

The manufacturing trade balance reveals an economy's structural strengths and weaknesses in terms of technological intensity. It indicates whether an industry performs relatively better (or worse) than total manufacturing and can be interpreted as an indicator of revealed comparative advantage that is based on countries' trade specialisation.

In 2007, only 11 OECD countries and 2 non-members (Israel and Slovenia) show a strong comparative advantage in trade in high-technology manufactures. As in previous years, Switzerland had a trade surplus of over 7%, followed by Ireland with 5%. Trade in high-technology industries represented around 3% of total manufacturing trade in the United States, Mexico and Korea. In Israel and Slovenia the trade surplus was 2% and 1%, respectively. Most countries' comparative advantage in trade in high-technology industries changed little between 1997 and 2007, although there were notable exceptions. It rose by 6 percentage points in Iceland, by 4 percentage points in Switzerland and in South Africa, and by 2 percentage points in Brazil. Over the same period, it dropped by 5 percentage points in Japan and by 3 percentage points in India and in China.

Between 1997 and 2007, the picture was somewhat different for trade in medium-high-technology industries. In particular, more countries had a strong comparative advantage in 2007. As in previous years, Japan led with a surplus of 15%, followed by Germany and Ireland with 7% and 5%, respectively. In 2007, Slovenia was the only non-OECD country to have not only a fairly strong comparative advantage of 2% in trade in medium-high technologies but also to benefit from an increase of 4 percentage points in its contribution to the manufacturing trade balance. Over 1997-2007, the contribution of trade in medium-high-technology industries increased by 13 percentage points in Indonesia, 11 percentage points in Turkey and 6 percentage points in China, despite negative contributions to their overall manufacturing trade balance. In 2007, much of the manufacturing trade balance of these countries relied on the positive contribution of low-technology industries.

Contributions to the trade balance

The contribution to the manufacturing trade balance is calculated as follows:

$$(X_i - M_i) - (X - M) * [(X_i + M_i) / (X + M)],$$

where $(X_i - M_i)$ is the observed manufacturing sector trade balance and $(X - M) * [(X_i + M_i) / (X + M)]$ is the theoretical trade balance.

A positive value for an industry i indicates a structural surplus, while a negative value indicates a structural deficit. The indicator is expressed as a percentage of total manufacturing trade in order to eliminate business cycle variations.

Sources

OECD, STAN Bilateral Trade Database, www.oecd.org/sti/btd.

OECD, STAN Indicators Database, www.oecd.org/sti/stan/indicators.

Going further

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Figure notes

Underlying data for China include trade with Hong Kong, China.

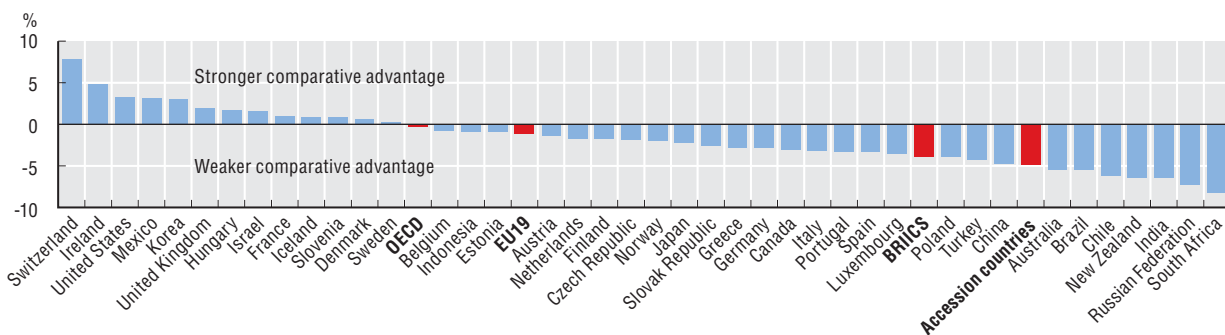
Changes in contribution to the manufacturing trade balance refer to 1999-2007 for Luxembourg, to 2000-07 for South Africa and to 2000-07 for the BRIICS (Brazil, Russian Federation, India, Indonesia, China and South Africa).

3. COMPETING IN THE WORLD ECONOMY

3.3. Manufacturing trade balance by technology intensity

Contribution of high-technology industries to the manufacturing trade balance, 2007

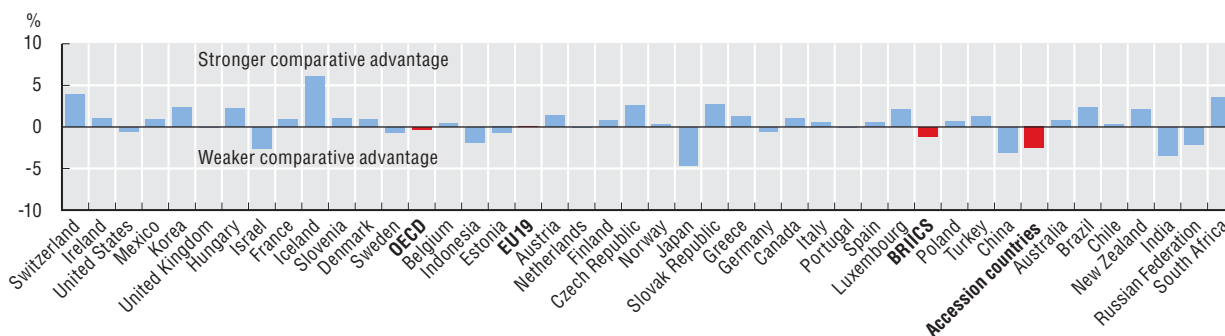
As a percentage of manufacturing trade



StatLink <http://dx.doi.org/10.1787/744524463556>

Change in contribution to the manufacturing trade balance: high-technology industries, 1997-2007

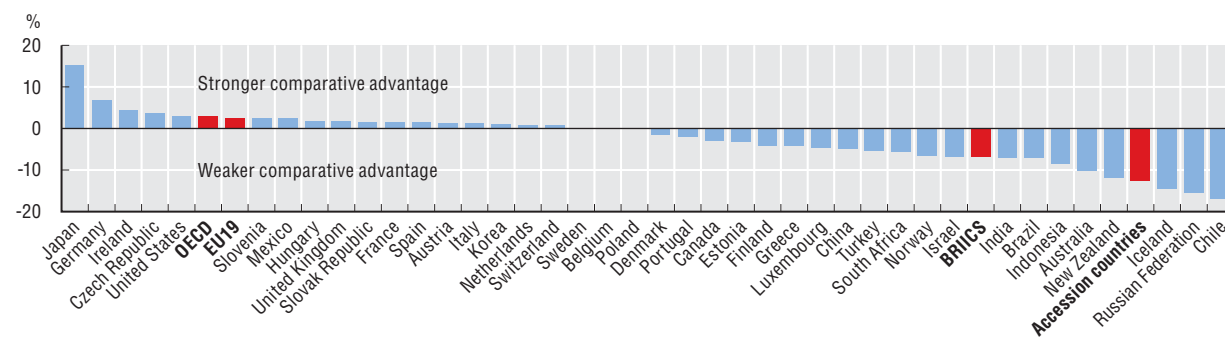
As a percentage of manufacturing trade



StatLink <http://dx.doi.org/10.1787/744542886012>

Contribution of medium-high-technology industries to the manufacturing trade balance, 2007

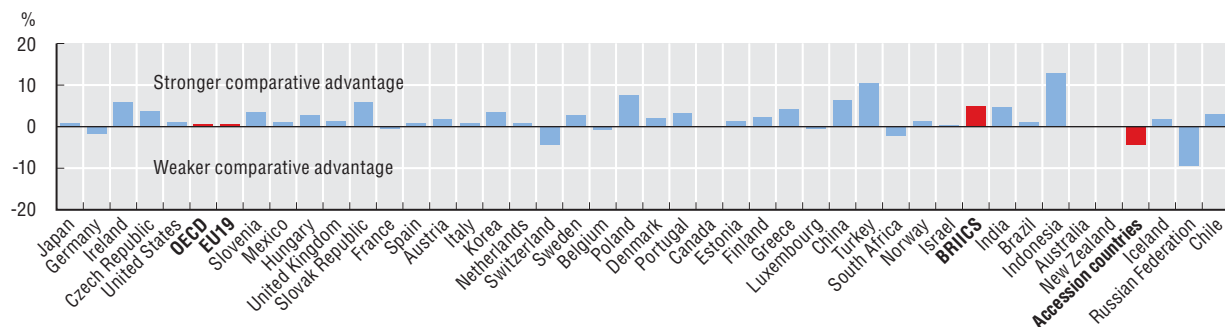
As a percentage of manufacturing trade



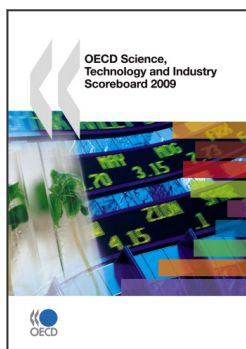
StatLink <http://dx.doi.org/10.1787/744586031377>

Change in contribution to the manufacturing trade balance: medium-high-technology industries, 1997-2007

As a percentage of manufacturing trade



StatLink <http://dx.doi.org/10.1787/744600432311>



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