

# GVC and Africa's industrialization

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# Development implications of GVC

- The potential impact of GVC participation for host countries economic growth and development depends on two main factors:
  - The '*governance*' of the GVC with a focus on the lead firms: which type of chain does present more potential for economic growth?

## → Top-down perspective

- The '*upgrading*' of local firms' capabilities and competences: how the business and institutional context in the host countries can facilitate learning and upgrading within GVC?

## → Bottom-up approach

## **GVC impact areas:**

### **Technology dissemination and skill building (based on Pietrobelli & Rabellotti, WD 2011)**

- The types of governance structure in GVCs are an indication of the potential for technology and skills transfer between various actors in the chain:
  - In which chains are lead firms promoting learning through increased pressure –‘competition effect’?
  - In which ones are lead firms supporting the innovation process through deliberate knowledge transfer and direct involvement in the learning and innovation process?
  - In which chains is learning resulting from unintended knowledge spillovers?

**Table IV.9. Learning mechanisms within GVCs**

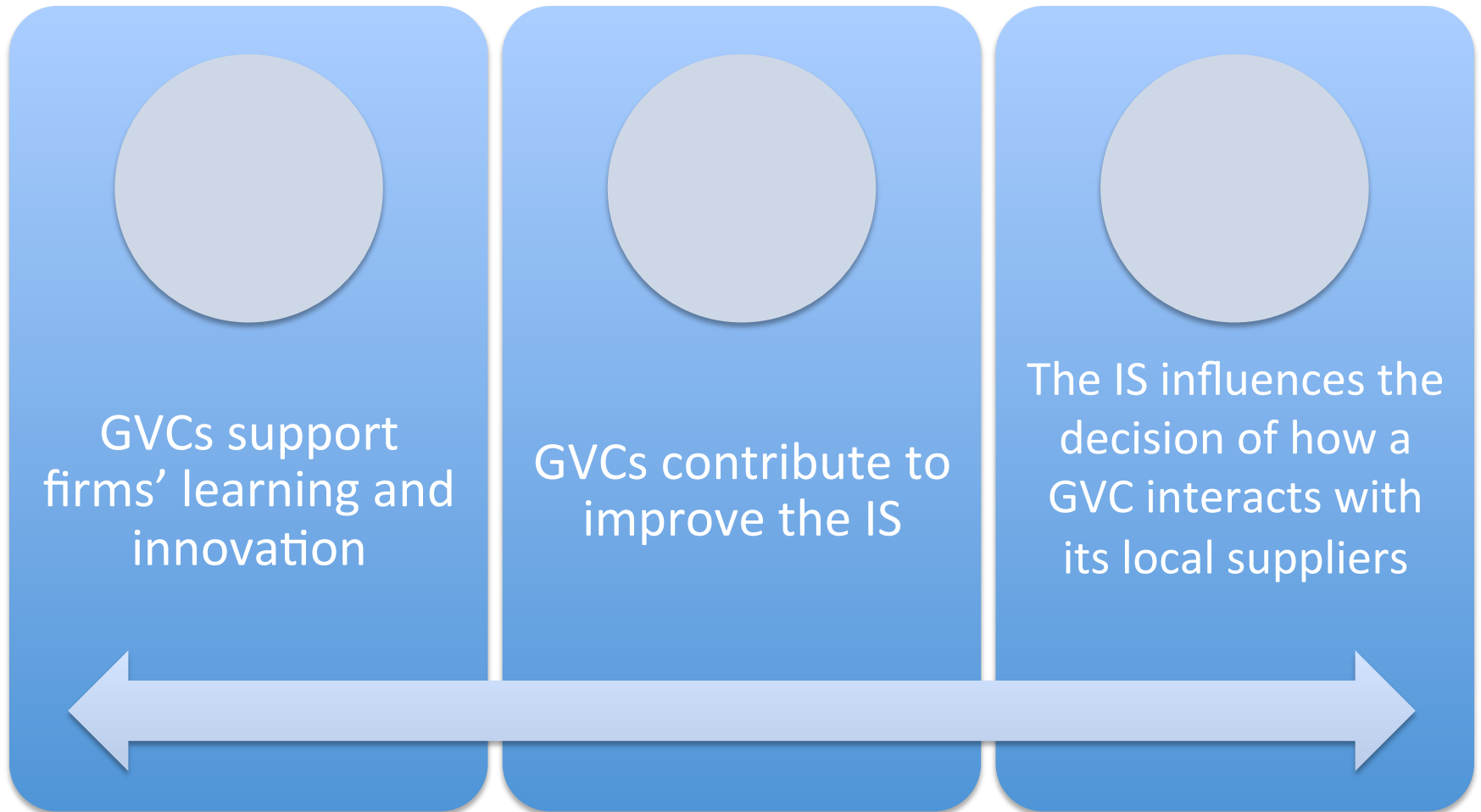
Governance type	Technology/knowledge-related determinants of governance types			Predominant learning mechanisms
	Complexity of transactions	Codification of transactions	Competence of suppliers	
FDI (ownership hierarchy)	High	Low	Low	<ul style="list-style-type: none"> <li>• Imitation</li> <li>• Turnover of skilled managers and workers</li> <li>• Training by foreign leader/owner</li> <li>• Knowledge spillovers</li> </ul>
NEMs:				
- Modular	High	High	High	<ul style="list-style-type: none"> <li>• Learning through pressure to accomplish international standards</li> <li>• Transfer of knowledge embodied in standards, codes, technical definitions</li> </ul>
- Relational	High	Low	High	<ul style="list-style-type: none"> <li>• Mutual learning from face-to-face interactions</li> </ul>
- Captive	High	High	Low	<ul style="list-style-type: none"> <li>• Learning through deliberate knowledge transfer from lead firms; confined to a narrow range of tasks – e.g. simple assembly</li> </ul>
Trade (market)	Low	High	High	<ul style="list-style-type: none"> <li>• Learning from exporting or importing</li> <li>• Imitation</li> </ul>

Source: Adapted from Pietrobelli, C. and R. Rabellotti (2011) "Global Value Chains Meet Innovation Systems: Are There Learning Opportunities for Developing Countries?", *World Development*, 39:1261-9.

## Market transactions: Learning from importing in Uganda (Haakonsson, 2009)

- In Uganda the pharmaceutical producers are tied into the global pharmaceutical value chain by international market linkages with Indian suppliers;
- They have upgraded their products, processes and functions (from assembly to manufacturing) **learning through imports** of knowledge, technology and machinery and from the demands placed upon them by their buyers;
- The industry upgrading is based on **South-South networks** for production of low-value pharmaceutical products;
- With the globalisation of the pharmaceutical industry, an increasing number of global lead firms are ceasing to manufacture these products and there is a growing regional market for low-value pharmaceuticals which Ugandan pharmaceutical producers can exploit;
- The regional market has opportunities for upgrading:
  - Less stringent product and process requirements;
  - More close knowledge of the market vis-à-vis MNCs (opportunities for frugal innovations).

# GVCs and Innovation Systems (IS): an endogenous relationship




# The policy implications: A dynamic view of GVC & IS

	Governance Type	Determinants	Innovation Systems
1	Market	Low complexity	
		High codification	MSTQ organizations matter
		High supplier competence	Education, training organizations matter
2	Modular	High complexity	
		High codification	MSTQ organizations matter
		High supplier competence	Education, training organizations matter
3	Relational	High complexity	“Local” systems and complementary knowledge matter
		Low codification	MSTQ are perhaps less crucial
		High supplier competence	Education, training organizations matter
4	Captive	High complexity	
		High codification	MSTQ organizations matter
		Low supplier competence	
5	Hierarchy	High complexity	Local R&D organizations may benefit from interaction
		Low codification	
		Low supplier competence	GVC is expected to improve human technical skills

A well-structured, complete, smooth system makes **1-2-3** more likely to occur. **4-5** may prevail also with ‘poorer’, fragmented systems. The chain leader may compensate system weaknesses, but upgrading is restricted.

**Possible Dynamics**



- **From 5 and 4 to 2:** thanks to improvement in MSTQ
- **From 5 and 4 to 3:** thanks to improvement in “local” systems
- **From 5 and 4 to 2 and 3:** thanks to IS supporting the co-evolution of suppliers and GVC competences

Source: authors' elaboration

# **Clusters increase the opportunities for upgrading of local firms**

- Collective actions by local producers can facilitate knowledge transfer and absorption;
- This is enhanced in clusters in which SMEs in can take advantage of collective efficiency to foster their competitiveness via learning and upgrading in global value chains.



# Some examples of cluster initiatives relevant for GVC upgrading in Africa

- Clusters can **promote the access to new value chains** (e.g. Sinos Valley – Brazil - collective initiative in design skills and promotion in the domestic and regional markets);
- In the agro food clusters, **public-private horizontal joint action** (involving different stakeholders such as local research centres and universities; intermediary organizations; business organizations) sustain product and process upgrading imposed by foreign buyers (e.g. Winetech participatory system in setting the wine research agenda in SA);
- Promotion of the **adoption of quality and sanitary standards, environmental regulations, and enforcement of quality inspections and controls** (e.g. increase standard awareness; TA to fulfill standards; set up of test laboratories; access to credit conditioned to standard implementation) can be strengthened at cluster level;
- Cluster availability of **specialized suppliers** (e.g. local packaging industries – Carrefour organic pineapples in Guyana, shared logistic infrastructures – berries in Chile) and **specialized skills** (training strategies).

# Thank you

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