GVCs – Policy Questions and Informed Decision Making

Friends of the Chair
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Overview

- **Objective:** To provide a user’s/policy maker’s perspective of data gaps.

- **Organization:**
  - Use of I/O tables
  - Trade negotiations; CETA example from Canada
  - Looking beyond the negotiating agenda
  - Use of expanded statistics, example of Canadian SMEs
  - Concluding Remarks
Input-output tables will remain the primary ‘economic’ measure of GVCs

- They are well suited to the task.
- Provide consistent measures of where value-added is created and linkages between industries.
- A more generalized and whole-of-economy perspective than case-studies.
- A significant amount of work has already been done on developing the data.
And, I-O / value-added trade approach has been useful for policy-makers

- Shows connection between exports and imports which helps to counter protectionist tendencies.
  - Multiplicative impact of even modest tariffs.
- Recasts bilateral trade balances.
- Demonstrates that firms/industries that don’t export directly are still important to exporting.
  - Particularly, raises the profile of services in exporting.
- Link between trade and employment and the environment.
- Potentially provides better measures of comparative advantage, exchange rate pass-through and real exchange rates.
- Transmission of shocks.
Some specific examples of use of I-O approach

- The impacts of a ‘thickening border’ post 9/11.
- “Buy American” provisions following the global financial crisis.
- Labelling requirements…
  …inspection fees…
  …etc.
- How to show the inter-connectedness of Canada-U.S. cross-border production?
We have many case-studies or examples of cross-border linkages.

Bombardier Global Express

- Aft Fuselage
- Vertical Stabilizer
- Landing Gear and Final Assembly
- Wings
- Center Fuselage
- Forward Fuselage
- Horizontal Stabilizers
- Avionics
- Fuel Systems
- Environmental Systems
- Powerplant

Rear Suspension Assembly

- Ohio
- Spring
- Spring isolator
- Rear differential bushing
- Canada
- Stab bar
- Brake cable
- USA
- Link asm
- North Carolina
- Real differential arm
- Stall bar
- Michigan
- USA
- Stab bar
- Michigan
- USA
- Link asm
- Illinois
- USA
- Upper control arm
- Minnesota
- USA
- Brake
- Louisiana
- USA
- Brake
- West Virginia
- USA
- Brake
- West Virginia
- USA
- Brake
- West Virginia
- USA
- Brake

Source: ADMB, Industry Canada

Source: Martinrea International Inc
But, more systematic measures were required

Most American manufacturing imports from Canada are intermediate inputs

Nearly one-fifth of the value of Canadian exports to the U.S. is produced in the U.S.

Distribution of American Manufacturing Imports from Canada

Final 42%
Intermediate 58%

U.S. Content of Canadian Manufactured Exports

- Transportation Equipment
- Plastics and Rubber
- Electrical Equipment
- Computer and Electronic
- Textile and Textile
- Chemical
- Machinery
- Miscellaneous Manu.
- Paper
- Fabricated Metal
- Primary Metal
- Food
- Furniture
- Printing
- Non-Metallic Mineral
- Wood Product
- Beverage & Tobacco
- Clothing
- Petroleum & Coal

Percent

Data: Statistics Canada, 2004
Source: Office of the Chief Economist, DFATD

Note: Manufactured products excludes refined petroleum.
Data: US BEA and USITC, 2006
Source: Office of the Chief Economist, DFATD
Key gaps identified in I-O approach

- Linking national I-O tables, a resulting lack of industry detail…but lots of work on-going on this issue.

- Proportionality:
  - Domestic vs imported inputs
  - Country source of inputs
  - Within industry heterogeneity
  - Differences in import prices

- Takes time to produce the data.

- Not available for all countries.

- Does not distinguish trade in intermediaries.

- Ownership not (currently) captured.

- R&D not well attributed to industries.
Possible ‘solutions’ to proportionality

- The ‘proportionality assumption’ is used in nearly all work using I/O tables to describe GVCs but is widely identified as a potential issue.
- Winkler and Milberg (2009) and Feenstra and Jensen (2012) provide specific measures of the issue.

Proportion of imported intermediaries, Canadian Manufacturing, 2004

<table>
<thead>
<tr>
<th></th>
<th>I-O with Proportionality</th>
<th>Survey of Innovation</th>
<th>Micro Linked to I-O</th>
<th>Micro Linked to ASM</th>
<th>Hybrid 1 (dist excess imports)</th>
<th>Hybrid 2 (exclude excess imports)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing</td>
<td>41%</td>
<td>29%</td>
<td>25%</td>
<td>25%</td>
<td>41%</td>
<td>36%</td>
</tr>
<tr>
<td>Durables</td>
<td>50%</td>
<td>27%</td>
<td>50%</td>
<td>32%</td>
<td>52%</td>
<td>46%</td>
</tr>
<tr>
<td>Non-Durables</td>
<td>31%</td>
<td>32%</td>
<td>15%</td>
<td>17%</td>
<td>27%</td>
<td>23%</td>
</tr>
</tbody>
</table>

Source: Baldwin, Gu, Sydor, Yan (forthcoming)

- Hybrid methods that make use of micro-data, but also adjust for roll of intermediaries may provide a credible alternative, especially for manufacturing durables.
Canada-EU Comprehensive Economic and Trade Agreement (CETA)

- Not just language, modern agreements extend well beyond the traditional ‘trade’ agenda (ie. goods and tariffs).

‘Traditional trade issues’ reflect modern reality:

“CETA’s rules of origin reflect today’s global value chains and the reality that goods are made from parts or ingredients (‘inputs’) sourced from many countries”

But, also new dimension to such agreements:

“Beyond imports and exports, the word “trade” itself is now shorthand for a vast number of international business connections.”
Coverage of CETA

TRADE IN GOODS
- Market access for goods
- Rules of origin
- Customs and trade facilitation
- Technical barriers to trade
- Regulatory cooperation
- Sanitary and phytosanitary measures
- Sector-specific provisions
- Subsidies
- Trade remedies

INVESTMENT, SERVICES AND RELATED MATTERS
- Investment
- Cross-border trade in services
- Domestic regulation
- Mutual recognition agreements
- Telecommunications
- Financial services
- Temporary entry
- Competition
- Monopolies and state enterprises
- Electronic commerce

GOVERNMENT PROCUREMENT
INTELLECTUAL PROPERTY
DISPUTE SETTLEMENT
SUSTAINABLE DEVELOPMENT, LABOUR AND ENVIRONMENT
- Trade and sustainable development
- Labour
- Environment

INSTITUTIONAL AND HORIZONTAL PROVISIONS
Trade negotiators most common requests and issues

- More…more…more, now…now…now

- Merchandise trade
  - Transshipments
  - Related party Trade
  - Tariffs/duties Collected and Import Programs

- Services
  - More Countries
  - More Sectors
  - Mode of Delivery
  - Comparable Definitions Across Countries
  - Link to Domestic Economy (eg. employment)

- “Foreign Direct Investment”
  - “Actual value of investment” in partner country
  - More countries
  - More Industries
Measuring the impacts of trade agreements

- **CETA impact:**
  
  “20-percent boost in bilateral trade and a $12-billion annual increase to Canada’s economy. Put another way, that’s the economic equivalent of adding $1,000 to the average Canadian family’s income or almost 80,000 new jobs to the Canadian economy.”

- **Measuring economic impacts of agreements**
  - See section on I-O…CGE modeling based on I-O tables
  - Measuring barriers to trade (especially, NTMs for goods and anything for services).
  - Linking trade to jobs and environment.
  - Especially difficult for trade in services and investment.

- **General support for trade and exporter performance**
  - Link between international activity and economic wellbeing and growth
The need for better measures of internationalization may be strongest outside of trade negotiations (although line blurring between domestic and international):

- **Trade promotion agencies**: building case for support, type of support given, to support offshoring/outsourcing, inward FDI, outward FDI, franchising, licensing, joint R&D.

- **Industrial development departments**: SMEs, infrastructure, industrial policy, domestic regulation.

- **Development agencies**: Aid for trade, private-sector led growth, GVCs.

- **Trade Facilitation**: For example APEC work on trade facilitation, customs procedure vs infrastructure.
Use of intermediaries is quite pervasive, especially for SMEs…

Share of Canadian Manufactures which Sold a Good to Another Firm which then Exported it “as is”*

<table>
<thead>
<tr>
<th>Percent</th>
<th>Large</th>
<th>Medium</th>
<th>Small</th>
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<tr>
<td>35</td>
<td>23.0</td>
<td>32.7</td>
<td>31.0</td>
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<td>30</td>
<td></td>
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* Excludes firms that could not respond to the question.

Data: Survey of Innovation and Business Strategy, data for 2009
Source: Office of the Chief Economist, DFAIT
...and, many SMEs export indirectly by selling inputs to an exporter

Direct and Indirect SME Exporters

Percent

16
14
12
10
8
6
4
2
0

14.1%
3.7%
1.3%
9.1%

Export
Sell Inputs which Are then Exported
Export and Sell Inputs

10.4% SME Exporters

Data: Survey on Financing and Growth of SMEs, data for 2011.
Source: Office of the Chief Economist, DFAIT
Service exports are more important for smaller firms

Canadian SME Exports by Type

Data: Survey on Financing and Growth of SMEs, data for 2011.
Source: Office of the Chief Economist, DFAIT
Outsourcing appears to be an important business strategy for exporters, including SMEs.

Outsourcing by Canadian SMEs

Data: Survey on Financing and Growth of SMEs, data for 2011.
Source: Office of the Chief Economist, DFAIT
Concluding Remarks

- The data needs have been well captured.
- Focus on maximizing the use of existing data due to cost and response burden is well placed.
  - Small additions or changes to existing tools can also be extremely fruitful.
- Modern ‘trade agenda’ is increasingly moving beyond traditional definitions of trade and will require new data.
  - This is easier to track as there are a limited number of big negotiations and there is an international structure in place.
  - Modern ‘trade agenda’ is widening and moving behind the border.
- Policymakers in other spheres may be even more important clients.
  - More difficult to identify and have less experience with international data, but may be more important.
  - Modern ‘domestic agenda’ is increasingly internationalizing.
Merchandise Trade Issues

- Linking of trade and business statistics
- Better utilization of customs procedure codes (processing trade)
- Separate recording of special transactions
- Recording of mode of transport
- Recording of second partner for imports and exports
- Compilation of imports on FOB basis, in addition to CIF.
- Tariffs/duties collected and import programs
- Related party trade
Services Trade Issues

- Further breakdown of services and partner detail
  - i.e. more countries, more sectors
- Inward and outward FATS !!!!
- Modes of supply
- Relation between purchaser and supplier (contract, ownership)
  - I.e. offshoring/outsourcing
- Comparable definitions across countries
- Link to domestic economic indicators including employment
GVC specific

- Goods for processing (???)
- Value-added trade
- Trade in tasks/import content of exports
- Trade in Business Activities
- Changing Activities within the Firm