Global Value Chains and Development Policies

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Handbook on Accounting for Global Value Chains

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GVCs are a fact

Uses the MC-GVC (Measuring Competitiveness in Global Value Chains) World Bank dataset to map intermediate and final goods in autos and parts, electronics and textiles, apparel and footwear. Complementary to other databases based on value-added concepts,
... though with different degrees

Figure 3: Share of GVC Exports in Total Exports by World Regions, 1988-2014

Ferrantino M. and Schmidt G., 2018
1. Access to demanding and sophisticated markets
2. Access to knowledge, technology, organization,
3. Opportunities for learning and innovation

GVCs are not only a trade phenomenon
Why does it matter?……

GVC integration is associated to higher productivity


- the last wave of WBES firm-level data and the OECD–WTO TiVA data, at the firm-level, for 30 LAC countries
- firms integrated in GVCs are more productive. Some of the opportunities for learning and innovation opened by GVCs are at play in the countries we study in Latin America, as they often involve knowledge exchanges, deeper interactions, and “learning by supplying”.
- Moreover, firms operating in the industries exporting intermediates used in other countries’ exports (forward integration) tend to be more productive than firms operating in industries whose value-added comes primarily from imported inputs (downward integration).
GVCs may foster processes of **upgrading** in local firms – an example of **Functional Upgrading**

<table>
<thead>
<tr>
<th>Textiles</th>
<th>Accesorios-Etiquetas</th>
<th>Corte</th>
<th>Ensamblaje</th>
<th>Lavado y acabados</th>
<th>Distribución</th>
<th>Marketing</th>
<th>Retail</th>
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Linking clusters to GVCs: Upgrading is possible within GVCs, but it depends on GVC governance

- Participation in GVCs led by large buyers (buyer-driven chains) **fosters** the **relationships with the international market**.
- Foreign chain leaders buyers favour **product and process upgrading** in traditional manufacturing sectors;
- However, **functional upgrading is rarely achieved**;
- **Several forms of GVC governance coexist** in the same cluster, and may offer **profitable alternatives**;
- **GVCs with network and less hierarchical governance offer greater opportunities**.
Forms of organization and Governance of VCs

Adapted from: Gereffi-Humphrey-Sturgeon, IRPE 2005, and Pietrobelli-Rabellotti, WD 2011

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Upgrading depends also on the interactions between GVCs and the Innovation System

Innovation Systems framework:

• **Focus** on how interactions among enterprises, institutions, research bodies and policy making agencies contribute to learning and innovation within firms;

• **Limitation**: little attention to external linkages in the generation and diffusion of knowledge and innovation;

Global Value Chain framework:

• **Focus** on the role of leading firms and inter-firm networks in firms upgrading;

• **Limitation**: little attention on the understanding of the upgrading itself. How is knowledge accessed? How can firms in GVCs learn and innovate? Do lead firms hinder/foster suppliers’ learning?
The bridge between GVCs and IS occurs through the role of learning within GVCs

How do different learning mechanisms operate in different types of GVCs?

- In which chains are lead firms promoting learning only through increased pressure (‘competition effect)?
- In which ones are lead firms supporting innovation through deliberate knowledge transfer and direct involvement in the learning and innovation process?
- In which type of chains is learning resulting from unintended knowledge spillovers?

How do different innovation systems affect the determinants of GVC governance and through this, the opportunity for enterprise learning and upgrading?
Learning mechanisms within GVCs need to be considered for policy purposes. They vary according to the form of GVC governance.

<table>
<thead>
<tr>
<th>Governance Type</th>
<th>Complexity of transactions</th>
<th>Codification of transactions</th>
<th>Competence of suppliers</th>
<th>Learning mechanisms within GVCs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Market</td>
<td>Low</td>
<td>High</td>
<td>High</td>
<td>▪ Knowledge spillovers</td>
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<td>▪ Imitation</td>
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<td>Modular</td>
<td>High</td>
<td>High</td>
<td>High</td>
<td>▪ Learning through pressure to accomplish international standards.</td>
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<td>▪ Transfer of knowledge embodied in standards, codes, technical definitions</td>
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<td>Relational</td>
<td>High</td>
<td>Low</td>
<td>High</td>
<td>▪ Mutual learning from face-to-face interactions</td>
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<tr>
<td>Captive</td>
<td>High</td>
<td>High</td>
<td>Low</td>
<td>▪ Learning via deliberate knowledge transfer from lead firms confined to a narrow range of tasks – e.g. simple assembly.</td>
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<tr>
<td>Hierarchy</td>
<td>High</td>
<td>Low</td>
<td>Low</td>
<td>▪ Imitation</td>
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<td>▪ Turnover of skilled managers and workers</td>
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<td>▪ Training by foreign leader/owner</td>
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<td>▪ Knowledge spillovers</td>
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Source: adapted from Gereffi et al., 2005

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Important to consider **both:**

1. **Integration** into GVCs

2. **Capturing value** within GVCs

   - challenge to enter segments of higher value added,
   - ....with larger opportunities for learning and innovation (capacity to attract knowledge, intangibles)
   - Help develop local technological capabilities
How do Development Policies Change with GVCs?

1. Trade Policy: Import protection may hinder capacity to produce/export.

2. Investment Attraction: needs to be selective and consistent with the country’s characteristics and its production capacity (potential for linkages, local procurement, development of local suppliers, ....).

3. Innovation system needs to be consistent with GVCs and FDI – mutual interactions between GVCs and IS to mutually strengthen.

4. Education and Training Policy needs to be consistent.

5. Migration policy also consistent, talents attraction.

6. ............
# A Typology of GVC and Innovation-related Policy Interventions - examples

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<tr>
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<th><strong>Horizontal</strong></th>
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<tbody>
<tr>
<td><strong>Public Inputs</strong></td>
<td>• Monitor opportunities for selective attraction</td>
<td>• FDI and lead-firm attraction:</td>
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<td></td>
<td>• Streamline procedures for FDI and lead-firm (e.g. One-stop shops).</td>
<td>✓ Skills training center</td>
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<td>✓ Quality, Standards, Certification Organizations</td>
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<td><strong>Market Interventions</strong></td>
<td>• R&amp;D&amp;i subsidies for local providers’ capabilities</td>
<td>• Temporary tax exemptions to new local providers</td>
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<td>• Matching grants for collaborative R&amp;D</td>
<td>• Selective R&amp;D&amp;I subsidies/grants</td>
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<td>• “Force” externalities:</td>
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<td></td>
<td>✓ training commitments</td>
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<td>✓ local suppliers’ development, ....</td>
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The missing link in the value chain: sterilization of medical devices in Costa Rica
Concluding:

1. Challenge to rethink development policies in light of GVCs
2. GVC integration as well as how to gain from it
3. Careful measurements are required
   - Not only of trade flows but also of inter-firm linkages

Thank you!
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[Email addresses]

[Website link]
5. New emerging emphasis on enterprise clusters based on NATURAL RESOURCES and MINING
Diagram 1. Mining Production involves co-evolution between commodity producers and their providers, environmental regulatory agencies, and local communities.

The industry, Global Value Chains and their governance

- Mining companies
  1. Mining permits
  2. Decreasing yields
  3. Process improvements
  4. Frontier R&D

- Equipment & service providers

Regulatory Agencies

- Agencies monitoring Environmental practices and routines
- Fiscalization and environmental risk management
- Other public sector agencies
- Public goods provision in the locality

The community

- Demand for environmental rights and less pollution
- Demand for Education, health and transport services
- Demand for enforcement of Labor legislation
- Demand for Corporate social responsibility

Source: Katz and Pietrobelli, 2017, RP forthcoming
Upgrading in Mining GVCs

demand forces:
- demand for local tailor-made solutions
- Vertical disintegration and outsourcing in mining
- GVC linkages and governance

Supply forces:
- Recent advances in scientific knowledge open TO (e.g. ICT, biotechnology and new materials)
- Technological rejuvenation in the industry

Firms capabilities
Local suppliers exploit the TO to enter GVC with local solutions based on the new technologies.

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1. Resource-based industries
   - Agro-industry: melon in Rio Grande do Norte, mangos in Petrolina, apples in Santa Catarina, BRAZIL
   - Salmon cluster in Southern CHILE
   - Milk and dairy cluster in Boaco and Chontales, NICARAGUA

2. Complex Product Systems’ industries
   - Metalworking sector, State of Espirito Santo, BRAZIL

3. Traditional Manufacturing Industries
   - Traditional furniture in Chipilo, Puebla, MEXICO
   - Manufacturing Clusters in Mezzogiorno, ITALY

4. High Tech industries
   - Software clusters in Guadalajara, Monterrey, D.F., Aguascalientes, MEXICO

5. An extensive survey on the existing literature
   - 50 cases of clusters and value chains in Latin America