7	Portugal	46.1
33	Saudi Arabia	44.2	Poland	44.6	Saudi Arabia	44.6	Saudi Arabia	44.9	Chile	45.7
34	Poland	42.6	Mexico	43.6	Argentina	43.5	Chile	44.5	China	44.9
35	Venezuela	42.4	Chile	43.3	Chile	43.1	China	44.2	South Africa	44.2
36	Mexico	41.9	Argentina	42.9	Mexico	43.0	Thailand	43.7	Thailand	42.5
37	Chile	41.8	Thailand	42.1	China	42.8	Mexico	42.7	Argentina	42.4
38	Brazil	41.7	Venezuela	41.7	Thailand	42.4	Argentina	41.7	Mexico	41.1
39	Philippines	40.6	Turkey	41.5	Brazil	40.0	Brazil	40.5	Turkey	40.7
40	China	39.9	Indonesia	41.2	Turkey	39.5	Venezuela	39.7	Brazil	40.5
41	Indonesia	39.4	China	39.7	Philippines	39.3	Philippines	38.5	Peru	40.3
42	Thailand	39.2	Brazil	39.5	Indonesia	39.1	Peru	38.0	Vietnam	38.7
43	Turkey	37.9	Philippines	38.8	Venezuela	38.5	Turkey	37.9	Colombia	37.8
44	Peru	37.8	Egypt	38.2	Peru	38.3	Colombia	37.5	Indonesia	37.7
45	Iran	37.6	Iran	36.9	Colombia	36.8	Indonesia	37.5	Iran	37.1
46	Egypt	36.9	Colombia	36.4	Egypt	36.0	India	35.1	Venezuela	36.5
47	India	36.8	Peru	34.5	Iran	36.0	Vietnam	34.9	Egypt	35.8
48	Vietnam	36.6	India	33.9	Vietnam	35.4	Egypt	34.8	India	34.9
49	Colombia	35.5	Vietnam	32.5	India	33.2	Iran	34.2	Philippines	33.2
50	Pakistan	31.8	Pakistan	31.6	Pakistan	31.5	Pakistan	32.1	Pakistan	30.1