



© WTO/OMC

Expert Group on International Trade  
and Economic Globalization  
Statistics

New York, 26-28 January 2016



Mapping Global Value Chains and Measuring  
Trade in Tasks

*“Looking at Trade Analysts’ Expectations”*

Hubert Escaith

# Export-Led Growth and Development:

## *What may affect Overall Export Performance?*

- **Supply side factors:** Gains in industrial or systemic competitiveness (GVC insertion; trade and transport facilitation); relative prices; supply shocks; B2C and B2B export promotion; ...
- **Demand side factors:** Global/Regional/Domestic Business Cycles; Market Access (MFN and Preference margins); RTAs, FDI and Trade creation/deviation; trade in varieties and change in consumer preferences ...

# What could bring a Global Value Chain Approach to Trade Statistics?

- **From Statistics to Knowledge:** *“If our aim is to understand firms and consumers’ behaviour rather than simply to record it, we want to know about actors and interactions, clusters and neighbourhoods, organization and social control”* (adapted from Freeman, 2004: *“The development of social network analysis”*)
- **Global Governance and Evidences Based Decision Making:** From *“International Trade Statistics”* (a simple *“one to many”* perspective) to **“Global Trade and Production Statistics”** (an hyper *“many to many”* approach: many actors, many flows –merchandises, services, investment, income,...)

# **Do we have a choice?**

- **Not really in my view!**

**If Curiosity Killed the Cat...**

**Lack of Curiosity Slowly Kills Official Statistics**

# The theoretical frameworks *relevant models*

## 1. Network economics

- Networks of differentiated agents: who you are connected with is very important
- From graph theory (nodes, vertex, oriented graphs) to Markov or Bayesian chains.
- From graphs to linear algebra: IO matrices
  - Flows indicator (strength and length)
  - IO and National Accounts: Physical, financial and income (factor) circuits

## 2. Trade Theory: *the new and the “new” new trade theories*

- Importance of specialization and agglomeration effects (territorial dimension)
- Importance of product differentiation and firm heterogeneity (the death of the representative agent)

## 3. Business School Models: *what is a value chain?*

- Notion of cluster (lead-firms and suppliers; networks and territories, once again)
- Competitive vs. comparative advantages; role of services as enablers/enhancers
- Corporate Social Responsibility: socio-economic dimension at local (micro) level.

## 4. Development Economics

- Importance of product and functional upgrading (product classification by technological content; strength and length of inter-industrial linkages)
- Importance of social upgrading (trade and employment; tasks and skills; socio-economic dimension at sectoral and macro levels)

# What should be counted?

A proper mapping of global trade today :  
*collecting information on*

- **Actors:**
  - Firms and households (both producers and consumers, resident and non-resident)
- **Flows:**
  - goods and services (intermediate, final);
  - factors and income (value-added disaggregation: labour content); FDI (financial flows); non-economic costs (e.g., environment and CO2; water content)
- **Operational and governance aspects:**
  - Trade and transportation costs (e.g., Trade Facilitation)
  - Other transaction costs (e.g., Non Tariff Measures)
  - Corporate ownership and intra-firm trade

# How can it be counted ?

## 1. Mapping the flow of intermediate goods and services

- Revisiting traditional data with a new mind-set
- Potential and Shortcomings:
  - Understanding flows: the role of classifications: BEC (end-use), Rauch (market-power); Lall (technological content)
  - Actors (sectors, firms): remains a black-box, need for additional (sectoral/micro) approaches

## 2. Supply Use Tables, International Input-Output and Trade in Value-Added

- SUTs as the basic building block (e.g., [OECD Extended SUT Initiative](#) )
- International Input-Output Tables and Trade in Value-Added
  - From Academia to Official Statistics (2001-2012)
  - Future extensions (coverage, disaggregation, socio-economic accounts)

## 3. Trade by Firm Characteristics

- Linking trade and business statistics (EUROSTAT; OECD)
- Extensions to “trade in business functions” (outsourcing/offshoring)
- Complementarity with Input-Output Analysis:
  - Examples of China and Mexico in the new OECD-WTO TiVA database

# Conclusions

## *New challenges for Trade and (inter)National Accounts Statistics in the 21st Century*

- **FIRMS ARE BECOMING INCREASINGLY GLOBAL WHILE INTERNATIONAL TRADE HAS AN INCREASING IMPACT A LOCAL LEVEL**
  - From International to Global Statistics
  - From Balance of Payments and Custom Statistics to firm-level and socio-economic data
- **WHAT SHOULD BE COUNTED?**
  - The “trade-investment” nexus: FDI and Ownership
  - Trade and Income Flow: wages, profit, taxes
  - Satellite accounts: socio-economic data, environment accounts
  - The territorial dimension: “Trade and the City”
- **HOW TO MAP AND MEASURE?**
  - New Ways of Milking the Old Trade Statistics Cow
  - Measuring Trade in Value Added
  - Linking Trade and Business Statistics

***Searching for an integrating framework at the UN Statistical Conference  
(and elsewhere...)***



# Measuring internationalization and globalization

UN-Statistical Conference Friend of the Chair Report, 2015

SCOPE	STATISTICAL DIMENSION	Existing and new aggregate statistics	Existing and new micro data based statistics and analysis (record linkages); confidentiality at NSOs
Existing core statistics and developments	<i>Domestic and cross-border (National Statistical System)</i>	Core national and international accounts, <b>trade and related business statistics</b> — <b>Development and implementation of core international manuals</b> , such as <b>measurement of global production</b>	Micro based estimates of domestic and cross-border processing in manufacturing
Enhancements to core statistics	<i>Domestic and cross-border (National Statistical Systems)</i>	Enhanced country bilateral data confrontation; implementation of <b>modes of supply for trade in services</b> ; Additional details in <b>Supply Use Tables</b> , trade and FDI; satellite accounts ( <b>KLEM</b> --employment, capital stock, environment)	Micro based estimates of value added, trade and investment, assets, etc.
Internationalization extensions	<i>Domestic and cross-border (National Statistical System)</i>	Country measures of <b>Trade in Value Added</b> ; Foreign ownership statistics; <b>Outward FATS</b> — <b>employment sales, trade, control, etc.</b> ; MNE statistics; <b>Details on mergers and acquisitions</b>	Inward/outward FATS and MNE statistics – Firm heterogeneity (export-intensities, firm size, productivity); international trade-investment-business statistics; Business Functions in- and outsourcing;
Globalization extensions — <b>summation of country activities</b>	<i>Beyond cross-border (International Statistical System)</i>	Trade flows symmetry, <b>Harmonized and Global supply-use tables</b> ; OECD-WTO TIVA; Aggregate tables built from country <b>micro-data studies</b> ; Globally-consolidated MNEs – activities, financial statements and risk exposures	
Globalization extensions	<i>Beyond cross-border (International Statistical System)</i>	<b>Aggregate global value chains analysis</b> by researchers; <b>Big Data</b> (e-commerce, digital flows,...)	Micro data based global value chains analysis by researchers