Handbook on Accounting for GVCs
Part I: Introduction

Meeting of the Expert Group on International Trade and Economic Globalization Statistics
7-9 May 2018

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Part I: Introduction

A. Introduction to Global Value Chains
B. Global Value Chains in Perspective
C. The Global Value Chain Framework
D. Analytical and Policy Framework for Global Value Chains
E. Key Features of GVC Accounting & Integrated Business Statistics

Based on:

- UNECE: The impact of Globalization on National Accounts
- GVC Handbook draft Chapter 1
- GVC Handbook draft Chapter 9 from Stat Canada
- GVC Handbook draft Chapter 14 from Steve Landefeld & Deborah Winkler of World Bank
- Gary Gereffi “Global Value Chain Analysis: A Primer”
The “unbundling” of production:
The parts and components that make up a final product, being either a good or service, are increasingly produced in different countries

GVC definition:
“The full range of activities that firms and workers perform to bring a product from its conception to end use and beyond, including…research and development, design, production, marketing, distribution and support to the final consumer. The activities…can be contained within a single firm or divided among different firms.”

• Current macroeconomic, business and trade statistics need to better capture these complex cross-border activities and risks associated with the growing interconnectedness of national economies
• The impact on employment, income, trade and productivity
Brief history of International Trade Theory

Heckscher–Ohlin model
- Markets are perfectly competitive
- Producers operate at constant returns to scale
- An industry consists of homogeneous producers and countries have identical production technology
- Countries trade only final products

Bernard and Jensen
Firm-level microdata showed heterogeneity in firm productivity between exporters and non-exporters

New Trade Theory
Explained intra-industrial trade between countries with similar technology and resource endowments (due to increasing returns to scale & love of variety)

Globalization & GVC studies
- Production processes sliced into segments across international boundaries based on where they can be performed most efficiently
- Focus on production & trade of intermediate goods & services and value-added of tasks

GVC studies
- Impacts of offshoring on domestic factor income and welfare
- Firms’ efforts to optimize production networks
- How value added structure affects firm’s organization & international production networks
NSOs already produce a wealth of information on the activities of economic actors participating in GVCs - international trade, economic performance, foreign investment, and employment.

So why do we need better statistics?

- Existing information not often presented in a way that permits understanding of the role and impact of GVCs on a given economy or within global economy.
- Existing macroeconomic accounting frameworks describe the relationships between one industry and another within a given economic territory, but are not able to illustrate the international linkages.
- Standard macroeconomic account tools are organized around *products, industries and sectors*, while the more applicable organizing framework to explain a GVC are business processes and activities.
- National statistical compilers only see parts of firms’ global activities.
• One approach is extending existing SNA production, distribution and use of income, capital, financial, and price and volume accounts to detail the international contributions, both in aggregate and by industry.

• Based on expanding national supply-use and I-O tables utilizing:
  - MNE surveys
  - surveys for Balance of Payments purposes
  - tax data on international financial and non-financial flows and ownership
  - integrated business statistics
  - reconciled trade statistics

• Would provide more homogenous information, such as breakdowns by type of ownership (e.g., foreign or domestically owned MNEs, foreign or domestic affiliates) and maybe by trading status (e.g., export orientation).
Extended global supply and use tables, or multi-country input-output tables, such as OECD’s TIVA accounts or World Input-Output Tables (WIOT), would complement such extended SNAs.

Because such tables contain information on supply–use relations between industries and across countries, it is possible to identify the vertical structure of international production sharing.

Cover entire set of industries that make up an economic system, enabling measurement of cross-border flows for country or region.

Theoretically, such analysis has the capacity to track the value-added generation process of every product in every country at every production stage.
Some limitations to multi-country I-O analyses

- Do not show value-added of a specific task or nature of specific transactions, business processes/functions

- Transactions are recorded on a domestic basis and so production activities are circumscribed by territorial borders rather than by the nationality that the produced goods are associated with

- Assumptions are made about the allocations of imports between final demand and intermediate uses in industries

- R&D and marketing usually counted in research or wholesale trade sectors though also part of manufacturing

- Statistical unit of imports is typically the enterprise rather than the establishment, which is used in conventional SUTs

- In multi-country context – difficulty of resolving bilateral trade asymmetries
Advantages of a GVC satellite account approach

Using firm-level data on specific industries and final products of an MNE is likely to produce more accurate data on specific industries and MNEs

- Focus on a specific product or group of products within a GVC
- Can complement and benchmark macro-based GVC extensions
- Among a group of key partner countries
- Countries choose to focus on particular GVCs and partners
- Based on existing firm-specific micro data, publicly available micro data, existing input-output coefficients, and existing, or newly collected, information on governance and business functions.
- Developed within, and can be linked to, the SNA accounts
- Would not overburden or reduce the accuracy or consistency of core accounts
- Would allow for adding flexibility and highlighting flows and interactions that may not be visible with a more structured and aggregated set of extended SUTs
• Industry-specific Supply and Use Tables delineated in standardized presentations of products and industry classifications.

• The coordination and governance of GVCs can be described using the institutional sector accounts of the System of National Accounts.

• Extended Institutional sector accounts provide an economic overview of the distribution of value added and related income across the different countries through transactions in goods, services, income, assets, and liabilities with breakdown by affiliate/non-affiliate firms.
• Global enterprise profiles and business registers should identify cross-border control and ownership established by the lead firms in their firm networks.

• Impact on firm level statistics and indicators on employment, income, productivity and international trade within the GVCs as compared to firms not participating in the GVCs.

• Will allow for tailored collaboration between partner countries in analyzing bi-lateral asymmetries.

• Development of global enterprise registers and establishing early warning systems for large statistical impact events.
The flows of goods, services, people, ideas, and capital are interdependent and must be assessed jointly.

Gross bilateral trade balances hide significant import content, including foreign and domestic value added.

Protectionist measures can (i): lower the competitiveness of domestic lead firms that rely on imported inputs; (ii) tax domestic value-added that is embodied in imports; and (iii) lead to higher consumer prices if lead firms pass-through costs.

Economic development can occur through economic upgrading and densification.

New policy framework depends critically on statistics classified into business functions rather than aggregated industrial sectors.
Further Improvements To Be Made

- Ensure **coherence** of substantive matter with the other sections
- Ensure consistency of **terminology** with other sections
- Potential areas of elaboration:
  - More detail on **related efforts**, such as two UNECE handbooks, Extended SUTs, TiVA, APEC TiVA, FIGARO, digital trade development of TEC data, modes of supply, balanced trade (goods and services)
  - Possibly a **snapshot of the inter-country tables** that are being proposed (as prelude to part II)
  - More precise **definition of GVC**?
  - Others?
Thank you!