UNITED NATIONS CONFERENCE ON TRADE AND DEVELOPMENT

UNCTAD

Multi-Year Expert Meeting on Enhancing the Enabling Economic Environment at all Levels in Support of Inclusive and Sustainable Development

Trade indicators and Economic Resilience

Henri Laurencin

Head

Development Statistics and Information Branch

UNCTAD

Plan

❖ UNCTAD and the statistics

❖ Statistical indicators to measure the impact of external trade shocks on domestic economies

❖ Research agenda

UNCTAD and statistics

❖ **UNCTAD statistics**

• Are designed for economists and users that need statistics for evidence-based decision-making

• Are disseminated through a unique platform: UNCTAD*STAT*

❖ **UNCTADstat**

• Is comprehensive (… time series and more than 100 indicators for … countries and … country groupings, 30 year history for most series, more if data available)

• Covers UNCTAD mandate subjects

• Relies on common rules that are applied to all series to facilitate data comparison across the database and the combination of different series in the calculation of derived indicators

• Includes metadata to document data

• Is constantly updated

• Is free of access

Maintained by Development Statistics
and Information Branch
Division on Globalization and Development
Strategies

UNCTADSTAT

http://unctadstat.unctad.org

Statistical indicators to measure the impact of external trade shocks on domestic economies

❖ **International trade trends**
- Annual trends
- Infra-annual trends

❖ **Structure of international trade**
- Merchandise trade matrix
- Trade in services by category

❖ **International trade indicators**
- Trade balance
- Trade openness
- Terms of trade and purchasing power of exports
- Merchandise trade concentration and diversification
- Merchandise complementarity
- Merchandise trade specialization
- Merchandise trade correlation

International trade trends (annual)

Total annual exports and imports of merchandises and services statistics monitor structural changes of the pattern of international trade.

Series	Value	Volume	Unit value	Prices
Total merchandise exports and imports	Value 1948-2011 Value indices Base 2010 1980-2011	Volume indices Base 2010 1980-2011	Unit value indices Base 2010 1980-2011	
Total merchandise balance	1948-2011			
Exports and imports of total services	1980-2011			
Exports and imports of goods and services	1980-2011			
Commodities				Free market commodity prices and price indices Base 2010 1960-2012

exports and imports price indices, by product or product group

International trade trends (infra-annual)

In fast-changing economic landscape, annual trade statistics prove to be insufficient to monitor current situation. Monthly and quarterly data releases are more appropriate, although this poses a certain compilation challenge as short term statistics are usually available at total level.

Series	Value	Volume	Unit value	Prices
Total merchandise exports and imports		Quarterly growth rates 2005-2012		
Exports and imports of total services	Quarterly values and growth rates 2006-2012			
Commodities				Monthly free market commodity prices and price indices Base 2010 1960-2013

seasonally adjusted series

Structure of international trade: merchandise trade matrix (annual)

The merchandise trade matrix provides basic statistic material needed for the analyse of trade flows between countries and for the calculation of trade indicators.

Series	Value	Partner	Product
Merchandise exports and imports by partner and product	1995-2011	Individual countries and UNCTAD groupings	SITC Rev3 3-digit and UNCTAD groups

volume/ quantity and infra-annual

Structure of international trade: Trade in services matrix (annual)

The trade in services matrix provides basic statistic material needed for the analysis of trade flows between countries and for the calculation of trade indicators.

Series	Value	Partner	Service category
Services exports and imports by service category	1980-2011	World	Derived of BOP

partner, trade mode and infra-annual

International trade indicators
Trade balance (annual)

The trade balance is defined as the difference between exports f.o.b. and imports f.o.b. presented in millions of dollars.
The normalized trade balance of goods and services is defined as the trade balance (total exports minus total imports) divided by total trade (exports plus imports).

Series	Trade balance in value	Normalized trade balance	Trade balance as % of imports	Trade balance as % of GDP
Total trade in goods	1980-2011	1980-2011	1980-2011	1980-2011
Total trade in services	1980-2011	1980-2011	1980-2011	1980-2011
Total trade of goods and services	1980-2011	1980-2011	1980-2011	1980-2011

by partner, by product and product group

International trade indicators
Trade openness (annual)

The trade openness is measured by the exports, imports, sum and average of exports and imports as percentage of nominal gross domestic product (GDP).

Series	Trade balance in value	Normalized trade balance	Trade balance as % of imports	Trade balance as % of GDP
Total trade in goods	1980-2011	1980-2011	1980-2011	1980-2011
Total trade in services	1980-2011	1980-2011	1980-2011	1980-2011
Total trade of goods and services	1980-2011	1980-2011	1980-2011	1980-2011

International trade indicators
Terms of trade and purchasing power of exports (annual)

The terms of trade or "net barter" terms of trade is the percentage ratio of the export unit value index to the import unit value index. The purchasing power index of exports is the value index of exports deflated by the import unit value index.

Series	Terms of trade	Purchasing power of exports
Total merchandise trade	1980-2011	1980-2011

by partner

International trade indicators Merchandise trade concentration and diversification (annual)

The concentration index shows how exports and imports of individual countries or group of countries are concentrated on several products or, otherwise, distributed in a more homogeneous manner among a series of products. The diversification index signals whether the structure of exports or imports by product of a given country or group of countries differ from the structure of product of the world.

Series	Number of products	Concentration index	Diversification index
Total merchandise exports	1995-2011	1995-2011	1995-2011
Total merchandise imports	1995-2011	1995-2011	1995-2011

by partner, trade in services, trade in goods and services

International trade indicators
Merchandise trade complementarity (annual)

The merchandise trade complementarity index assesses the suitability of preferential trade agreement between two economies given the structure of one potential partners' exports match the imports of the other potential partner.

$$Se_jm_k = 1 - \frac{\sum_i \left| E_{ij} - M_{ik} \right|}{2}$$

Series	Complementarity index	Partner	Product
Total merchandise trade	1995-2011	Individual countries and UNCTAD groupings	Total

by product group

International trade indicators
Merchandise trade specialization (annual)

The merchandise trade specialization index, also known as normalized trade balance by product , measures the degree of specialization in the production/consumption of goods through trade. Calculated for each product group it compares the net flow of goods (exports minus imports) to the total flow of goods (exports plus imports).

$$TSI_{ji} = \frac{X_j^i - M_j^i}{X_j^i + M_j^i}$$

Series	Specialization index	Product
Merchandise trade	1995-2011	SITC Rev3 2-digit and UNCTAD groups

International trade indicators
Merchandise trade correlation (annual)

The merchandise trade correlation index measures measure similarity of trade specialization index between economies. High similarity then can be considered that those economies competes each other in both exports and imports.

$$TCI_{jk} = \frac{\sum\limits_{i=1}^{n}(TSI_{ji} - \overline{TSI_{ji}})(TSI_{ki} - \overline{TSI_{ki}})}{\sqrt{\sum\limits_{i=1}^{n}(TSI_{ji} - \overline{TSI_{ji}})^2 (TSI_{ki} - \overline{TSI_{ki}})^2}}$$

Series	Correlation Index	Partner
Merchandise trade	1995-2011	Individual countries and UNCTAD groupings

Research agenda

❖ **Expansion of trade matrix**

An "Inter-Agency" project is envisaged to create a trade matrix that includes more detailed products (HS-based) and longer time series (since 1980).

❖ **Terms of trade decomposition**

The purpose of the project is to continue the research work presented in the UNCTAD … Trade and Development Report to assess the contribution of different product groups to terms-of-trade changes.

❖ **New trade indicators**

They will be introduced in UNCTADstat in response to requests raised in the context of the research agenda of UNCTAD.

❖ **Trade in value added**

UNCTAD will participate in the Friends of the Chair group on Internationalization established by the UN Statistical Commission in 2013 to prepare a concept paper on the measurement of international trade and economic globalization.

Thank you for your attention.

Questions?