Trade in Value Added

WTO TiVA Profiles

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Trade in value added is a statistical approach that estimates the sources (by country and industry) of the value that is added in the production of goods and services for exports.

Some advantages of the trade in value added measure:
- Highlights the actual contribution of trade to an economy
- Addresses the double counting observed with traditional statistics.
- Estimates trade taking place within GVCs.
- Highlights interlinkages between economies.

OECD-WTO TiVA video
Why do we care about TiVA?

6 compelling reasons why trade statistics in Value-Added terms are relevant for trade policy:

- Global imbalances (Apple iPhone example)
- Market access and trade disputes
- The impact of macro-economic shocks
- Trade and employment
- Trade and environment
- Trade, growth and competitiveness

Gross vs Value Added measures of trade flows

Gross exports of intermediates (50) → Value added exports (50)

Gross exports of final goods/services (150 = 50 + 100) → Value added exports (100)

: Gross trade flows

: Value added trade flows
Trade in intermediate goods
50% of world merchandise exports are intermediate goods

World exports of intermediate goods, 2001-2015
(Billion $ and % shares)

Note: world total exports exclude fuels
Source: UN Comtrade database and WTO Secretariat estimates
Accessing TiVA statistics


- WTO TiVA-GVC profiles, including technical notes: [https://www.wto.org/english/res_e/statis_e/miwi_e/countryprofiles_e](https://www.wto.org/english/res_e/statis_e/miwi_e/countryprofiles_e)


Link to the WTO web portal on TiVA and GVC statistics: [http://www.wto.org/miwi](http://www.wto.org/miwi)
Accessing educative TiVA reports

Link to the WTO web portal on TiVA and GVC statistics:
http://www.wto.org/miwi

WTO/IDE-JETRO joint publication:
“Trade Patterns and Global Value Chains in East Asia: from trade in goods to trade in tasks”

WTO/French Senate conference proceedings:
“Globalization of industrial production chains and measurement of trade in value added”
Further reading on TiVA

Trade in Value Added (TiVA) database

- A joint OECD-WTO initiative

- To better track global production networks and supply chains, better than what's possible with conventional trade statistics.

- Some 40 of indicators measuring the VA content of international trade flows and final demand
  - Derived from the OECD's Inter-Country Input-Output (ICIO) Database.

- Data from 1995-2011, 64 economies, 34 industries

- In USD million (in current prices) or percentages
### Inter-Country Input-Output (ICIO) database

**National Input-Output tables (IOTs) or Supply and Use tables (SUTs)**

**Bilateral trade statistics in goods and services**

| Countries, WTO (estimations, adjustments) |

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### Inter-Country Input-Output (ICIO) table

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<th>Country A</th>
<th>Country B</th>
<th>Country C</th>
<th>Final Demand</th>
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**Taxes less subsidies on products**

**Cif-fob adjustments**

**Value added**
- Labour compensation
- Operating surplus
- Taxes less subsidies on production

**Output**

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### TiVA and GVC indicators
Overview of South Africa
TiVA-GVC statistical profile
The decomposition of gross exports in VA components
The example of South Africa

South Africa gross exports 2011 (Bil. $) 119
South Africa VA exports 2011 (Bil. $) 119
of which:
Domestic VA
Sent to consumer economy 64
Sent to third economies 32
Re-imported in the economy 8
Foreign VA 23
South Africa TiVA-GVC profile 2/4

**Participation in Global Value Chains (GVCs)**

**The GVC participation index, 2011**
(% share in total gross exports)

<table>
<thead>
<tr>
<th>Total GVC participation</th>
<th>South Africa</th>
<th>Developing economies</th>
<th>Developed economies</th>
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<tbody>
<tr>
<td>Forward participation</td>
<td>48.6</td>
<td>23.1</td>
<td>14.2</td>
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<tr>
<td>Backward participation</td>
<td>21.5</td>
<td>23.8</td>
<td>23.8</td>
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</tbody>
</table>

**Forward GVC participation, 2011**
(% share in total exports of domestic inputs sent to third countries)

1. Mining                  | 37.6          |
2. Wholesale and retail trade | 14.8         |
3. Transport and storage   | 8.2           |

**Top exporters of South Africa inputs through GVCs**
(% share in total exports of domestic inputs sent to third countries)

1. China                   | 19.3          |
2. Germany                 | 9.4           |
3. Japan                   | 6.3           |

**Evolution of total GVC participation, 1995-2011**
(annual % change)

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<th>South Africa</th>
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<td>8.0</td>
<td>10.0</td>
<td>13.1</td>
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**Backward GVC participation, 2011**
Top GVC-importing industries
(% share in total foreign content of exports)

1. Basic metals         | 23.4          |
2. Mining               | 17.4          |
3. Petroleum products   | 11.3          |

**Top foreign inputs providers**
(% share in total foreign content of exports)

1. Saudi Arabia, Kingdom of | 13.7          |
2. United States          | 7.5           |
3. China                  | 6.9           |
Indirect exports of services

Direct + indirect exports of services

ROLE OF SERVICES VALUE ADDED IN EXPORTS

The services VA content of exports, by origin, 2011
(% shares in manufactures and total exports)

Evolution of the services VA content of exports, 1995-2011
(annual % change)

Services VA contribution to exports of manufactures
Top services industries contributing to exports of manufactures, 2011
(% share in gross exports of manufactures)
1. Wholesale and retail trade 11.8
2. Transport and storage 6.5
3. Other community and social services 5.9

Top foreign services providers to exports of manufactures, 2011
(% share in gross exports of manufactures)
1. United States 0.9
2. United Kingdom 0.7
3. China 0.7

Services VA contribution to total exports
Top services industries contributing to total exports, 2011
(% share in total gross exports)
1. Wholesale and retail trade 14.0
2. Transport and storage 9.6
3. Financial intermediation 6.2

Top foreign services providers to total exports, 2011
(% share in total gross exports)
1. United States 0.8
2. United Kingdom 0.6
3. Germany 0.6
WTO TiVA-GVC statistical profiles, including technical notes:
https://www.wto.org/english/res_e/statis_e/miwi_e/countryprofiles_e.htm

OECD-WTO TiVA country notes, including technical guide:
To remember about TiVA

Trade in value added statistics:

✓ Are estimates!

✓ Do not replace traditional trade statistics but rather complement them by providing another angle for trade analysis

✓ Are useful to understand current trade patterns, especially exchanges taking place within GVCs

✓ Are useful to assist trade policy orientations but not for decision-making at product level
Some projects and initiatives to improve TiVA data

- OECD-WTO joint collaboration on “Balancing bilateral international merchandise trade and international trade in services statistics” => Improving trade statistics used for the ICIO tables (estimation of missing data, corrections of bilateral trade asymmetries, estimation of cif/fob margins,...)

- UN ECA/OECD/WTO forthcoming project
to foster the development of African SUTs, and facilitate the integration of African economies in the OECD-WTO TiVA database

- Develop WTO TiVA sectoral profiles, start with Automotive Sector (2018)

- Write more advocacy papers and publications to show TiVA analysis results

- Other international initiatives (APEC, ADB, NAFTA, ECLAC, …)to develop regional ICIO tables compatible with OECD ICIO tables
Thank you for your attention.