

# CEPII Country Profiles: indicators, databases and classifications

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The CEPII Country Profiles put forward an original tool to analyze the insertion of eighty countries in international trade using databases developed by the CEPII. Thus, CHELEM which provides long period trade data since the 1960s in goods and services, GDP and population; MAcMap which estimates the average country's protection by partners and products; BACI which offers harmonized statistics on values and quantities at a very detailed level of products; and World Trade Flows Characterization (WTFC) which defines type and price range of trade flows, are used to present a consistent set of indicators. Tables and figures are grouped under seven thematic sections: broad patterns; tariff protection; products and partners; comparative advantages; one-way and two-way trade; unit value ranges; and terms of trade. This document specifies the indicators, databases and classifications used in the CEPII Country Profiles.

## Summary

### ▪ CEPII's indicators

Broad patterns / Tariff protection / Products and partners / Comparative advantages  
One-Way and Two-Way Trade/ Unit value ranges / Terms of trade

### ▪ Databases

- CHELEM
- BACI
- MAcMap
- WTFC

### ▪ Classifications

- Country notes
- Composition of the continents
- Sectoral classifications

## ■ CEPII's indicators

### BROAD PATTERNS

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This section presents country's integration in the world economy over the long run. Data sets start in 1960 for GDP and population, and in 1967 for trade flows. However, for successor states of the former USSR, the former Czechoslovakia, the former Yugoslavia and for a few numbers of other countries, trade data start in 1996 for reasons of availability and quality.

#### Table 1

### Population, gross domestic product (GDP) and trade in goods and services (latest available year [t] and average annual growth rate from [t-10] to [t])

Sources: CEPII, CHELEM – GDP - International Trade - Balance of Payments databases.

Notes:

*Population*: thousands of inhabitants at mid-year.

*GDP at current prices*: Gross Domestic Product in millions of US current dollars.

*PPP GDP (constant \$ & prices)*: Gross Domestic Product at 2011 prices and purchasing power parity, in millions of international dollars.

*GDP per capita (current US \$)*: Gross Domestic Product per inhabitant at current prices, in US current dollars.

*PPP GDP per capita (constant \$ & prices)*: Gross Domestic Product per inhabitant at 2011 prices and purchasing power parity, in international dollars.

*Exports and imports of goods*: FOB flows (Free On Board, transportation and insurance costs excluded), in millions of US current dollars.

*Exports and imports of services*: flows in millions of US current dollars. Processing not included in Country Profiles.

*Average annual growth rate\**: in %.

\*In Table 1.B, thanks to the harmonization of countries' declarations in the CHELEM - International Trade database, the average annual growth rate of world exports is equal to that of world imports in goods. Trade data in services (CHELEM - Balance of Payments database) are not harmonized. The average annual growth rate for world exports, as well as for world imports, in services is here calculated on the average of world exports and imports (see Databases).

#### Figure 1

### Population, GDP and GDP per capita (1960- latest available year [t])

Source: CEPII, CHELEM – GDP database.

Notes:

*Population*: share of the country in the continent's population and in the world's population (inhabitants at mid-year), in %.

*GDP in purchasing power parity*: share of the country in the continent's and in the world's GDP in purchasing power parity (at 2011 prices and purchase power parity rates), in %.

*GDP per capita in purchasing power parity*: country's GDP per inhabitant in purchasing power parity relative to the continent's and the world's ones (at 2011 prices and purchase power parity), in %.

## Figure 2

### Openness, share in world trade and trade balance relative to GDP (goods and services, 1967- latest available year [t])

Sources: CEPII, CHELEM – International Trade - Balance of Payments – GDP databases.

Notes:

Processing is not included in services in Country Profiles.

**Openness degree** 
$$o_i^k = 100 \frac{(X_i^k + M_i^k)/2}{GDP_i}$$

with

$X_i^k$  exports of country  $i$  in sector  $k$  to all partners at current dollars

$M_i^k$  imports of country  $i$  in sector  $k$  from all partners at current dollars

$k$  sectors of the CHELEM database (see Classifications)

$GDP_i$  GDP of country  $i$  at current dollars

**Share in world trade** 
$$x_i = 100 \frac{X_i}{X_{..}} \quad \text{and} \quad m_i = 100 \frac{M_i}{M_{..}}$$

with

$X_i$  exports of country  $i$  in all products to all partners at current dollars

$X_{..}$  world exports in all products at current dollars

$M_i$  imports of country  $i$  in all products from all partners at current dollars

$M_{..}$  world imports in all products at current dollars

**Trade balance in % of GDP** 
$$b_i = 100 \frac{X_i - M_i}{GDP_i}$$

with

$X_i$  exports of country  $i$  in all products to all partners at current dollars

$M_i$  imports of country  $i$  in all products from all partners at current dollars

$GDP_i$  GDP of country  $i$  at current dollars

## Figure 3

### Geographic breakdown of the country's exports and imports (goods, latest available year [t], [t-10], [t-20], [t-30], [t-40])

Source: CEPII, CHELEM – International Trade database.

Note:

See the Classifications section for the composition of the continents.

## Figure 4

### Breakdown of the country's exports and imports by industry (goods and services, latest available year [t], [t-10], [t-20], [t-30], [t-40])

Sources: CEPII, CHELEM – International Trade - Balance of Payments databases.

Notes:

Only the industries that made up more than 5% in the country's exports (or imports) in the latest year or that allows for more than 10% in the preceding selected years are individualized. The remained industries are grouped in "Rest of goods and services".

Industries are defined according to the sectoral classification of the CHELEM database (see Classifications).

Processing is not included in services in Country Profiles.

## TARIFF PROTECTION

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### Table 2 Tariffs by sector: applied and MFN rates (in %, latest available year [t])

Source: CEPII-ITC, MAcMap-HS6 2007 database.

Notes:

*Applied preferential tariff*: the lowest rate applicable to a single partner, taking into account the preferential agreements.

*MFN tariff*: applied tariff under the Most Favoured Nation clause. For a member country of the World Trade Organization (WTO), this is the standard non-discriminatory tariff on imported products from its WTO partners (excluding preferential tariffs under free trade agreements and other arrangements or tariffs applied within the limits of a quota).

The average tariff rate, for both MFN and Applied Preferential, corresponds to weighted averages computed with the MAcMap-HS6 methodology, called the "reference groups" (see Guimbard *et alii*, 2012, p. 102).

Columns 1 & 2: average tariffs (MFN and preferential) applied by the country to all its partners.

Columns 3 & 4: average tariffs (MFN and preferential) applied by the country to its partners of its own geographic area.

Columns 5 & 6: world average tariff (MFN and preferential).

The sectors come from the CEPII's CHELEM classification of products (see Classifications).

### Table 3 Tariffs by sector: applied and faced tariff protection by the country, disaggregated by partners, industries and production stages (in %, latest available year [t])

Source: CEPII-ITC, MAcMap-HS6 2007 database.

Notes:

*Applied preferential tariff*: the lowest rate applicable to a single partner, taking into account the preferential agreements.

*MFN tariff*: applied tariff under the Most Favoured Nation clause. For a member country of the World Trade Organization (WTO), this is the standard non-discriminatory tariff on imported products from its WTO partners (excluding preferential tariffs under free trade agreements and other arrangements or tariffs applied within the limits of a quota).

The average tariff rate, for both MFN and Applied Preferential, corresponds to weighted averages computed with the MAcMap-HS6 methodology, called the "reference groups" (see Guimbard *et alii*, 2012, p. 102).

Industries and stages are defined according to the sectoral classification of the CHELEM database (see Classifications).

## PRODUCTS AND PARTNERS

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Individual data are not available for Belgium and Luxembourg for the whole period. Tables for Belgium or Luxembourg refer to the sum of the two countries.

### **Table 4** **Concentration of trade in goods by partner and product (HS4)** **(latest available year [t])**

Source: CEPII, BACI database.

Notes:

Products correspond to the 4-digits level in the Harmonized System (HS4) of product classification. It contains 1,241 categories of products.

The three columns present the export and import concentration of respectively the country, its continent and the world.

*Share of the first one:* share of the first partner or product in the country's, continent's or world's total exports or imports. Similarly the share of the first four represents the share of the four most important partners or products.

*Number corresponding to 50% (90%) of exports (imports):* number of partners or products which covers 50% (90%) of the country's, continent's or world's exports (imports).

### **Table 5** **Share of the first 20 partners in exports and imports** **(in % of the country's exports or imports in goods,** **latest available year [t] and [t-10])**

Source: CEPII, BACI database.

### **Table 6** **Share of the first 20 products (HS4) in exports and imports** **(in % of the country's exports or imports in goods,** **latest available year [t] and [t-10])**

Source: CEPII, BACI database.

Note:

Products correspond to the 4-digits level in the Harmonized System (HS4) of product classification. It contains 1,241 categories of products.

### **Table 7** **Share of the first 20 flows (partner/HS4 product) in exports and imports** **(in % of the country's exports or imports in goods,** **latest available year [t] and [t-10])**

Source: CEPII, BACI database.

## COMPARATIVE ADVANTAGES: TRADE SPECIALIZATION

Trade data before 1996 are not available or of sufficient quality for successor states of the former Soviet Union, the former Czechoslovakia, the former Yugoslavia and for a few numbers of other countries.

International specialization is measured by the contribution to the trade balance. For every country, this indicator calculates the revealed comparative advantages (RCA), ie the country's advantages/disadvantages revealed by international trade. Considering the country's exports and imports, it shows the key points and the weak points of the country, regardless of the impact of the macroeconomic situation of the country on its trade balance.

$$RCA_i^k = \frac{1000}{X_i^{total} + M_i^{total}} \times \left[ (X_i^k - M_i^k) - (X_i^{total} - M_i^{total}) \times \left( \frac{X_i^k + M_i^k}{X_i^{total} + M_i^{total}} \right) \right]$$

with

$i$  country

$k$  product (good or service)

$X$  exports in value

$M$  imports in value

Trade balance of a product  $k$  is compared to a "theoretical balance" resulting from the distribution of the global balance observed between the various products in total trade of country  $i$ . This theoretical balance is, by construction, neutral towards any advantage or disadvantage of the country on the various products. So the distance between effective balance and theoretical balance on each of the products reveals the key or weak points of the country. The indicator is additive and the sum on all the products is equal to zero. To facilitate the comparisons between countries, the indicator is expressed in thousandths of the country's total trade.

### Figure 5 Specialization of the country in primary goods, manufactured goods and services (contribution to the balance, in thousandths of the total of exchanges of the country, 1967- latest available year [t])

Sources: CEPII, CHELEM – International Trade - Balance of Payments databases.

Notes:

Three large sectors correspond to the groupings of products in the CHELEM database (see Classifications).

*Primary goods*: ores, energy and agriculture (sections H, I and J).

*Manufactured goods*: other goods (sections B, C, D, E, F, G, K and NDA).

*Services*: all services (processing excluded).

**Table 8**

**Trade specialization by category: Top 10 comparative advantages and disadvantages**  
**(contribution to the balance, in thousandths of the country's total trade, latest available year [t], change [t-10]-[t] and [t-10], change [1996]-[t-10])**

Sources: CEPII, CHELEM – International Trade - Balance of Payments databases.

Notes:

Key points (comparative advantages) and weak points (comparative disadvantages) are calculated for the 72 categories of goods and for the 12 categories of services of CHELEM (see Classifications). Sometimes there are less than ten key points or ten weak points.

The changes over the period are calculated by subtraction and represent points of thousandths.

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## ONE-WAY AND TWO-WAY TRADE

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Individual data are not available for Belgium and Luxembourg for the whole period. Illustrations for Belgium or Luxembourg refer to the sum of Belgium and Luxembourg.

Types of trade are distinguished according to Fontagné & Freudenberg (1997) methodology.

### Two-way versus one-way trade

Two partners may export and import the same product. For example, French producers may export cotton men's shirts to Spain, while Spanish producers may export the same category of product to France. There is thus a trade *overlap*. If the overlap is above a given threshold, then the flow is defined as two-way trade, or intra-industry trade.

Trade at a country-partner-product-year level is considered to be two-way or intra-industry when the value of the minority flow (the smallest value between the export and import flows) represents at least 10% of the majority flow:

$$\frac{\text{Min}(X_{ij}^k, M_{ij}^k)}{\text{Max}(X_{ij}^k, M_{ij}^k)} > 10\%$$

with

$X_{ij}$  exports in value from country  $i$  to country  $j$   
 $M_{ij}$  imports in value of country  $i$  from country  $j$   
 $K$  product

If the ratio is below this 10% threshold, the flow is considered one-way.

### Product similarity

Products of a pair of flows (imports and exports for a country-partner-product-year) are considered to be similar (or *horizontally differentiated*) if their relative unit values differ by less than 15%, i.e. if they fulfil the following condition:

$$\frac{1}{1.15} \leq \frac{UV_{ijk}^X}{UV_{ijk}^M} \leq 1.15$$

with

$UV$  unit value (ratio value/quantity)

$UV_{ij}^X$  export unit value from country  $i$  to country  $j$

$UV_{ij}^M$  import unit value from country  $i$  to country  $j$

$k$  product

When this is not the case, products are considered to be *vertically differentiated*.

According to the conditions summarized in the following table, each pair of flows (exports and imports) is associated with one of the four types of trade:

- one-way or inter-industry trade,
- two-way trade in variety or in horizontally differentiated (similar) products,
- two-way trade in vertically differentiated products,
- unventilated two-way trade (without information on unit values).

Trade overlap: does the minority flow represent at least 10% of the majority flow?	Product similarity: do export and import unit values differ from less than 15%?		
	<b>Yes</b> horizontal differentiation	<b>No</b> vertical differentiation	Missing unit value
<b>Yes</b> Two-Way Trade	trade horizontally differentiated	trade vertically differentiated	unventilated Two-Way Trade
<b>No</b> One-Way Trade	One-Way Trade		

### Figure 6 Breakdown of the country's total trade by type (in % of total exports and imports of goods, evolution from 2000 on)

Source: CEPII, WTFC (World Trade Flows Characterization) database.

Notes:

*One-Way Trade*: inter-industry trade.

*Two-Way Trade in variety*: intra-industry trade of *horizontally differentiated* products (similar characteristics and unit values).

*Two-Way Trade in quality*: intra-industry trade of *vertically differentiated* products (similar characteristics but different unit values).

*Unventilated Two-Way Trade*: intra-industry trade without information on unit values.

### Table 9 Breakdown of the country's total trade by type and industry (in % of total exports and imports of the industry, average on the latest three available years)

Sources: CEPII, WTFC (World Trade Flows Characterization) database.



**Notes:**

Products are defined at the 6-digit level of the Harmonized System in BACI database. They are aggregated by industry according to the CHELEM nomenclature (see Classifications).

*One-Way Trade*: inter-industry trade.

*Two-Way Trade in variety*: intra-industry trade of *horizontally differentiated* products (similar characteristics and unit values).

*Two-Way Trade in quality*: intra-industry trade of *vertically differentiated* products (similar characteristics but different unit values).

*Unventilated Two-Way Trade*: intra-industry trade without information on unit values.

## UNIT VALUE RANGES

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Individual data are not available for Belgium and Luxembourg for the whole period. Hence illustrations for Belgium or Luxembourg refer to the sum of Belgium and Luxembourg.

We follow the Fontagné, Freudenberg and Péridy (1997) methodology.

A unit value range is assigned to each elementary flow depending on its unit value relatively to a world reference. This reference corresponds to the world median of all unit values weighted by the value of their flow for a given year. The three unit value ranges for each flow at the country-partner-product-year level are defined as followed:

- High unit value range, if the product unit value exceeds the world reference by at least 15%,
- Medium unit value range, if the product unit value ranges between +/-15% around the reference,
- Low unit value range, if the product unit value is below the reference by at least 15%.

### Figure 7 Breakdown of the country's exports and imports by unit value range (in % of total exports or imports of goods, evolution from 2000 on)

Source: CEPII, WTFC (World Trade Flows Characterization) database.

### Table 10 Breakdown of the country's exports and imports by unit value range and industry (in % of total exports or imports of the industry, average on the latest three available years)

Source: CEPII, WTFC (World Trade Flows Characterization) database.

**Notes:**

Products are defined at the 6-digit level of the Harmonized System. They are aggregated by industry according to the CHELEM classification (see Classifications).

For each industry, as for the total ("ALL"), exports and imports of the country are broken down by unit value range (high, medium, low). For each row, the sum is 100%.

## TERMS OF TRADE

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Individual data are not available for Belgium and Luxembourg for the whole period. Hence the figure for Belgium or Luxembourg refers to the sum of Belgium and Luxembourg.

### Figure 8 Terms of trade evolution and breakdown (evolution from 2000 on, 2000=100)

Source: CEPII, BACI database.

Note:

Terms of trade is defined as the ratio of export and import price. The terms of trade index is here equal to the ratio of the Laspeyres unit value indices of exports and imports of a given country:

$$TE_i = \frac{L_i^x}{L_i^m}$$

with  $L_i^x$  and  $L_i^m$  Laspeyres indices for respectively exports and imports of country  $i$ . The Laspeyres index is the arithmetical average of the ratio of unit values at time  $t$  and at the time of reference 0, weighted by the share of the country  $j$  and product  $k$  in country  $i$ 's trade at time 0.

$$L_i^x = \sum_{jk} w_{ijk0} \frac{uv_{ijkt}}{uv_{ijk0}}$$

with  $uv_{ijkt}$  unit value of exports of country  $i$  to country  $j$  for the product  $k$  in year  $t$ ,  $uv_{ijk0}$  unit value of exports of country  $i$  to country  $j$  for the product  $k$  in year of reference 0 and with  $w_{ijk0} = \frac{v_{ijk0}}{\sum_{jk} v_{ijk0}}$  share of the product  $k$  and the destination  $j$  in country  $i$ 's exports in year 0 (equal to 2000).

## ■ Databases

### BACI

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BACI provides bilateral export values (in thousands of US dollars) and quantities (in tons) at the 6-digit level of Harmonized System (5,018 products), for more than 254 countries since 1989. Original data come from the United Nations Statistical Division (COMTRADE database). This source database provides the declarations of the exporter and the importer, that gives double information for each flow (exporter-importer-product-year).

BACI is constructed using an original procedure that reconciles the declarations. This harmonization procedure enables to extend considerably the number of countries for which trade data are available, as compared to the original dataset. First, as import values are reported CIF (Cost, Insurance and Freight) while exports are reported FOB (Free On Board), insurance and freight costs are estimated and removed from imports values to compute all flows free on board. Second, the reliability of country reporting is assessed based on the reporting distances among partners. These reporting qualities are used as weights in the reconciliation of each bilateral trade flow twice reported (see Gaulier & Zignago, 2010).

BACI on CEPII website: [http://www.cepii.fr/CEPII/fr/bdd\\_modele/presentation.asp?id=1](http://www.cepii.fr/CEPII/fr/bdd_modele/presentation.asp?id=1)

### CHELEM

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For several decades now, the CHELEM database [*Comptes Harmonisés sur les Echanges et L'Economie Mondiale*], ie harmonized international trade flows, balances of payments and world revenues], developed by the CEPII, has been recognized as one of the most useful tools to analyze global economic trends in a framework combining coherence, exhaustiveness and reliability. The CHELEM database is composed of three databases: CHELEM - International Trade, CHELEM - Gross Domestic Product and CHELEM - Balance of Payments. These three databases contain annual data on long periods, going back to either 1960 or 1967. The three databases are interlinked by a common worldwide geographical classification organized in 95 elementary zones, one "not specified" zone and one "total world", and by specific indicators.

CHELEM on the CEPII website: [http://www.cepii.fr/CEPII/en/bdd\\_modele/presentation.asp?id=17](http://www.cepii.fr/CEPII/en/bdd_modele/presentation.asp?id=17)

### International Trade (INT)

The CHELEM - International Trade database contains the bilateral flow of all traded goods expressed in millions of current dollars since 1967. The sectoral nomenclature has been chosen to provide the optimal fit with international trade and production classifications. The data from the different sources are harmonized and rendered coherent in a framework spanning the entire world and all goods. For each year and product category, the trade between the 95 geographical zones (countries or group of countries) is therefore represented by a unique and harmonized matrix (see de Saint Vaulry, 2008 and 2013). In particular, freight and insurance costs, as well as re-exports and re-imports, are removed.

The flows of goods are detailed in either 71 INT-CHELEM product categories, 43 INT-GTAP categories or 147 INT-ISIC categories, to which are added the non-ventilated product category and the total products. Products categories may be aggregated by industries, by stages in the production process, by intermediate sections, by sectors or by technological levels. Geographical aggregates are also available. The sectoral and geographical classifications used in the CEPII Country Profiles are presented below in the classifications section.

### Balance of Payments (BOP)

The CHELEM - Balance of Payments database contains the flows of the Balance of Payments since 1967. It covers 194 countries as well as the 95 elementary zones identified by the CHELEM common classification and international organizations. At the sectoral level, the data are displayed in 30 credit (resp. debit) items, of which 6 aggregates, 37 balance items, of which 7 aggregates, and 7 specific balance accounts, presenting the main headings of the classification recommended by the International Monetary Fund in the sixth manual of the Balance of Payments (see Nayman, 2014).

The flows of services represent the most detailed part of the sectoral classification of the CHELEM - BOP database: the global exchanges of 194 countries are classified in three traditional aggregate items of transport, travel and other services; the trade in "Other services", one of the most dynamic domains of the world trade since the end of 1990s (see Herzog & Ünal, 2011), is detailed in 11 categories; within the latter, the services of "Telecommunications, computing and information" as well as "Other business services" are distributed in 3 subcategories. "Processing" is not included in services in Country Profiles. Indeed, it is already included in exports and imports of goods reported by Customs included (and so in International Trade).

In this database the flows are not detailed by partner and are not harmonized. The value of world exports differs from that of world imports in services.

## Gross Domestic Products (GDP)

The CHELEM - Gross Domestic Product database consists of five series among which three are estimations of Gross Domestic Products: GDP in value (current prices and dollar); GDP in volume (constant (2011) prices and dollar); GDP based on Purchasing Power Parity (PPP constant (2011) prices and international dollar). The series of total population and nominal exchange rate complete the database.

The CHELEM - GDP series begin in 1960. The data posterior to the last available year in CHELEM - International Trade and Balance of payments databases are based on estimations of the IMF (World Economic Outlook). As the two other CHELEM databases, it covers the whole world at the level of the common classification of 95 elementary zones, but also presents a more detailed level with 201 countries or individualized statistical territories.

## MAcMap-HS6

Market Access Map HS6 (MAcMap-HS6) is a database jointly developed by the International Trade Centre (ITC, Geneva) and the CEPII. It constitutes the source of tariff protection for GTAP (Global Trade Analysis Project coordinated by Purdue University). As such, it has been widely used in Applied General Equilibrium simulations to assess the impacts of trade liberalization (multilateral proposals during the WTO Doha Round; bilateral free trade agreements; regional integration; modification of preferential regimes ...).

MAcMap-HS6 provides, for the years 2001, 2004 and 2007, a comprehensive measure of bilateral tariffs (through *ad valorem* equivalents of the tariff protection) taking account of trade preferences applied by each importer and all regional agreements in which it is involved (see Bouët et al, 2008). It also contains the tariffs applied under the Most-Favored-Nation clause (MFN) by the members of the World Trade Organization.

For 2007, which is the year used in the CEPII Country Profiles, MAcMap-HS6 includes *ad valorem* equivalents of tariffs applied by 190 importing countries to 220 exporting countries, on 5,113 products at the 6 digit level of the Harmonized System (see Guimbard et al, 2012).

MAcMap-HS6 on CEPII's website: [http://www.cepii.fr/CEPII/fr/bdd\\_modele/presentation.asp?id=12](http://www.cepii.fr/CEPII/fr/bdd_modele/presentation.asp?id=12)

## World Trade Flows Characterization

The World Trade Flows Characterization (WFTC) database developed by the CEPII associates each flow with a trade type (one-way trade, intra-industry trade in similar products or in differentiated products) and a price range (low, middle or high range).

Trade characteristics are computed using an harmonized version of CEPII's Trade Unit Values (TUV) database which contains import and export unit value information (in US dollars per ton), at the 6-digit level of Harmonized System (5,113 products) for 182 reporters and 253 partners, from 2000 to the latest year available (see Berthou & Emlinger, 2011a et b). The comparison of trade flows and the unit values analysis allow to distinguish one-way trade from intra-industry trade and to determine whether it corresponds to trade in similar or differentiated products according to the Fontagné and Freudenberg index (FF) or the Grubel-Lloyd index (GL). A price range is also assigned to each elementary flow depending on its unit value relatively to a world reference (see Emlinger & Piton, 2014).

WFTC on CEPII website: [http://www.cepii.fr/cepii/en/bdd\\_modele/presentation.asp?id=29](http://www.cepii.fr/cepii/en/bdd_modele/presentation.asp?id=29)

## ■ Classifications

### COUNTRY NOTES

Tables and figures are presented for the 80 following countries:

ISO code	Country	Note
008	Albania	
012	Algeria	
032	Argentina	
036	Australia	Re-exports and re-imports are excluded in CHELEM
040	Austria	
050	Bangladesh	
056	Belgium	Luxembourg included in BACI and WTFC
068	Bolivia	
076	Brazil	Re-imports excluded in CHELEM
100	Bulgaria	
112	Belarus	Formerly part of USSR
120	Cameroon	
124	Canada	Re-imports and re-exports are excluded in CHELEM
144	Sri Lanka	
152	Chile	
156	China	Re-imports excluded in CHELEM
158	Taiwan	
170	Colombia	Re-imports and re-exports are excluded in CHELEM
191	Croatia	Formerly part of Yugoslavia
196	Cyprus	Re- exports excluded in CHELEM
203	Czech Republic	Formerly part of Czechoslovakia
208	Denmark	
218	Ecuador	
233	Estonia	Formerly part of USSR
246	Finland	
251	France	Including Monaco and French overseas departments – Re-imports excluded in CHELEM
276	Germany	Including East Germany, except in services before 1991
300	Greece	
344	Hong Kong	Domestic exports and imports only in CHELEM, general trade in BACI
348	Hungary	
352	Iceland	Including Faeroe Islands in CHELEM - International Trade
360	Indonesia	Re-imports excluded in CHELEM
372	Ireland	Re-imports excluded in CHELEM
376	Israel	Including State of Palestine in CHELEM - International Trade
381	Italy	Re-exports and re-imports excluded in CHELEM
392	Japan	
398	Kazakhstan	Formerly part of USSR
404	Kenya	
410	South Korea	
417	Kyrgyzstan	Formerly part of USSR – Re-exports excluded in CHELEM
428	Latvia	Formerly part of USSR
434	Libya	
440	Lithuania	Formerly part of USSR
442	Luxembourg	With Belgium in BACI and WTFC – Re-imports and re-exports excluded in CHELEM
458	Malaysia	Re-exports and re-imports excluded in CHELEM
470	Malta	Re-exports excluded in CHELEM
484	Mexico	
504	Morocco	Including Western Sahara in services
528	Netherlands	
554	New Zealand	Re-exports and re-imports excluded in CHELEM
566	Nigeria	
579	Norway	
586	Pakistan	Re-exports and re-imports excluded in CHELEM
600	Paraguay	
604	Peru	
608	Philippines	
616	Poland	
620	Portugal	
642	Romania	
643	Russia	Formerly part of USSR
682	Saudi Arabia	Re-exports excluded in CHELEM

ISO code	Country	Note
699	India	
702	Singapore	Re-exports and re-imports excluded in CHELEM
703	Slovakia	Formerly part of Czechoslovakia - Re-imports excluded in CHELEM
704	Viet Nam	
705	Slovenia	Formerly part of Yugoslavia - Re-imports excluded in CHELEM
711	South African Union	Botswana, Lesotho, Namibia, South Africa, Swaziland
724	Spain	
752	Sweden	
757	Switzerland	
764	Thailand	Re-exports and re-imports excluded in CHELEM
788	Tunisia	
792	Turkey	
804	Ukraine	Formerly part of USSR
807	Macedonia	Formerly part of Yugoslavia
818	Egypt	
826	United Kingdom	Re-exports and re-imports excluded in CHELEM
842	United States	Re-exports excluded in CHELEM
858	Uruguay	
862	Venezuela	Re-exports and re-imports excluded in CHELEM

## COMPOSITION OF THE CONTINENTS

Countries are grouped in 4 continents according to the classification of the CEPII's CHELEM database: America, Europe and CIS, Africa, Near and Middle-East, Asia and Oceania.

Alpha code	Num. code	Continent	Composition by countries
<b>AMN</b>	<b>901</b>	<b>AMERICA</b>	
AMN	911	North America	Canada, Mexico, United States of America
AMS	912	South America, Central America and Caribbean	America, excl. Canada, Mexico and United States
<b>EUC</b>	<b>902</b>	<b>EUROPE AND COMMONWEALTH OF INDEPENDENT STATES</b>	
UE	915	European Union (EU-27)	Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany (former East Germany included), Gibraltar, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, United Kingdom
CEI	916	Commonwealth of Independent States (CIS)	Commonwealth of Independent States : Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyzstan, Moldova, Russian Federation, Tajikistan, Turkmenistan, Ukraine, Uzbekistan (estimated in TRADE before 1992)
EUA	917	Others in Europe	Albania, Iceland, Norway, Switzerland, Turkey; Bosnia Herzegovina, Croatia, Macedonia, Serbia-Montenegro (calculated before the partition of former Yugoslavia)
<b>AFR</b>	<b>903</b>	<b>AFRICA, NEAR AND MIDDLE EAST</b>	
AFN	921	North Africa	Algeria, Egypt, Libya, Morocco, Tunisia
AFS	922	Sub-Sahara Africa	Africa, excluding North Africa
PMO	923	Near and Middle East	Bahrain, Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Syria, United Arab Emirates, Yemen (and State of Palestine in GDP and TRADE)
<b>ASO</b>	<b>904</b>	<b>ASIA AND OCEANIA</b>	
ANE	925	North East Asia	China, Hong Kong, Japan, South Korea, Taiwan
AES	926	South-East Asia	Cambodia, Indonesia, Lao PDR, Malaysia, Philippines, Singapore, Thailand, Viet Nam
ASS	927	South Asia and Pacific	Afghanistan, Bangladesh, Bhutan, Brunei, Fiji, French Polynesia (in GDP and TRADE), Guam (in GDP and TRADE), India, Kiribati, Macao, Maldives, Mongolia, Myanmar, Nepal, New Caledonia (in GDP and TRADE), North Korea, Pacific Islands (in GDP and TRADE), Pakistan, Papua New Guinea, Solomon Islands, Sri Lanka, Tonga, US Samoa (in GDP and TRADE), Vanuatu, Western Samoa, and all others in Asia and Oceania (in TRADE and GDP only)
OCN	928	Australia and New Zealand	Australia, New Zealand
<b>XXX</b>	<b>990</b>	<b>NES</b>	Not specified
<b>WLD</b>	<b>000</b>	<b>WORLD</b>	Sum of all areas (America + Europe & CIS + Africa, Near & Middle East + Asia & Oceania + NES)

## SECTORAL CLASSIFICATIONS

### By product category

Products are listed according to the CHELEM classifications in 72 categories for the goods in the International Trade database and in 13 categories for the services in the Balance of Payments database, except for Tables 4, 6 and 7 where the Harmonized System (HS4) is retained.

TRADE IN GOODS		
CHELEM code	Product category	Description
BA	Cement	Cement and derived products
BB	Ceramics	Ceramics (including manufactured mineral articles not elsewhere specified)
BC	Glass	Glass (flatware and hollow-ware)
CA	Iron and steel	Iron and steel-making (including pig iron and sheet steel)
CB	Tubes	Tubes and first-stage processing products
CC	Non-ferrous metals	Non-ferrous metals
DA	Yarns and fabrics	Yarns and fabrics
DB	Clothing	Clothing (with fabrics as the main input)
DC	Knitwear	Knitwear (made directly from yarns)
DD	Carpets	Carpets and textile furnishings
DE	Leather	Leather, fur skins and footwear
EA	Wood articles	Articles in wood
EB	Furniture	Furniture (made of wood or other materials)
EC	Paper	Paper and pulp
ED	Printing	Printing and publications
EE	Miscell. manuf.	Toys, sports equipment and miscellaneous manufactured articles
FA	Metallic structures	Large metallic structures
FB	Miscell. hardware	Miscellaneous hardware
FC	Engines	Engines, turbines and pumps
FD	Agricultural equip.	Agricultural equipment
FE	Machine tools	Machine tools
FF	Construction equip.	Construction and public works equipment
FG	Specialized mach.	Specialized machines
FH	Arms	Arms and weaponry
FI	Precision inst.	Precision instruments
FJ	Clock making	Watch and clock making
FK	Optics	Optics and photographic and cinematographic equipment
FL	Electronic comp.	Electronic components
FM	Consumer electro.	Consumer electronics
FN	Telecom. Equip.	Telecommunications equipment
FO	Computer equipment	Computer equipment (including office equipment)
FP	Domestic electrical app.	Domestic electrical appliances
FQ	Electrical equip.	Heavy electrical equipment
FR	Electrical app.	Electrical apparatus (including passive devices)
FS	Vehicle comp.	Vehicle components
FT	Cars and cycles	Cars (including motorcycles)
FU	Commercial vehic.	Commercial vehicles and transport equipment (including public transport vehicles and railway equipment)
FV	Ships	Ships (including oil rigs)
FW	Aeronautics	Products of the aircraft and spatial manufacturing
GA	Basic inorg. chem.	Basic inorganic chemicals
GB	Fertilizers	Fertilizers
GC	Basic org. chem..	Basic organic chemicals
GD	Paints	Paints, colorings and intermediate chemical products not elsewhere specified
GE	Toiletries	Toilet products, soaps and perfumes (including chemical preparations not elsewhere specified)
GF	Pharmaceuticals	Pharmaceuticals products (including veterinary products)
GG	Plastics	Plastics, fibers and synthetic resins

TRADE IN GOODS (continuing)		
CHELEM code	Product category	Description
GH	Plastic articles	Plastic articles
GI	Rubber articles	Rubber articles (including tyres)
HA	Iron ores	Iron ores and scrap
HB	Non-ferrous ores	Non-ferrous ores and scrap
HC	Unproces. min. nes	Unprocessed minerals not elsewhere specified
IA	Coals	Coal (including lignite and other primary energy products)
IB	Crude oil	Crude oil
IC	Natural gas	Natural gas (including all petroleum gases)
IG	Coke	Coke
IH	Refined petrol. Pr.	Refined petroleum products
II	Electricity	Electricity
JA	Cereals	Cereals
JB	Oth. ed. agr. pr.	Other edible agricultural products
JC	Non-edible agr. pr.	Non-edible agricultural products
KA	Cereal products	Cereal products
KB	Fats	Fats (of vegetable or animal origin)
KC	Meat and fish	Meat and fish
KD	Preserved meat	Preserved meat and fish products
KE	Preserved fruit	Preserved fruit and vegetable products
KF	Sugar	Sugar products (including chocolate)
KG	Animal food	Animal foodstuffs
KH	Beverages	Beverages
KI	Manuf. tobaccos	Manufactured tobaccos
NA	Jewel., works of art	Precious stones, jewellery, works of art
NB	Non-monetary gold	Non-monetary gold
NV	Not specified	Not specified
TT	Total	Total

TRADE IN SERVICES		
CHELEM Code	MBP6* Code	Service
121	1BC000	Transport services
122	1BD000	Travel services
123a**	1BA000	Manufacturing services on physical inputs owned by others (processing)
123b	1BB000	Maintenance and repair services not elsewhere specified
123c	1BE000	Construction services
123d	1BF000	Insurance and pension services
123e	1BG000	Financial services
123f	1BH000	Charges for the use of intellectual property not elsewhere specified
123g	1BJ000	Telecommunications, computer, and information services
123h	1BK000	Other business services
123i	1BL000	Personal, cultural, and recreational services
123j	1BM000	Government goods and services not elsewhere specified
123nv	123-sum(123a:123j)	Other services not elsewhere classified

\* Manuel 6 of the Balance of Payments (IMF)

\*\* Processing not included in Country Profiles.

## By sector

In the CEPII Country Profiles Table 2, products are grouped according to the 4 sectors of the CHELEM - International Trade database (with mining and energy sectors, codes H & I, joined in the same one). An additional sector of goods contains products not elsewhere specified. The same breakdown is used in Figure 2 with an additional sector including all services from the Balance of Payments database.



CHELEM code	Sector	Composition (CHELEM categories)
AL	Food, agriculture	JA+JB+JC+KA+KB+KC+KD+KE+KF+KG+KH+KI
H + I	Mining & Energy	HA+HB+HC+ IA+IB+IC+IG+IH+II
M	Manufacturing minimum	BA+BB+BC+CA+CB+CC+DA+DB+DC+DD+DE+EA+EB+EC+ED+EE+FA+FB+FC+FD+FE+FF+FG+FH+FI+ FJ+FK+FL+FM+FN+FO+FP+FQ+FR+FS+FT+FU+FV+FW+GA+GB+GC+GD+GE+GF+GG+GH+GI
NDA	NES	NA+NB+NV
120*	Services*	121+122+123*

\* Processing (123a) not included in Country Profiles.

## By industry

In the CEPII Country Profiles, for trade in goods, the grouping of products in 11 industries (with an additional grouping for the not elsewhere specified trade) comes from CHELEM - International Trade database. An “industry” including all services from the Balance of Payments database is joined to the other ones in Figure 3.

CHELEM code	Industry	Composition (CHELEM categories)
R01	Energy	IA+IB+IC+IG+IH+II
R02	Food, agriculture	JA+JB+JC+KA+KB+KC+KD+KE+KF+KG+KH+KI
R03	Textiles	DA+DB+DC+DD+DE
R04	Wood, paper	EA+EB+EC+ED+EE
R05	Chemicals	GA+GB+GC+GD+GE+GF+GG+GH+GI+BA+BB+BC+HC
R06	Iron & steel	HA+CA+CB
R07	Non ferrous	HB+CC
R08	Machinery	FA+FB+FC+FD+FE+FF+FG+FH+FI+FW
R09	Vehicles	FS+FT+FU
R10	Electrical	FP+FQ+FR
R11	Electronic	FI+FJ+FK+FL+FM+FN+FO
NDA	NES	NA+NB+NV
120*	Services*	121+122+123*

\* Processing (123a) not included in Country Profiles.

## By stage in the production process

In the CEPII Country Profiles, for trade in goods, the grouping of products in 6 stages in the production process (with an additional grouping for the not elsewhere specified trade) comes from CHELEM - International Trade database.

CHELEM code	Stage in the production process	Composition (CHELEM categories)
ST1	Primary	HA+HB+HC+IA+IB+IC+JA+JB+JC
ST2	Basic manufacturing	BA+BB+BC+CA+CC+GA+GC+IG
ST3	Intermediate goods	CB+DA+EA+EC+FA+FB+FC+FL+FS+GB+GD+GG+GI
ST4	Equipment goods	FD+FE+FF+FG+FH+FI+FN+FO+FQ+FR+FU+FV+FW
ST5	Mixed products	DE+EB+ED+GH+IH+II+KB+KC+KF+KG
ST6	Consumption goods	DB+DC+DD+EE+FJ+FK+FM+FP+FT+GE+GF+KA+KD+KE+KH+KI
NDA	NES	NA+NB+NV

## By large sector: primary goods, manufactured goods and services

In the CEPII Country Profiles Figure 5, stages in the production process are aggregated in three large sectors: primary goods, manufactured goods and services.

Large sector	Composition (CHELEM stages in the production process)
Primary goods	ST1
Manufactured goods	ST2+ ST3+ ST4+ ST5+ ST6+NDA
Services*	120*

\* Processing (123a) not included in Country Profiles.

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