



UNCTAD/STAT/IE/2018/1

INDICATORS EXPLAINED #1



EXPORT MARKET CONCENTRATION INDEX

What does this indicator tell us?

This index measures, for each product, the degree of export market concentration by country of origin. It tells us if a large share of commodity exports are accounted for by a small number of countries or, on the contrary, if exports are well distributed among many countries.

The evolution of the index through time gives important indications about the changing export structure of a product. Contrary to the *product concentration index*, which measures the degree of concentration of exports at the country level (i.e., if the exports of country A are concentrated on some products), this *market concentration index* gives the concentration of exports at the product level (i.e., if exports of product X are concentrated in some countries of origin).

The exports of some commodities are very concentrated (relatively few countries export these products)...

| Product | Market concentration index, 2016 |
|---|----------------------------------|
| Jute and other textile fibers | 0.80 |
| Silk  | 0.75 |
| Cork manufactures | 0.66 |
| Pottery | 0.61 |
| Uranium/thorium ores and concentrates  | 0.59 |
| Natural cork, raw and waste | 0.57 |
| Lighting fixtures and fittings | 0.55 |
| Iron ore and concentrates | 0.55 |
| Coal gas, water gas and similar gases | 0.51 |
| Fixed vegetable fats and oils | 0.49 |

For example, the exports of **silk** originate mostly in **one country**,

China, 78%
of silk global exports



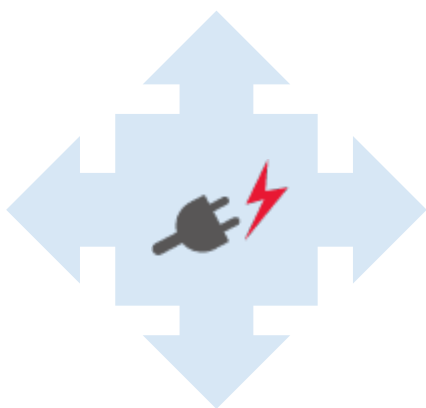
and those of **uranium and thorium** come predominantly from **two countries**.


Niger, 52%
Namibia, 44%
of uranium/thorium global exports



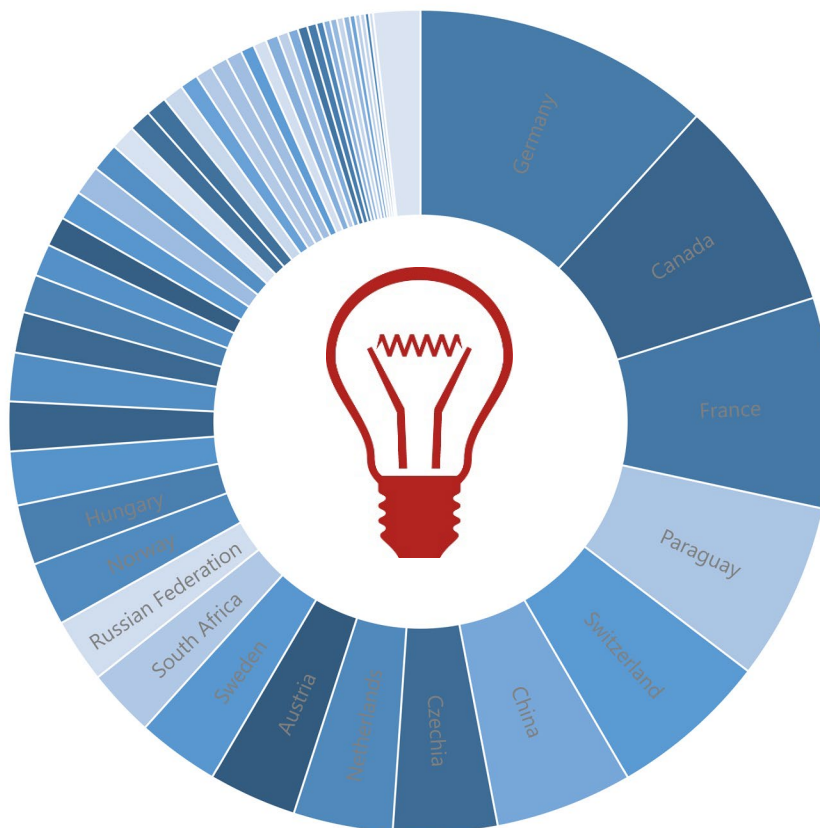
...while those of other commodities are less concentrated (many countries share the exports of these products).

The exports of **electricity** originate in many countries.



| Product | Market concentration index, 2016 |
|--|----------------------------------|
| Electric current  | 0.14 |
| Fuel wood and wood charcoal | 0.14 |
| Sugar confectionery | 0.15 |
| Fruits and nuts, fresh or dried | 0.15 |
| Aluminum | 0.15 |
| Metal containers for storage/transport | 0.16 |
| Fruit preparations | 0.16 |
| Non-alcoholic beverages | 0.16 |
| Edible products and preparations | 0.16 |
| Stone, sand and gravel | 0.16 |

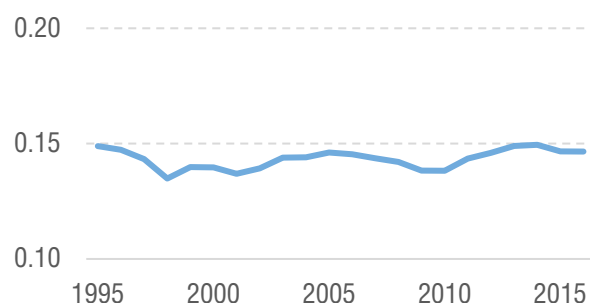
Exports of electric current by economy, 2016
(SITC 351)



The structure of petroleum exports

Oil markets have experienced significant changes in recent years, including the phasing out of oil production in some countries, the introduction of new producers, the development of novel technologies, and conflict and instability affecting production in others. In spite of these changes, the concentration of petroleum exports has remained low and stable, indicating a dynamic market where events in one country are rapidly compensated by other exporters.

Market concentration index of exports, petroleum (SITC33)



The importance of the “made in China”

A growth in the exports of manufactured goods in rising industrial poles (China, Republic of Korea, India, Vietnam, Poland, etc.) to the detriment of traditional manufacturing centers (Japan, United States, United Kingdom, France, Italy, etc.) led to a fall in export concentrations in the mid-2000s. However, increasing reliance on China for manufacturing exports has caused a reversion in this trend leading to rising concentration indexes for these products in recent years.

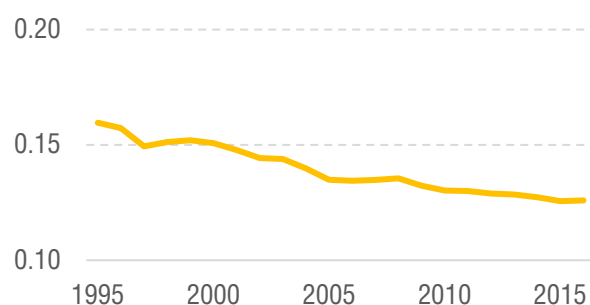
Market concentration index of exports, manufactures (SITC 5 to 8 less 667 and 68)



The increasing globalization of food

The concentration of food exports, already at a very low level, has followed a stable downward trend. Although traditional food exporters, such as the United States, France and other Western European countries, continue to account for an important share of global food exports, they have been joined by other exporting powers, such as Brazil, China, Poland and Indonesia.

Market concentration index of exports, food (SITC 0 + 1 + 22 + 4)



Methodology

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

$$H_i = \frac{\sqrt{\sum_{j=1}^N \left(\frac{X_{i,j}}{X_i}\right)^2} - \sqrt{\frac{1}{N}}}{1 - \sqrt{\frac{1}{N}}}$$

where H_i is the market concentration index of exports for product i , $X_{i,j}$ is the value of exports of product i by country j , X_i is the world value of exports of product i , and N is the total number of exporting countries. The concentration index of exports ranges from zero to one, with a larger value indicating a higher concentration in the export market. For example, a value of H_i equal to zero indicates that all countries in the world export an equal share of product i , while a value of one means that a single country is responsible for all exports of product i . This is an annual indicator, currently available for the period 1995-2016 and for all products at the three-digit level of the SITC Revision 3.

Note

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