

# Hinrich Foundation Sustainable Trade Index

## Taiwan Highlights

### Introduction

The Hinrich Foundation commissioned the Economist Intelligence Unit to build the Sustainable Trade Index using 24 indicators to measure 19 economies in Asia and the U.S. across the three recognized pillars of sustainability: **economic growth, social capital and environmental protection.**




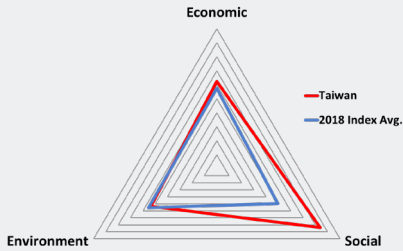



The Index measures the readiness of each economy to participate in global trade in a way that creates sustainable growth, encourages foreign direct investment, and support from multilateral development agencies.

The Index was created for the purpose of stimulating meaningful discussion of the full range of considerations for policy makers, business and civil society when engaging in international trade.



The Hinrich Foundation launched the inaugural Sustainable Trade Index in 2016. Visit [www.hinrichfoundation.com](http://www.hinrichfoundation.com) to download the 2018 and 2016 Index.

### Taiwan Overview

|  |  |  |  |
|--|--|--|--|
| <b>GDP per capita</b><br> <b>US \$22,540</b>                                    | <b>Population</b><br> <b>23.5 million</b>   | <b>Exports % of GDP</b><br> <b>73.5% of GDP</b> |  |
| <b>GDP growth</b><br> <b>5.6% growth</b><br><small>(average since 2010)</small> | <b>Labour Force</b><br> <b>11.7 million</b> | <b>FDI net inflow</b><br> <b>US\$11 billion</b> |  |

### Overall performance

Taiwan ranked sixth overall in the 2018 Index—the same score as 2016. Although its overall score stayed the same, Taiwan saw a big swing in terms of performance on both the economic and social pillars. Taiwan's decrease on the economic pillar was offset with a top performance on the social pillar, where it surpassed Japan, South Korea and the United States for the number one position.

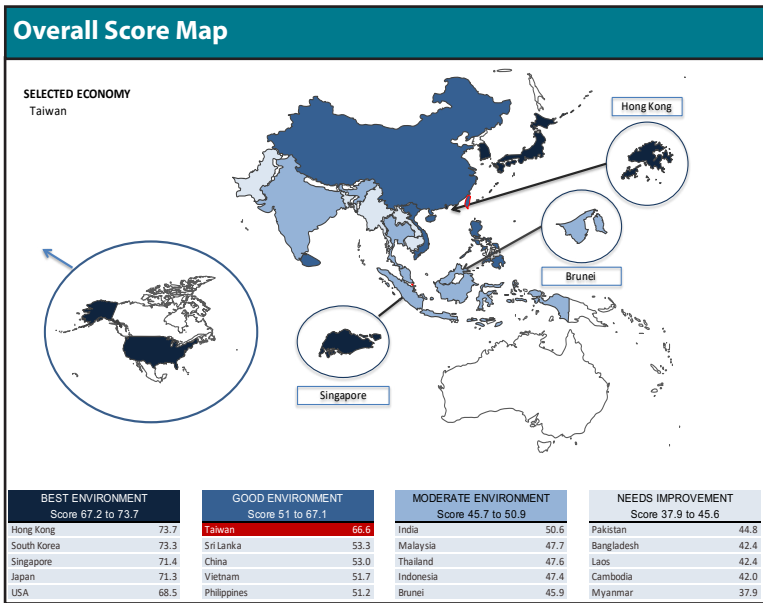
- **Economic:** Taiwan saw its largest decrease in the economic pillar, dropping from fourth place in 2016 to eighth in 2018.
- **Social:** Taiwan scored first overall in the social pillar, showing its ability to balance economic success with low levels of inequality—a pressing issue for other upper-income economies in the region.
- **Environmental:** Taiwan's lowest performance was on the environmental pillar, where it scored at the bottom of all upper-income economies due to high levels of transfer emissions and low levels of environmental standards of trade.

SOURCE: Statistical Yearbook 2016<sup>1</sup> and Hinrich Foundation Sustainable Trade Index 2018

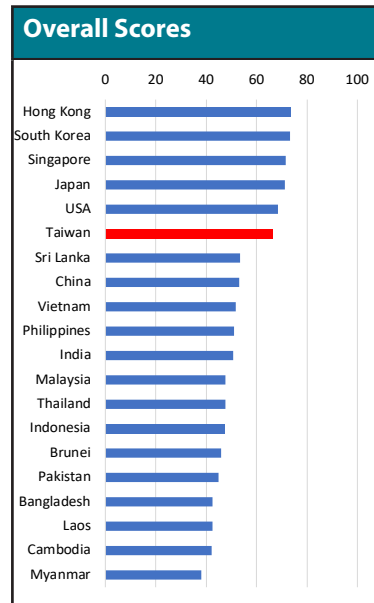
| Overall Index Performance |           |           |        |
|---------------------------|-----------|-----------|--------|
| Pillar                    | 2018 Rank | 2016 Rank | Change |
| Economic                  | 8         | 4         | -4 ▼   |
| Social                    | 1         | 4         | +3 ▲   |
| Environmental             | 10        | 10        | = ■    |
| Overall                   | 6         | 6         | = ■    |

Taiwan's score on each pillar compared with 2016 Sustainable Trade Index results.

<sup>1</sup> Directorate-General of Budget, Accounting and Statistics, "Statistical Yearbook of the Republic of China 2016", October 2017, [https://eng.stat.gov.tw/public/data/dgbas03/bs2/yearbook\\_eng/Yearbook2016.pdf](https://eng.stat.gov.tw/public/data/dgbas03/bs2/yearbook_eng/Yearbook2016.pdf)



SOURCE: Hinrich Foundation Sustainable Trade Index 2018



SOURCE: Hinrich Foundation Sustainable Trade Index 2018

## Areas of top performance and improvement

- Top performance:** Technological infrastructure. Taiwan's best performance in the 2018 Index was in the technological infrastructure indicator, where it recorded a perfect 100 score and tied for the number one ranking with six other economies. This indicator measures an economy's IT infrastructure, which impacts its ability to attract foreign direct investment and create a competitive environment for exporting.
- Worst performance:** Foreign direct investment (FDI). Taiwan tied for last place with South Korea for this indicator, which measures inward FDI as a share of GDP. FDI is considered an important source of investment that supports an economy's trade and economic growth.
- Most improved:** Air pollution. Taiwan decreased its levels of air pollution and as a result climbed five spots to sixth place overall for this indicator, which measures the levels of particulate matter 2.5 (PM 2.5) in an economy.

| Top & Bottom Indicators          |            |            |
|----------------------------------|------------|------------|
| Indicator                        | Index Avg. | 2018 Score |
| Current account liberalization   | 90.7       | 100        |
| Technological infrastructure     | 62.5       | 100        |
| Labour standards                 | 39.7       | 94         |
| Deforestation                    | 66.8       | 97         |
| Growth in labour force           | 64.0       | 43         |
| Gross fixed capital formation    | 42.2       | 22         |
| Foreign direct investment        | 13.0       | 0          |
| Environmental standards in trade | 66.7       | 33         |

SOURCE: Hinrich Foundation Sustainable Trade Index 2018

## Economic pillar

Taiwan placed eighth overall in the economic pillar for the 2018 Index, a decrease of four positions from the 2016 Index. Taiwan continues to serve as an example of Asian economies that were able to evolve from low-value added manufacturing to the production of high-value technology and services.

### KEY TAKEAWAYS:

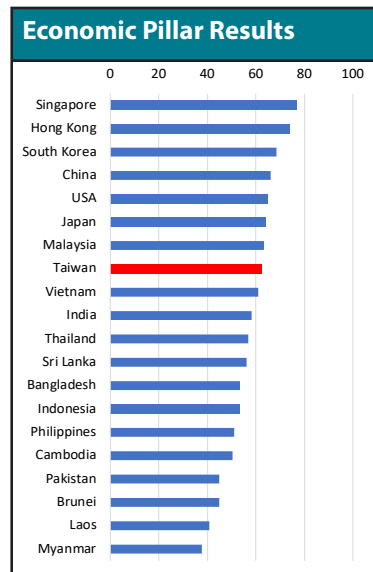
- Taiwan dropped four places on the economic pillar, scoring eighth overall in the 2018 Index.
- Taiwan placed toward the top the Index in the technology indicators, which can have a dramatic multiplier effect on overall economic growth and trade.
- Taiwan's lowest score was in foreign direct investment (FDI).

Taiwan scored well in both technological trade indicators. In the 2018 Index, Taiwan tied for first place in the technological infrastructure indicator with Hong Kong, Japan, Singapore, South Korea, and the United States. Taiwan also performed well in the technological innovation indicator, which captures an economy's ability to innovate and create sophisticated goods. For this indicator, Taiwan scored third overall— trailing only South Korea and Japan.

Taiwan had the fifth lowest trade costs of all nations in the Index, behind Singapore, the US, Hong Kong and Japan. The trade costs indicator is a composite of four important factors: infrastructure, logistics, corruption and legal system. Of these four indicators, Taiwan scored best for low corruption (=2) and quality infrastructure (=3).

Taiwan's biggest economic pillar decrease in the 2018 Index was in the exchange rate volatility indicator, where Taiwan fell 13 spots from second place in 2016 to 15th place in 2018. This indicator is measured using the standard deviation of an economy's exchange rate to its major trading partners. As an indicator, exchange rate volatility is a potential source of uncertainty when conducting trade.

Taiwan's overall lowest scoring economic indicator was foreign direct investment (FDI), which measures inward FDI as a share of GDP. Taiwan's inward FDI represented less than one percent of the economy's total GDP, reflecting its low score in this indicator. FDI is considered an important source of investment that supports an economy's trade and economic growth. Conversely, Taiwanese companies are well known for their foreign direct investment into other Asian economies.



SOURCE: Hinrich Foundation Sustainable Trade Index 2018

| Indicator                              | Index Avg. | 2018 Score |
|--|------------|------------|
| Current account liberalization         | 90.7       | 100        |
| Technological infrastructure           | 62.5       | 100        |
| Technological innovation               | 26.2       | 71         |
| Tariffs & non- tariff barrier to trade | 59.4       | 75         |
| Foreign trade and payments risk        | 65.3       | 82         |
| Financial sector depth                 | 43.5       | 73         |
| Trade costs                            | 51.2       | 75         |
| Exchange rate volatility               | 66.7       | 60         |
| Export product concentration           | 84.6       | 84         |
| Export market concentration            | 68.3       | 44         |
| Growth in per capita GDP               | 66.7       | 47         |
| Growth in labour force                 | 64.0       | 43         |
| Gross fixed capital formation          | 42.2       | 22         |
| Foreign direct investment              | 13.0       | 0          |

SOURCE: Hinrich Foundation Sustainable Trade Index 2018

**CASE STUDY: EAST ASIAN TIGER ECONOMIES SHOWING THE WAY ON FDI**

The East Asian Tiger economies—Hong Kong, Singapore, South Korea, Taiwan, traditionally, but arguably today China’s eastern seaboard too—have over the past few decades pioneered a model of rapid industrialisation based on huge inflows of foreign direct investment (FDI). There are some common characteristics in all these economies—from special economic zones and tax holidays to a bountiful labour supply—that have made them attractive to FDI as their economies have evolved from low-skilled to higher-value-add manufacturing and services. All that has occurred in tandem with dramatic improvements in standards of living. It is a model that many other emerging markets are trying to emulate.<sup>1</sup>

**Social pillar**

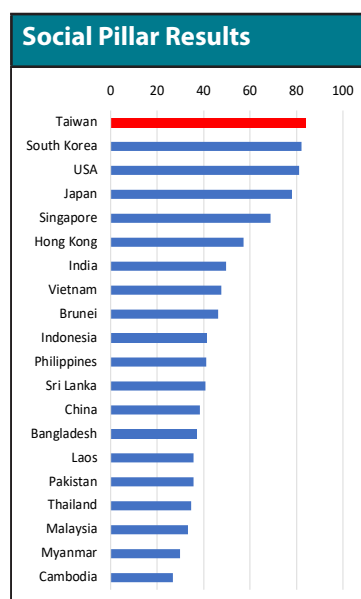
In the 2018 Index, there was an overall stagnation across all economies on the social pillar. Inequality and political instability are on the rise across the region, a trend that transcends wealth and development status. Taiwan was the top performer on the social pillar in 2018, balancing political stability with low inequality, high labour standards and a well-educated workforce.

**KEY TAKEAWAYS:**

- Taiwan topped the social pillar for the 2018 Index, advancing three places from the 2016 Index.
- Taiwan scored in the top five for all four social pillar indicators— the only economy on the Index able to accomplish this feat.
- Taiwan was the top scoring upper-income economy in the inequality pillar, demonstrating its ability to balance economic success with low levels of inequality.

Taiwan saw the largest increase on the social pillar in the inequality indicator, reflecting lower levels of inequality. Taiwan was the top performing upper-income economy in the inequality indicator— improving four spots to third place overall on the 2018 Index. This indicator uses the Gini coefficient to capture the inequality level in an economy between the upper and lower income brackets. Taiwan’s ability to balance economic success with low levels of inequality is impressive, given the fact that other upper-income economies, including the United States and Singapore, have struggled to do this. This export-oriented “growth with equity” model is an area where economies like Japan and Taiwan are succeeding, and other Asian nations are trying to emulate.

Taiwan placed in the top five economies for both labour standards and education attainment. Taiwan’s lowest scoring indicator on the social pillar was in political stability, where it scored fifth overall on the 2018 Index. In general, political stability is a considered a necessary condition for trade, investment and economic growth.



SOURCE: Hinrich Foundation Sustainable Trade Index 2018

| Indicator                     | Index Avg. | 2018 Score |
|-------------------------------|------------|------------|
| Inequality (Gini coefficient) | 62.3       | 87         |
| Labour standards              | 39.7       | 94         |
| Educational attainment        | 38.4       | 89         |
| Political stability           | 57.6       | 65         |

SOURCE: Hinrich Foundation Sustainable Trade Index 2018

<sup>1</sup> Hinrich Foundation Sustainable Trade Index 2018

**CASE STUDY: TAIWAN AN EXAMPLE FOR EMERGING ECONOMIES**

Asia finds itself in the unique position of helping lead and sustain the global economy’s commitment to free and fair trade. It is in this context that the need for sustainability in trade is ever more crucial. Emerging Asian economies would do well to emulate Japan, South Korea and Taiwan, suggests Jayant Menon, lead economist at the Asian Development Bank (ADB). These are the places he believes have best managed trade-dependent growth. “They have had dramatic improvements in their economic conditions without the huge disparities that we see in other countries.” He points to three common factors in the countries: a system of land distribution and land reform that worked well; a broad focus on education, from primary to tertiary levels, encompassing even technical education; and luck—the fact that they were industrialising at a time when the global economy was growing.<sup>2</sup>

## Environmental pillar

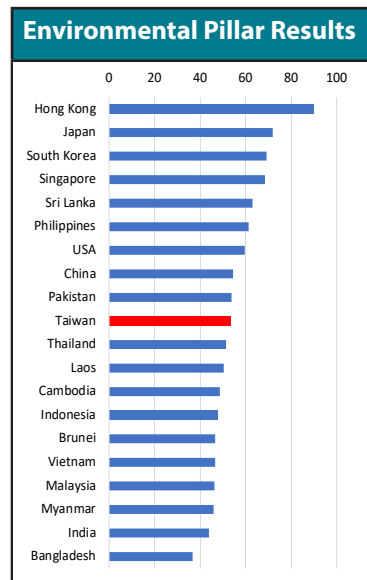
Taiwan’s worst performance for the 2018 Index was on the environmental pillar, where it scored 10th out of 20 economies. While Taiwan saw an improvement in the air pollution indicator due to lower levels of pollution, this increase was tempered by poor scores in the transfer emissions and environmental standards in trade indicators.

**KEY TAKEAWAYS:**

- Taiwan placed 10th overall in the environmental pillar with low levels of deforestation and improved levels of air pollution.
- Taiwan scored at the bottom of all upper-income economies in both transfer emissions and environmental standards of trade indicators— both areas where Taiwan could improve its performance in the future.

Taiwan was able to decrease its levels of air pollution for the 2018 Index, jumping five spots to sixth place overall in this indicator—outscored China and Hong Kong. This indicator, which measures the levels of particulate matter 2.5 (PM 2.5) in an economy, reflects the important link between economic growth, trade and pollution. Taiwan also scored within the top 10 economies with low levels of deforestation and water pollution.

Taiwan witnessed a substantial ranking decrease on the environmental pillar due to higher transfer emissions and lower environmental standards in trade indicators for 2018, scoring at the bottom for upper-income economies in both of these indicators. Taiwan placed 15th overall on the transfer emissions indicator, which measures transfer emissions as a share of an economy’s total territorial emissions (MtCO<sub>2</sub>).



SOURCE: Hinrich Foundation Sustainable Trade Index 2018

| Indicator                           | Index Avg. | 2018 Score |
|-------------------------------------|------------|------------|
| Deforestation                       | 66.8       | 97         |
| Air pollution                       | 67.2       | 81         |
| Water pollution                     | 24.3       | 7          |
| Share of natural resources in trade | 85.3       | 94         |
| Transfer emissions                  | 22.6       | 7          |
| Environmental standards in trade    | 66.7       | 33         |

SOURCE: Hinrich Foundation Sustainable Trade Index 2018

<sup>2</sup> Hinrich Foundation Sustainable Trade Index 2018

# Hinrich Foundation Sustainable Trade Index

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### Additional resources

The Hinrich Foundation commissioned The Economist Intelligence Unit (EIU) to build the Sustainable Trade Index. The Index uses 24 indicators to measure the trade impacts of 19 economies in Asia and the U.S. across the three recognized pillars of sustainability: economic growth, social capital, and environmental protection.

Visit our website at: [www.hinrichfoundation.com/trade-research/sustainable-trade-index](http://www.hinrichfoundation.com/trade-research/sustainable-trade-index) to download additional Sustainable Trade Index resources including:

- **2018 Sustainable Trade Index white paper**- Prepared by the EIU, it presents and analyzes the 2018 Index findings for all 20 economies.
- **Index interactive data set and KPIs**- The comprehensive Index database allows users to directly interact with the Sustainable Trade Index data. For each economy, compare indicators, adjust score weights and visualize data in custom charts and graphs. It's a useful tool for regional comparisons or reviewing the performance of a particular economy.
- **Additional highlight reports for other economies**- Looking for information on other economies in the Sustainable Trade Index? Visit our website to download special reports on all 20 economies featured in the 2018 Index.
- **Index infographics, fact sheets and more!**

### About the Hinrich Foundation

The Hinrich Foundation is a nonprofit organization that undertakes trade-related policy research and development work in Asia. It focuses on creating opportunities, choice and engagement through sustainable and mutually beneficial global trade. The Sustainable Trade Index aims to stimulate positive thinking about global trade and promote behaviors that will lead to better developmental outcomes, engagement and stability.

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| Economic Pillar         |      | Social Pillar           |      | Environmental Pillar    |      |
|-------------------------|------|-------------------------|------|-------------------------|------|
| Australia               | 82.4 | Australia               | 82.4 | Australia               | 82.4 |
| Canada                  | 81.4 | Canada                  | 81.4 | Canada                  | 81.4 |
| China                   | 78.1 | China                   | 78.1 | China                   | 78.1 |
| India                   | 75.2 | India                   | 75.2 | India                   | 75.2 |
| Japan                   | 74.5 | Japan                   | 74.5 | Japan                   | 74.5 |
| South Korea             | 73.8 | South Korea             | 73.8 | South Korea             | 73.8 |
| U.S.                    | 72.9 | U.S.                    | 72.9 | U.S.                    | 72.9 |
| U.K.                    | 71.5 | U.K.                    | 71.5 | U.K.                    | 71.5 |
| Germany                 | 70.8 | Germany                 | 70.8 | Germany                 | 70.8 |
| France                  | 69.9 | France                  | 69.9 | France                  | 69.9 |
| Italy                   | 68.5 | Italy                   | 68.5 | Italy                   | 68.5 |
| Spain                   | 67.2 | Spain                   | 67.2 | Spain                   | 67.2 |
| Sweden                  | 66.8 | Sweden                  | 66.8 | Sweden                  | 66.8 |
| Netherlands             | 65.9 | Netherlands             | 65.9 | Netherlands             | 65.9 |
| Denmark                 | 65.1 | Denmark                 | 65.1 | Denmark                 | 65.1 |
| Belgium                 | 64.3 | Belgium                 | 64.3 | Belgium                 | 64.3 |
| Portugal                | 63.5 | Portugal                | 63.5 | Portugal                | 63.5 |
| Poland                  | 62.7 | Poland                  | 62.7 | Poland                  | 62.7 |
| Czechia                 | 61.9 | Czechia                 | 61.9 | Czechia                 | 61.9 |
| Slovakia                | 61.1 | Slovakia                | 61.1 | Slovakia                | 61.1 |
| Slovenia                | 60.3 | Slovenia                | 60.3 | Slovenia                | 60.3 |
| Lithuania               | 59.5 | Lithuania               | 59.5 | Lithuania               | 59.5 |
| Latvia                  | 58.7 | Latvia                  | 58.7 | Latvia                  | 58.7 |
| Estonia                 | 57.9 | Estonia                 | 57.9 | Estonia                 | 57.9 |
| Average (all economies) | 72.5 | Average (all economies) | 72.5 | Average (all economies) | 72.5 |
| Best Trade 2018         |      | Best Trade 2018         |      | Best Trade 2018         |      |

