Materials and methods

UN Comtrade

The United Nations Commodity Trade Statistics Database (UN Comtrade) contains detailed imports and exports statistics reported by statistical authorities of approximately 200 countries or areas. All commodity values are converted from national currency into US dollars using exchange rates supplied by the reporter countries, or derived from monthly market rates and volume of trade. Quantities, when provided with the reporter country data (when available) are converted into metric units.

Definitions and terms

Imports: In the case of the general trade system, import flows come from the rest of the world or from customs transit, i.e. goods redirected from customs transit to remain in the economic territory.
Exports: In the case of the general trade system, export flows come from:

a) The free circulation area, premises for inward processing or industrial free zones;
b) Premises for customs warehousing or commercial free zones. There are three types of exports:
   – Domestic goods originating in the free circulation area industrial free zones
   – Domestic goods comprised of compensating products after processing
   – Foreign goods in the same state as previously imported, or in inward.

There is just one destination for exports, namely, the rest of the world. It follows that general exports consist of six different flows, two of which are referred to as re-exports. Re-exports are to be included in the country exports. They are also recommended to be recorded separately for analytical purposes, which may require the use of supplementary sources of information in order to determine the origin of re-exports, i.e., to determine that the goods in question are indeed re-exports rather than the export of goods that have acquired domestic origin through processing.

Data availability by codes and countries

Commodities are classified according to SITC (Rev.1 from 1962, Rev.2 from 1976 and Rev.3 from 1988), the Harmonized System (HS) (from 1988 with revisions in 1996, 2002 and 2007) and Broad Economic Categories (BEC).

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<tr>
<th>Country</th>
<th>BEC</th>
<th>HS12</th>
<th>HS07</th>
<th>HS02</th>
<th>HS96</th>
<th>HS92</th>
<th>SITC.4</th>
<th>SITC.3</th>
<th>SITC.2</th>
<th>SITC.1</th>
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The commodity structure of external trade flows of goods is analysed using various internationally adopted commodity classifications which have different levels of detail and are based on different classification criteria (UNStats 2013). The country of purchase is the country where the purchaser's co-contractor (seller of the goods) resides. The country of sale is the country where the seller's co-contractor (purchaser of the goods) resides.

The country of origin of a good (for imports) is determined by rules of origin established by each country. Generally, rules of origin consist of two basic criteria:

   a) The criterion of goods "wholly produced" (obtained) in a given country, where only one country enters into consideration in attributing origin;

   b) The criterion of "substantial transformation", where two or more countries have taken part in the production of the goods.

The country of consumption of a good (for exports) is parallel to the concept of country of origin for imports. The country of consumption is the country in which the goods are expected to be used for private or public consumption or as inputs in a production process.

**Code 0141:** Name: Meat extracts and juices; fish extracts  
Description: Meat extracts and juices; fish extracts

**Code 03:** Name: Fish, crustaceans, molluscs, aquatic invertebrates nes  
Description: Fish & crustacean, mollusc & other aquatic invertebrate

**Code 0301:** Name: Live fish  
Description: Live fish
Code 0302: Name: Fish, fresh or chilled, whole
   Description: Fish, fresh or chilled, excluding fish fillets and other fish meat

Code 0303: Name: Fish, frozen, whole
   Description: Fish, frozen, excluding fish fillets and other fish meat

Code 0304: Name: Fish fillets, fish meat, mince except liver, roe
   Description: Fish fillets and other fish meat (whether or not minced), fresh, chilled or frozen.

Code 0305: Name: Fish, cured, smoked, fish meal for human consumption
   Description: Fish, dried, salted or in brine; smoked fish, whether or not cooked before or during the smoking process; flours, meals and pellets of fish, fit for human consumption.

Code 0306: Name: Crustaceans
   Description: Crustaceans, whether in shell or not, live, fresh chilled, frozen, dried, salted or in brine; crustaceans, in shell, cooked by steaming or by boiling in water, whether or not chilled, frozen, dried, salted or in brine; flours, meals and

Code 0307: Name: Molluscs
   Description: Molluscs, whether in shell or not, live, fresh, chilled, frozen, dried, salted or in brine; aquatic invertebrates other than crustaceans and molluscs, live, fresh, chilled, frozen, dried, salted or in brine; flours, meals and pellets of.

Code 08142: Name: Flours and meals of fish, crustacean, etc, unfit for human
   Description: Flours and meals of fish, crustacean, etc, unfit for human

Code 29193: Name: Gut, bladders, and stomachs of animals (other than fish)
   Description: Gut, bladders, and stomachs of animals (other than fish)

Code 29194: Name: Fish waste
   Description: Fish waste

Code 4111: Name: Fat and oils of fish and marine mammals
Description: Fat and oils of fish and marine mammals

Code 41111: Name: Fish liver oil
Description: Fish liver oil

Code 41112: Name: Fish oils and fats (other than fish liver oil)
Description: Fish oils and fats (other than fish liver oil)

Code 41113: Name: Oils and fats of marine mammals
Description: Oils and fats of marine mammals

Code 16: Name: Meat, fish and seafood food preparations nes
Description: Prep of meat, fish or crustaceans, molluscs etc

Limitations

UN Comtrade is available to the general public and should be used with good knowledge of its limitations. According to UNStats (2013), the most relevant limitations are the following:

1. The values of the reported detailed commodity data do not necessarily sum up to the total trade value for a given country dataset. Due to confidentiality, countries may not report some of its detailed trade. Nevertheless, this trade will be included at the higher commodity level and in the total trade value. For example, trade data not reported for a specific 6-digit HS code will be included in the total trade and may be included in the 2-digit HS chapter. Similar situations could occur for other commodity classifications.

2. Countries (or areas) do not necessarily report their trade statistics for each and every year. This means that aggregations of data into groups of countries may involve countries with no reported data for a specific year. UN Comtrade does not contain estimates for missing data. Therefore, trade of a country group could be understated due to unavailability of some country data.

3. Data are made available in several commodity classifications, but not all countries necessarily report in the most recent commodity classification. Again, UN Comtrade does not contain estimates for data of countries which do not report in the most recent classification.
4. When data are converted from a more recent to an older classification it may occur that some of the converted commodity codes contain more (or less) products than what is implied by the official commodity heading. No adjustments are made for these cases.

5. Imports reported by one country do not coincide with exports reported by its trading partner. Differences are due to various factors including valuation (imports CIF, exports FOB), differences in inclusions/ exclusions of particular commodities, timing etc.

6. There are limitations to the use of data compiled on a country- of-origin basis; most notably, such an approach does not permit a symmetrical recording of the same trade transactions by the exporting country and the importing country if the goods were not directly imported from the country of production. Suppose goods were produced in country A, sold and shipped to country B, and afterwards resold and dispatched to country C. The statistics of country B will show exports to country C, but statistics of country C will not attribute its imports to country B; it will indicate that goods were imported from country A (the country of origin). This fact complicates the issue of the comparability of data, and detracts from their usefulness for some types of economic analysis, especially in compilation of balance of payment statements by partner countries or regions.

7. Difficulties can also arise in actually determining the country of origin since the information on origin for different transactions may not have the same quality because of variations in the requirements to produce documentary evidence. The requirement to present a certificate of origin of goods is defined by the tariff law of the countries and does not apply to all goods entering or leaving a country.

**References**