

International Business Speaker Series
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Global Value Chains and Local Cluster Development: A Perspective on Domestic SMEs in the 3D-Animation Industry in Colombia

- UNCTAD, OECD, University of Fribourg Research Project -

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Clusters – A Definition

- Clusters are geographic “regional” concentrations of interconnected companies and institutions in a particular field (Porter, 1998, 2000).
- Clusters consist of co-located and linked industries, government, academia, finance and institutions for collaboration (The Cluster Initiative Greenbook, 2003).
- Clusters can have a positive impact on the competitiveness of its firms:

Collective efficiency (Schmitz, 1995):

- *Passive external economies* (spill-over effects)
- *Consciously pursued joint action* (within horizontal or vertical linkages)

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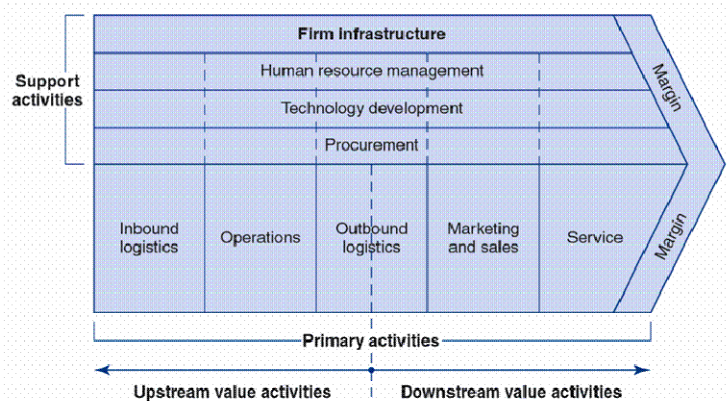
Global Value Chain – A Definition (I)

- Vertical disintegration of transnational corporations and fragmentation of production processes provide new opportunities for developing country SMEs (doctrine of core competence).
- Fragmentation can lead to cross-border production networks within or between firms (Arndt & Kierzkowski, 2001).
- Value-added chain as a process by which technology is combined with material and labour inputs, and then assembled, marketed and distributed. The single firm may consist of only one link in this process or it may be extensively vertically integrated (Kogut, 1985).
- **Global value chain (GVC)** as vertically interrelated productive activities performed by firms in different geographical locations to bring out a product from conception to complete production, and distribution to the final consumer.

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Global Value Chain – A Definition (II)



Source: Hollensen 2004, Global Marketing

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Coordination between the different actors of the GVC may occur through arm's-length market relations or non-market relationships.

Non-market relationships can be distinguished according to three types of governance (Humphrey and Schmitz, 2000):

- **Network**: cooperation between firms of more or less equal power.
- **Quasi-hierarchy**: relationships between legally independent firms that are subordinated to each other with a leader in the chain defining the rules.
- **Hierarchy**: a firm is owned by an external firm.

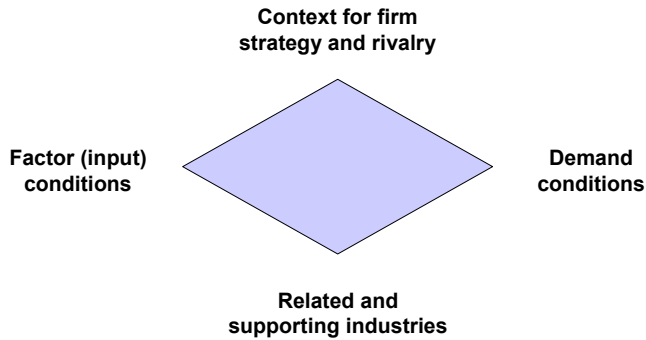
Upgrading as a concept of *making better products, making them more efficiently, or moving into more skilled activities*.

Upgrading as innovating to increase value added (Giuliani et al., 2005):

- **Process upgrading**
- **Product upgrading**
- **Functional upgrading**
- **Intersectoral upgrading**

→ Acquisition of competitiveness on the firm-level (competitive advantage) as a result of innovation and upgrading.

Microeconomic business environment critical in driving innovation and the upgrading of competitive advantage by a nation's firms (Porter's diamond model):



→ Creation of “dynamic” diamonds important for cluster growth and innovation!

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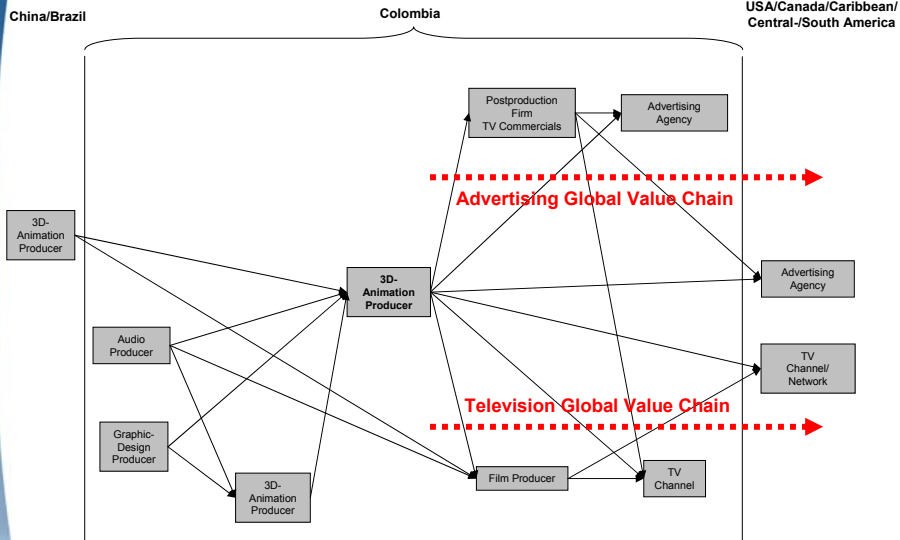
- 3D-Animation as one of the fastest growing industries world-wide.
- 3D-Animations used for TV commercials, TV show/serial promotions and –identity packages, TV channel branding (all in our cases).
- Colombia as the world's third largest producer of TV serials *Telenovelas*.
- Colombian TV market dominated by two national private channels: RCN, Caracol.
- RCN, Caracol increasingly engaged in international strategic alliances for production and distribution.
- Increasing Hispanic population in the US.
- Penetration of major US-based TV channels and – networks into Latin America.

Source: <http://www.virtualamericas.net/graphix/americas.gif>

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Value Mapping for 3D-Animations in Colombia



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Characteristics of 3D-Animation Firms in Colombia



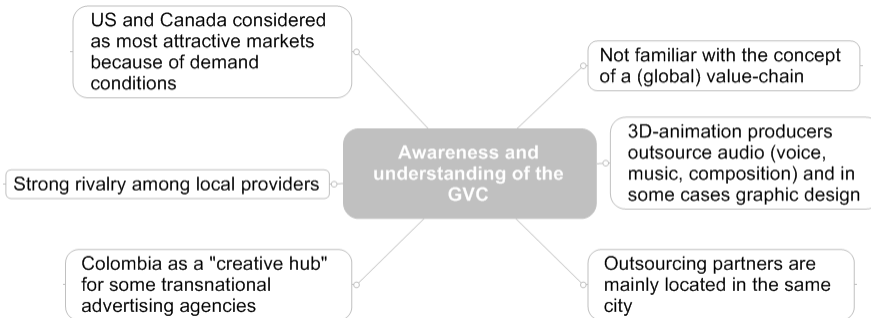
- Established over the last three years.
- Turnover below 1 million US\$.
- Average number of employees: 15.
- Fragmented market with a view established firms complemented by a scattered market of freelancers.
- Talented labour as most important asset, followed by technological equipment.
- Increased importance of R&D expenditures.
- Mainly located in Bogota, and international presence in some cases in USA and Canada (Canada as a "global cluster" for 3D-Animations).
- Software capabilities for 3D animated design still mainly acquired through self-education.

Source: http://www.state.gov/cms_images/10262005_Colombia_330.gif

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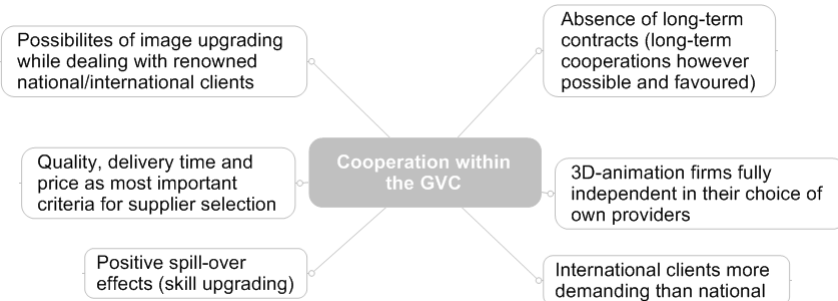
Research Results: Awareness and understanding of the GVC



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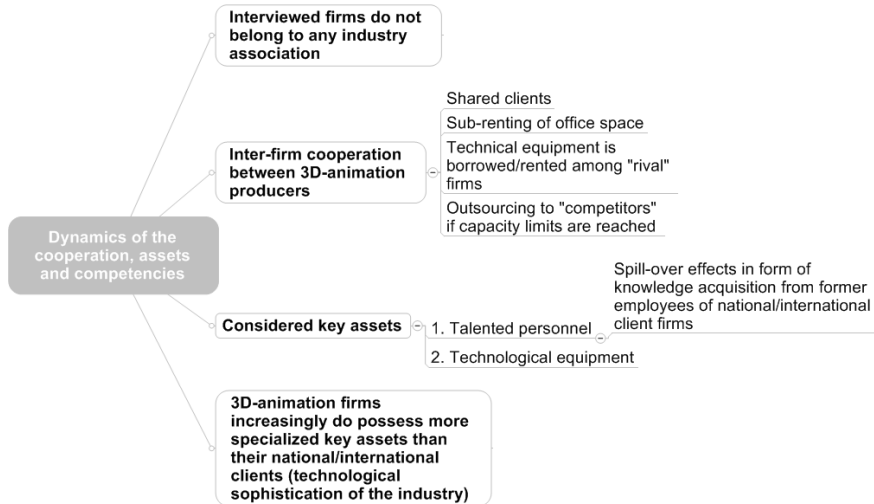
Research Results: Cooperation within the GVC



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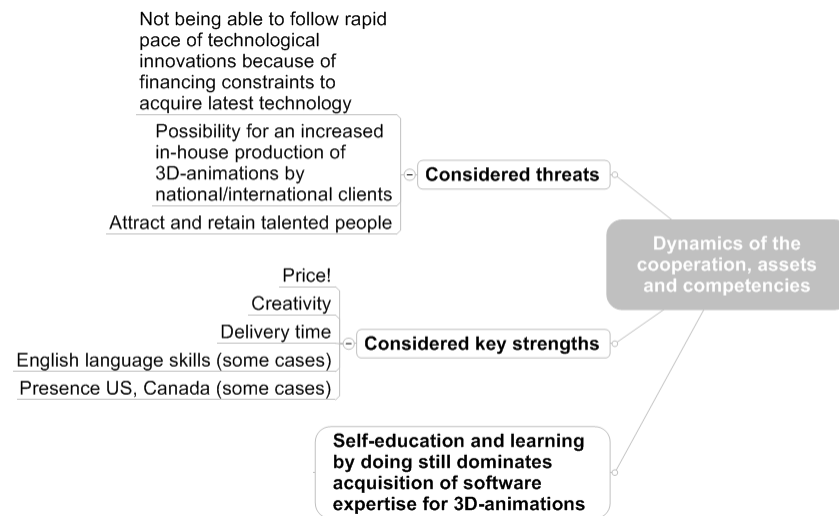
Research Results: Dynamics of the cooperation, assets and competencies (I)



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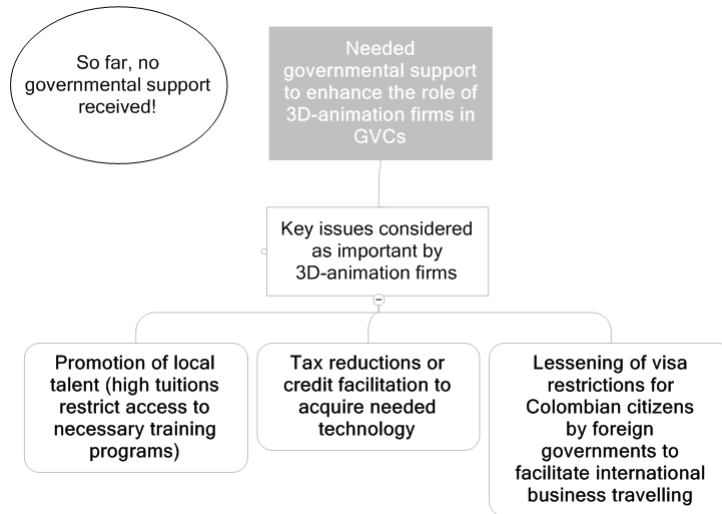
Research Results: Dynamics of the cooperation, assets and competencies (II)



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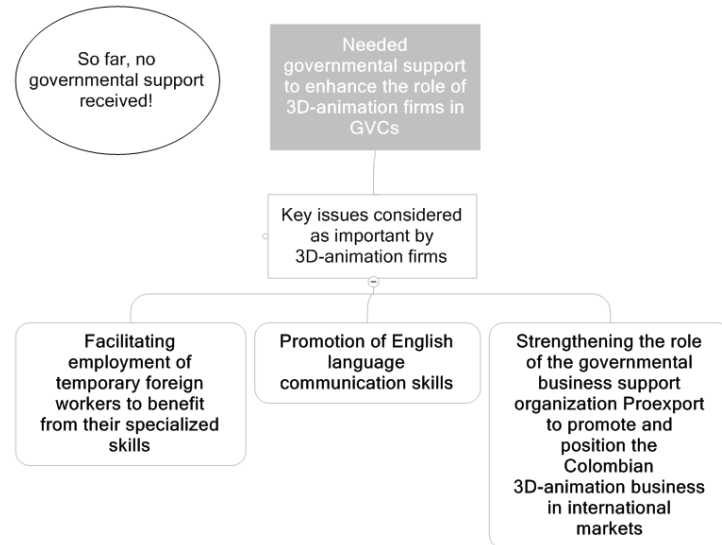
Research Results: Needed governmental support to enhance the role of 3D-animation firms in GVCs (I)



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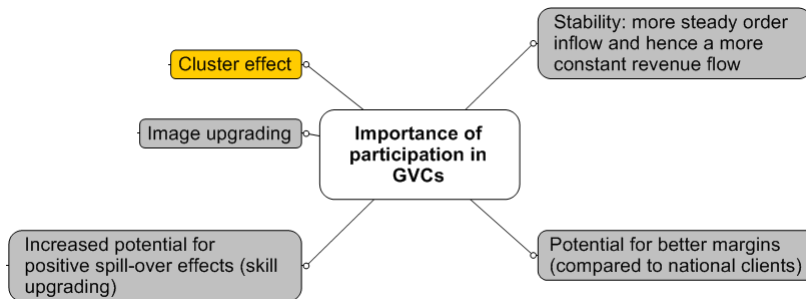
Research Results: Needed governmental support to enhance the role of 3D-animation firms in GVCs (II)



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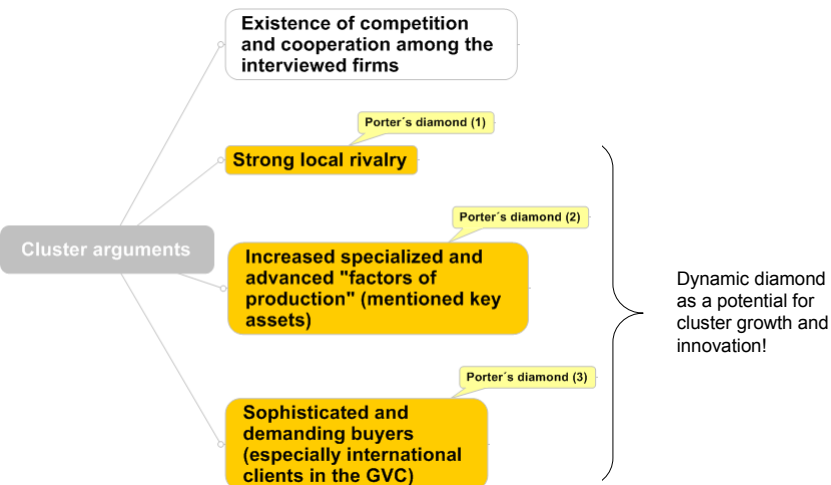
Importance of Participation in GVCs



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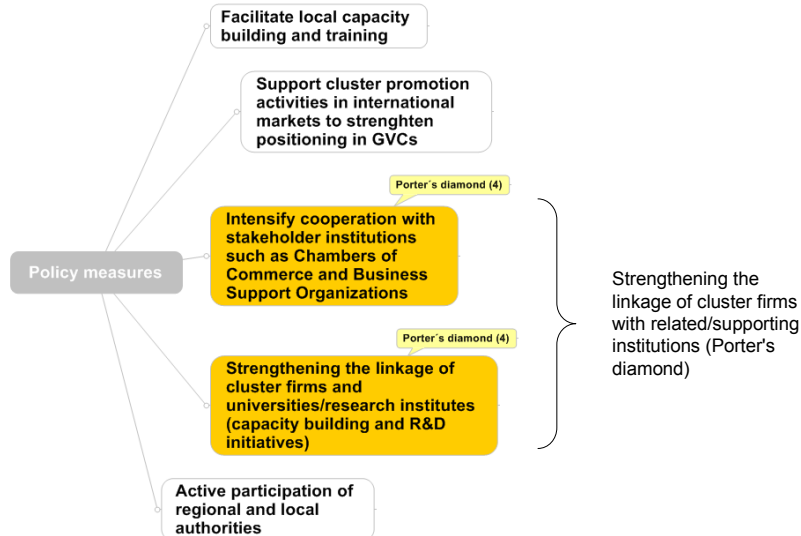
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Cluster Evidence



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Key opportunities for SME participation in GVCs

- Fragmentation of production processes creates **new market niches** for goods and services in which SMEs can position themselves utilizing their relative advantages in flexibility, innovativeness and specialization.
- New opportunities for the international sourcing of **scarce specialized skills**.
- SMEs can **internationalize faster** and cheaper through GVCs.
- SMEs can **participate in different GVCs**, hence securing their growth.
- SMEs can follow on the strategy of their foreign partners in GVCs and **engage in outsourcing and offshoring**.
- They can **learn and innovate in fast track manner**.

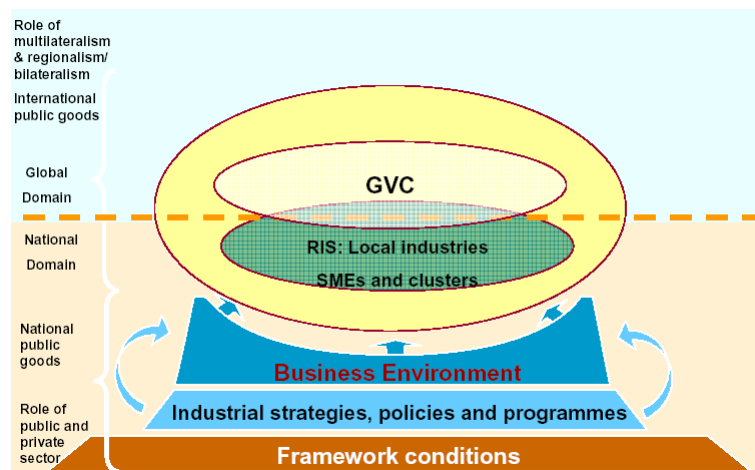
- **Region becomes the strategic level** at which industrial innovations and upgrading takes place.
- Countries compete based on their **regional/location specific assets**: skills (talent) formation; interactive learning processes between SMEs in their clusters, and between SMEs and other stakeholders in the location; modern infrastructure and logistics capabilities.
- **Regional Innovation Systems (RIS)** is a system of networks of SMEs, their clusters, research institutes, organizations providing business development services and government representatives.
- National Innovation System (NIS) approach has been dominant in the past, now RIS is gaining in importance because of GVCs and their impact on local innovation and learning.

Source: Memedovic, O. 2007.

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Cluster-Regional Innovation System-Global Value Chain Linkages



Source: Memedovic, O. 2007.

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Cluster Development as National/Regional Policy – Examples (I)

2007: Most advanced clusters: Energy distribution, Apparel, Construction, Business Tourism & Conventions (82% Micro” Firms with less than 10 employees)

2005: Launch of “Business Network Initiative” for Internationalization by Proexport Colombia

2004:

- Municipal Development Plan for Medellin (2004-2007)
- Regional Competitiveness Agreement for the Energy Cluster

2001:

- Antioquia progresses towards new models for business development (Cluster identification: Timber, Apparel, Construction, Software, Tourism, Health, Energy, Telecommunications and Transport Logistics)
- Regional Competitiveness Agreements for the clusters: Apparel (women underwear), Construction, Fruits and Vegetables, Furniture, Tourism

1999:

- National Plan for Productivity and Competitiveness (1999-2009)
- The Competitive Advantage of Antioquian Business Activities in the 21st century

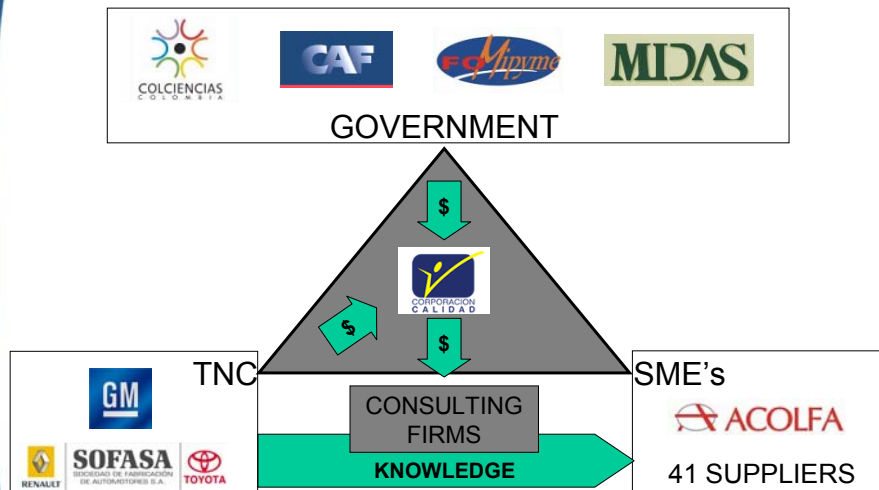
1995: Monitor Study Medellin

1994: Monitor Study Colombia

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Cluster Development as National/Regional Policy – Example (II)



Source: Mantilla, 2007

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