UNCTAD/STAT/IE/2019/2

INDICATORS EXPLAINED #4
IMPORT PRODUCT CONCENTRATION INDEX

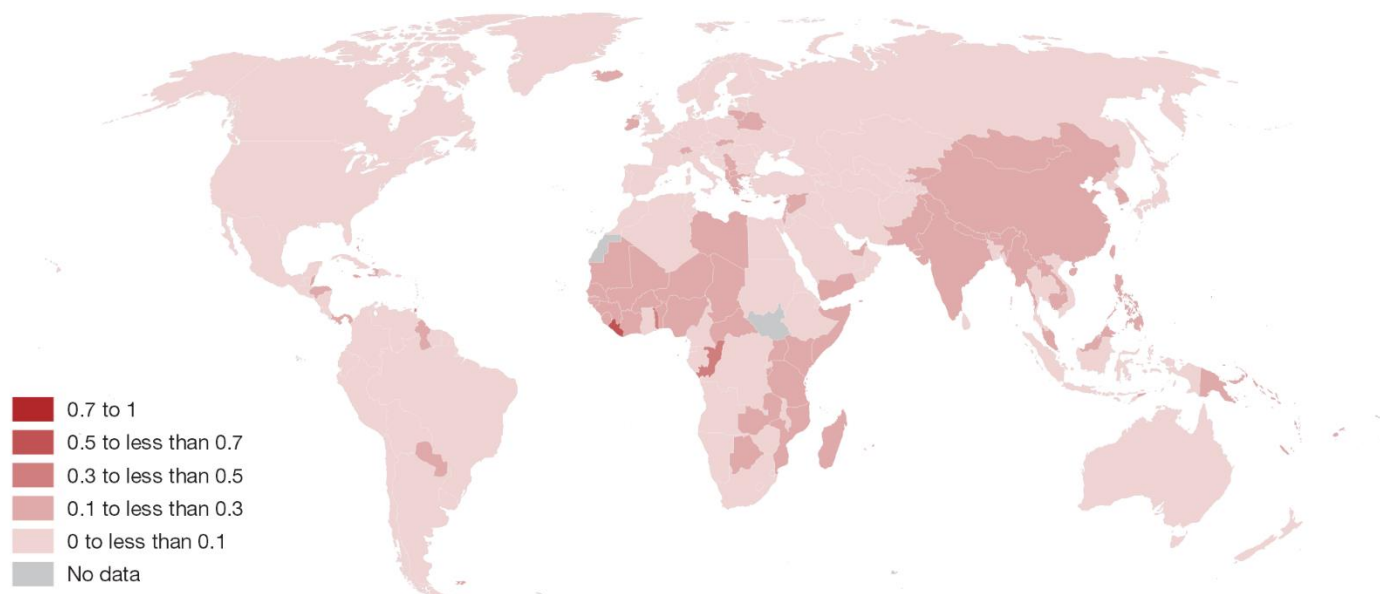## What does this indicator tell us?

This index measures, for each country, the degree of concentration of imports of goods. It tells us if a large share of country's imports relies on a small number of commodities or, conversely, if imports are well distributed among many types of products. The evolution through time can also highlight changes in the structure of production and/or consumption of a country.

Unlike the *market concentration index* (see Indicators Explained #2), which gives the level of import concentration at product level (i.e., if the imports of product X are concentrated on some destination countries), the product concentration index measures the degree of import concentration at country level (i.e., if the imports in country A are concentrated on some products).

Imports in most countries have a low level of concentration

Product concentration index of imports, 2017

0.7 to 1
0.5 to less than 0.7
0.3 to less than 0.5
0.1 to less than 0.3
0 to less than 0.1
No data

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Is there a link between product concentration of imports and economic risks?

Product concentration index of imports, 2017

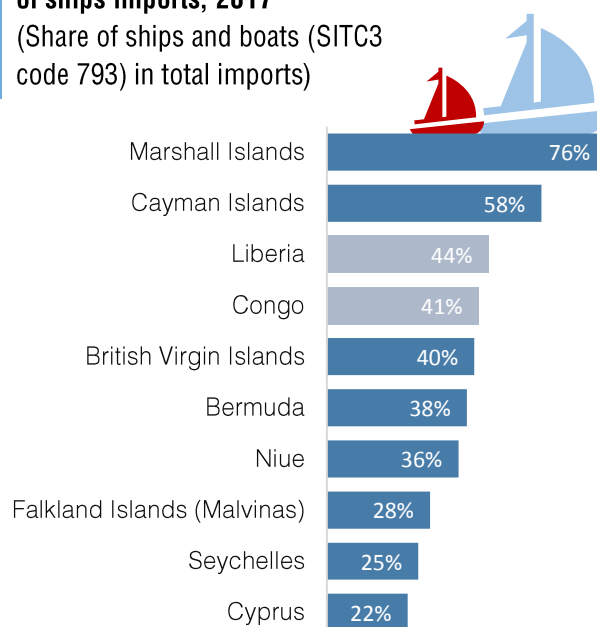| Country	Index
Kazakhstan	0.045
Iran (Islamic Rep. of)	0.047
Iraq	0.049
Bosnia and Herzegovina	0.049
Venezuela (Bolivarian Rep. of)	0.050
Denmark	0.052
Angola	0.052
Russian Federation	0.052
Poland	0.053
Austria	0.053

Unlike the product concentration index of exports (see Indicators Explained #3), there is no clear correlation between product concentration of imports and economic risks. A high import concentration on one commodity could leave an economy vulnerable to changes in international prices or in supply. But a low import concentration might also introduce risks if it is caused by a country's low productive capacity, with the results that it is obliged to import most of the goods that it consumes, leaving it vulnerable to changes in foreign exchange rates. On the other hand, a low concentration could also mean that the country is well integrated in the global markets and its supply of imported goods is well diversified, reducing the risk of a supply shock. Among the countries with the lowest concentration of imports in the table, we can find both situations.

The importance of ships for island states

The imports of ships, boats and other floating structures represent a high proportion of total trade inflows in many **small island developing States (SIDS)**. These economies depend to a great extent on the sea, including fishing, touristic services or maritime transportation. The unit price of ships and similar products is high compared to other imported goods, which could contribute to their large share of total trade value. Indeed, ships accounted for 3.15% of all imports to SIDS in 2017, significantly higher than the world average of 0.46%. The chart shows the ten economies with the highest imports of ships relative to total imports. With the exception of two (Liberia and the Republic of Congo), all are island economies.

Top 10 countries with highest concentration of ships imports, 2017
(Share of ships and boats (SITC3 code 793) in total imports)

| Country	Share
Marshall Islands	76%
Cayman Islands	58%
Liberia	44%
Congo	41%
British Virgin Islands	40%
Bermuda	38%
Niue	36%
Falkland Islands (Malvinas)	28%
Seychelles	25%
Cyprus	22%

The weight of gold

Developed countries generally show low levels of import concentration due to their high integration in global markets and the diversity of their domestic economies. The case of **Switzerland**, however, stands out as one of the few developed countries with a high import concentration. But this has not always been the case. The high concentration began only in 2012. What happened?

The answer is gold. Switzerland has long been a global center for the refining and trading of gold. However, the federal authorities in Switzerland excluded this commodity from trade statistics until recently owing to its monetary role. When this practice was abolished, the share of gold in total imports jumped from less than 1% in 2011 to 33% the next year, and so did the country's import concentration index, as shown in the chart. This revealed the importance of gold for Swiss international trade. Although nothing in reality has changed, the statistics now confirm that Switzerland is the largest importer and exporter of gold in the world.

Product concentration index of imports
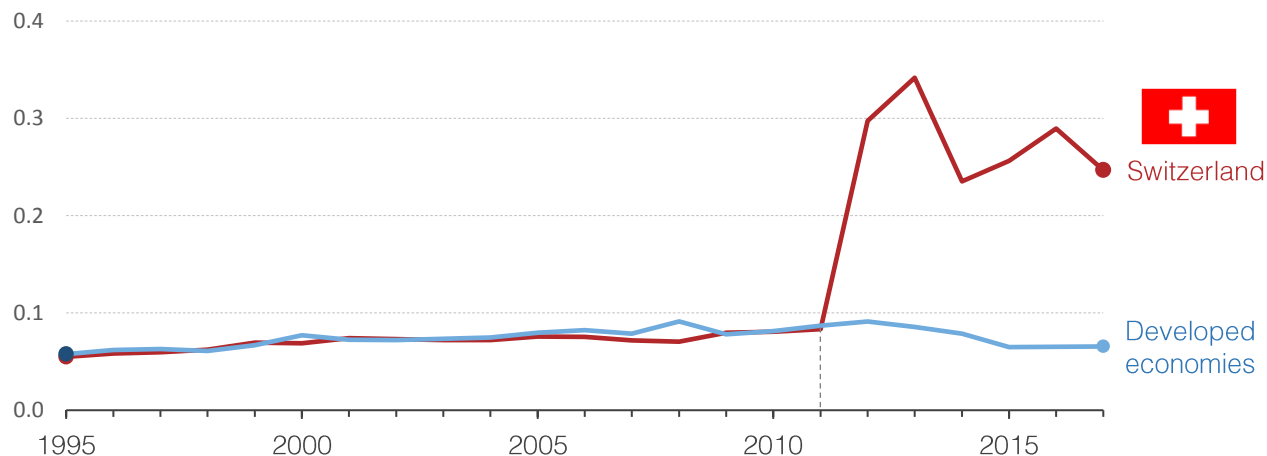
Methodology

This indicator is defined as a normalized Herfindahl-Hirschmann index of the product concentration of merchandise imports at the country level. It is calculated according to the following formula,

$$H_j = \frac{\sqrt{\sum_{i=1}^{N}\left(\frac{M_{i,j}}{M_j}\right)^2} - \sqrt{\frac{1}{N}}}{1 - \sqrt{\frac{1}{N}}}$$

where H_j is the product concentration index of imports for country j, $M_{i,j}$ is the value of imports of product i by country j, M_j is the total value of imports of country j, and N is the number of products imported at the three-digit level of the SITC Revision 3. This index ranges from zero to one, with a larger value denoting a higher concentration of imports. For example, a value of H_j equal to one indicates that all imports of country j are accounted by a single commodity, while a value of zero means that the country's imports are homogeneously distributed among all products. This is an annual indicator, currently available from 1995 to the latest period for all countries and country aggregates.

Note

All visualizations were created using the product concentration index of imports and other data series available at UNCTADstat. For additional details and data download, see http://unctadstat.unctad.org.

Disclaimer: The publication has not been formally edited.