Services and Manufacturing: Patterns of Linkages

Expert Group Meeting on “Global Value Chains, Regional Integration and Sustainable Development: Asia-Pacific Perspectives”

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Nomenclature of services

Global Value Chains (GVCs)

Pre-Production | Production | Post-Production

1 'Producer' services
- Research
- Consulting
- Prototyping
- Design

2 'Embodied' services
- Transport
- Distribution
- Accountancy
- Engineering

1 'Consumer' services
- Branding
- Leasing
- Financing and insurance
- Repairs and maintenance

2 'Embedded' services
- Prototyping
- Design

Examples
Capturing contribution of services to manufacturing

<table>
<thead>
<tr>
<th>No.</th>
<th>Export channel</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Direct services exports</td>
<td>Engineering services provided to manufacturing plant abroad.</td>
</tr>
<tr>
<td>2</td>
<td>Indirect services embodied in domestic intermediate goods</td>
<td>Research services provided by locally-based company and embodied in domestic intermediate goods.</td>
</tr>
<tr>
<td>3</td>
<td>Re-imported domestic services embodied in imported intermediate goods</td>
<td>Design services provided domestically and embodied in imported intermediate goods.</td>
</tr>
<tr>
<td>4</td>
<td>Indirect services supplied to other service sectors which enter export market in one of the above</td>
<td>Telecommunication services used by logistics company which delivers intermediate goods to manufacturing plant for final assembly before export.</td>
</tr>
</tbody>
</table>

Contribution of services

Share of services value added in manufacturing exports (1995 and 2009)

Share has increased for 15 economies and APEC as a whole.

Source: APEC Policy Support Unit computation based on OECD-WTO Trade in Value Added (TiVA) database.
Contribution of services

Services’ contribution by manufacturing sectors (1995 and 2009)

- Share has increased for 8 (out of 9) industries and manufacturing as a single group.

Source: APEC Policy Support Unit computation based on OECD-WTO TiVA database.
Domestic and foreign share of services value added in manufacturing exports in 2009

- For APEC as a whole, 65 percent domestic and 35 percent foreign.
- Of the foreign share, more than 60 percent are from other APEC economies.

Source: APEC Policy Support Unit computation based on OECD-WTO TiVA database.
## Importance of business services

### Growth of service exports

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Construction</td>
<td>1.91</td>
<td>2.31</td>
<td>18.84</td>
<td>5.83</td>
</tr>
<tr>
<td>Wholesale and retail trade; hotels</td>
<td>265.16</td>
<td>6.97</td>
<td>356.37</td>
<td>5.99</td>
</tr>
<tr>
<td>Transport and storage, post and telecommunication</td>
<td>197.21</td>
<td>4.80</td>
<td>195.78</td>
<td>6.41</td>
</tr>
<tr>
<td>Financial intermediation</td>
<td>73.50</td>
<td>7.43</td>
<td>150.99</td>
<td>6.98</td>
</tr>
<tr>
<td><strong>Business services</strong></td>
<td><strong>173.85</strong></td>
<td><strong>8.46</strong></td>
<td><strong>387.32</strong></td>
<td><strong>7.40</strong></td>
</tr>
<tr>
<td>Other services</td>
<td>28.63</td>
<td>7.10</td>
<td>64.24</td>
<td>8.06</td>
</tr>
</tbody>
</table>

**Business services:**
- With highest direct exports CAGR 1995-2009 (%).
- With highest value added share in manufacturing in 2009.

Source: APEC Policy Support Unit computation based on OECD-WTO TiVA database.
<table>
<thead>
<tr>
<th>Role of business services in manufacturing</th>
<th>Increase in share of business services within total services from 1995 to 2009</th>
<th>Top service sector value added, by manufacturing sector (2009)</th>
</tr>
</thead>
<tbody>
<tr>
<td>All manufacturing</td>
<td>√</td>
<td>Business services</td>
</tr>
<tr>
<td>Food products, beverages and tobacco</td>
<td>√</td>
<td>Wholesale and retail trade; Hotels and restaurants</td>
</tr>
<tr>
<td>Textiles, textiles, leather and footwear</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wood, paper, printing and publishing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chemicals and pharmaceuticals</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Basic metals, non-metallic mineral</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Machinery and equipment, not elsewhere</td>
<td>√</td>
<td>Business services</td>
</tr>
<tr>
<td>classified</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electrical and optical equipment</td>
<td>x</td>
<td>Business services</td>
</tr>
<tr>
<td>Transport equipment</td>
<td>√</td>
<td>Business services</td>
</tr>
<tr>
<td>Manufacturing nec; recycling</td>
<td>√</td>
<td>Business services</td>
</tr>
</tbody>
</table>

What are in business services?
- Real estate activities.
- Renting activities for machines and equipment.
- Computer related activities.
- Research and development.
- Other business activities.

Source: APEC Policy Support Unit computation based on OECD-WTO TIVA database.
Detailed contribution of business services

Other business activities is the top business services in terms of share in mid-2000s for 11 industries.

What are in other business activities?

- Legal.
- Accounting.
- Bookkeeping and auditing activities.
- Tax-consultancy.
- Business and management consultancy.
- Engineering services.
- etc.

Source: APEC Policy Support Unit computation based on OECD Structural Analysis (STAN) database.
Restrictiveness in services

Manufacturing exports and services restrictiveness

The more restrictive services are, the lower manufacturing exports per capita are.

Source: APEC Policy Support Unit computation based on OECD-WTO TIVA, OECD Services Trade Restrictiveness Index (STRI) and World Bank World Development Indicators databases.
Policy implications and what next?

- Policymakers should increasingly think of both goods and services concurrently.
- The need to look at how restrictions on provision of services can be overcome to improve competitiveness.
- Collaborative and coordinated policymaking across government agencies are necessary in view of cross-agency nature of services and GVCs regulations.
- Collection of case studies to understand the value chain of various manufacturing sector to complement research using TiVA data.