Integrating SMEs into Global Value Chains: Myth or Reality?

Fulvia Farinelli,
Division on Investment and Enterprise
UNCTAD
Global trade (exports of goods and services), by type, 2010

- Global trade in goods and services: ~19
- Non-TNC trade: ~4
- All TNC-related trade: ~15
- Intra-firm trade: ~6.3
- NEM-generated trade: ~2.4
- TNC arm’s length trade: ~6.3

Total trade within the international production networks of TNCs: ~80%

Source: UNCTAD estimates, based on WIR12 (table I.8); BEA; EFIGE; Altmont et al. 2012.
FDI helps countries increase participation in GVCs but the presence of TNCs that participate in GVCs does not guarantee participation of local SMEs.

Relationship between GVC participation and FDI inward stock, 189 countries over 20 years.
Fragmentation of production: the example of the Boeing 787 Dreamliner

- **Wing box**: Mitsubishi Heavy Industries (Japan)
- **Wing ice protection**: GKN Aerospace (UK)
- **Vertical Stabiliser**: Boeing Commercial Airplanes (USA)
- **Horizontal Stabiliser**: Alenia Aeronautica (Italy)
- **Raked wing tips**: Korean Airlines Aerospace division (Korea)
- **Aux. power unit**: Hamilton Sundstrand (USA)
- **Passenger doors**: Latécoère Aéroservices (France)
- **Cargo doors**: Saab (Sweden)
- **Prepreg composites**: Toray (Japan)
- **Centre wing box**: Fuji Heavy Industries (Japan)
- **Centre fuselage**: Alenia Aeronautica (Italy)
- **Rear fuselage**: Boeing South Carolina (USA)
- **Forward fuselage**: Kawasaki Heavy Industries (Japan)
- **Spirit Aerosystems (USA)**
- **Escape slides**: Air Cruisers (USA)
- **Doors & windows**: Zodiac Aerospace (USA), PPG Aerospace (USA)
- **Lavatories**: Jamco (Japan)
- **Landing gear**: Messier-Dowti (France), Electric brakes: Messier-Bugatti (France)
- **Tires**: Bridgestone Tires (Japan)
- **Horizontal Stabiliser**: Alenia Aeronautica (Italy)
- **Flight deck seats**: Ipeco (UK)
- **Flight deck controls**: Esterline (USA), Moog (USA)
- **Engines**: GE Engines (USA), Rolls Royce (UK)
- **Engine nacelles**: Goodrich (USA)
- **Flight deck controls**: Esterline (USA), Moog (USA)
- **Tools/Software**: Dassault Systemes (France)
- **Navigation**: Honeywell (USA)
- **Pilot control system**: Rockwell Colins (USA)
- **Wiring**: Safran (France)
- **Final assembly**: Boeing Commercial Airplanes (USA)
Major Flow of Intermediate Goods and Finished Goods in Asia (Electrical/Electronic)

- **China/Hong Kong**
  - Export value of electric/electronic machinery in 2008: 29.4 billion USD
  - Export value in 1998: 2.7 billion USD
  - 10.9 times increase

- **South Korea**
  - Export value in 2008: 25.1 billion USD
  - Export value in 1998: 4.6 billion USD
  - 6.5 times increase

- **Japan**
  - Export value in 2008: 27.4 billion USD
  - Export value in 1998: 24.2 billion USD
  - 1.1 times increase

- **US/Europe**
  - Export value in 2008: 124.4 billion USD
  - Export value in 1998: 21.1 billion USD
  - 5.9 times increase

- **ASEAN**
  - Export value in 2008: 15.1 billion USD
  - Export value in 1998: 14.4 billion USD
  - 1.06 times increase

- **Taiwan**
  - Export value in 2008: 19.1 billion USD
  - Export value in 1998: 14.4 billion USD
  - 1.3 times increase

Flow of finished goods:
- **2008 → 1998**

Flow of intermediate goods:
- **2008 → 1998**

* Electric/electronic machinery export value (billion USD)
Source: RIETI-TID(2009), White Paper on International Economy and Trade 2010 (METI)
The Emergence of Regional Value Chains

• There is a significant structural diversity and a high degree of complementarity of emerging global and regional production systems

• Production networking and regional division of labour result in massive intra-industry trade in parts and components within regions

• Intermediate goods are the «blood stream» that irrigates global and regional supply chains
Complementarity of auto-parts suppliers in ASEAN

**MALAYSIA**
- Instrumental panel assembly
  - Bumper
  - Drive shaft

**PHILIPPINES**
- Engine fuel system
- Emission dress parts
- Engine electronic parts
  - Suspension parts
  - MT mission

**THAILAND**
- Press parts
- Frame panels
- Electronic parts
- Interior parts
- Engine parts

**INDONESIA**
- Cylinder head assembly
  - Cylinder block
  - Engine valve
  - Steering handly
  - AT mission
What are the implications: consequences for SMEs

• New opportunities (vertical specialization)

• But also risks:
  – Being pushed towards cheap end of the market
  – Being pushed towards lower tiers of suppliers
Value capture can be limited: iPod production in China

- The retail value of the 30-gigabyte video iPod is $299.
- The most expensive component in it is the hard drive, which is manufactured by Toshiba and costs about $73.
- The next most costly components are the display module (about $20), the video/multimedia processor chip ($8) and the controller chip ($5).
- The final assembly, done in China, costs only about $4 a unit.
Figure 1: How SMEs fit into Global Value Chains

LE: Large enterprise
SME: Small or medium enterprise
Source: Abonyi, 2005
Results of UNCTAD’s case studies on the software industry:

1. Leading software providers (such as Microsoft in Egypt or IBM in Vietnam) depend on local companies to adapt their products to the local market and to support local customers.

2. Rivalry among local companies is strong and is driving a constant upgrading process.

3. This, in turn, gives companies **visibility and credibility** not only in their domestic market but also in their region.
Example of suppliers upgrading in the IBM PartnerWorld system applied in Vietnam

Source: UNCTAD’s case study on IBM in Vietnam, 2007
1. TNCs dominate the most important production networks. Creative industries face structural changes triggered by technology, both at the production and the distribution side.

2. The issue of local preferences, culture, formats and language is still a determining factor in shaping the emergence of new value chains in creative industries.

3. This opens up new opportunities for new, specialized entrants, such as the Colombian 3-D animation producers and local movie producers in “Nollywood” (Nigeria).
E.g. Numbers on key players in the 3D-animation value-chain in Colombia

<table>
<thead>
<tr>
<th>Animation firms (including freelance)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>3D-animation producers</td>
<td>23</td>
</tr>
<tr>
<td>3D-animation producers with presence in international markets</td>
<td>8</td>
</tr>
<tr>
<td>Digital animation producers (not necessarily specialized in 3D-animations)</td>
<td>34</td>
</tr>
<tr>
<td>Total (without international offices)</td>
<td>57</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Film producers</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>General film producers</td>
<td>20</td>
</tr>
<tr>
<td>Documentary film producers</td>
<td>18</td>
</tr>
<tr>
<td>Total</td>
<td>38</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Production and postproduction firms</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Production and postproduction firms for TV commercials</td>
<td>79</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Advertising agencies</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Advertising agencies</td>
<td>68</td>
</tr>
</tbody>
</table>

Source: UNCTAD’s case study on Caracol in Colombia, 2007
1. Most local suppliers in developing countries did not succeed to become global sourcing partners.

2. Developing countries SMEs have started to link up with first tier suppliers of large TNCs.

3. Large opportunities appear to have emerged in second-tier sourcing.
First and second tier suppliers of the Volkswagen plant in Puebla, Mexico

Source: UNCTAD’s case study on Volkswagen in Mexico, 2007
UNCTAD’s Business Linkages Programme connects large companies with domestic suppliers in developing countries.

Currently operational in Argentina, Brazil, Mozambique, Chile, Tanzania, Uganda and Zambia.
Key activities:
• Upgrading local businesses to meet international standards
• Strengthening small businesses to become dependable partners for large companies
• Providing policy advice on improving the environment for sustainable business linkages
• Sharing effective international business linkage strategies with the various stakeholders

...in order to deliver tangible results for all:
**Results monitoring: Brazil**

- **15** Income increases of employees
- **14** Employment increases
- **12** SMEs expand
- **13** Other SMEs copy
- **11** SMEs perform better
- **10** TNC/SME doing business
- **8** SMEs capable
- **9** Bottlenecks resolved
- **7** SMEs action plan implemented
- **6** SMEs action plan developed
- **5** SMEs on board
- **4** SMEs selected
- **3** TNCs on board
- **2** Needs of TNC identified
- **1** Proposal to TNC

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Bahia</th>
<th>Ceará</th>
<th>Manaus</th>
<th>Pernambuco</th>
<th>S. Bernardo do Campo</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proposals to TNC</td>
<td>22</td>
<td>15</td>
<td>3</td>
<td>20</td>
<td>4</td>
<td>64</td>
</tr>
<tr>
<td>Expression of Interest signed</td>
<td>8</td>
<td>7</td>
<td>1</td>
<td>12</td>
<td>1</td>
<td>29</td>
</tr>
<tr>
<td>TNC needs identified</td>
<td>8</td>
<td>7</td>
<td>1</td>
<td>5</td>
<td>1</td>
<td>22</td>
</tr>
<tr>
<td>Assessment questionnaire</td>
<td>8</td>
<td>7</td>
<td>1</td>
<td>5</td>
<td>1</td>
<td>22</td>
</tr>
<tr>
<td>TNC on board</td>
<td>8</td>
<td>7</td>
<td>1</td>
<td>5</td>
<td>1</td>
<td>22</td>
</tr>
<tr>
<td>Signed MoU or agreement</td>
<td>8</td>
<td>7</td>
<td>1</td>
<td>5</td>
<td>1</td>
<td>22</td>
</tr>
<tr>
<td>Liaison officer appointed</td>
<td>8</td>
<td>7</td>
<td>1</td>
<td>5</td>
<td>1</td>
<td>22</td>
</tr>
<tr>
<td>Financial commitment</td>
<td>245,000</td>
<td>225,000</td>
<td>175,000</td>
<td>210,000</td>
<td>n/a</td>
<td>865,000</td>
</tr>
</tbody>
</table>
Results monitoring: Uganda

- 15 Income increases of employees
- 14 Employment increases
- 12 SMEs expand
- 11 SMEs perform better
- 10 TNC/SME doing business
- 8 SMEs capable
- 7 SMEs action plan implemented
- 6 SMEs action plan developed
- 5 SMEs on board
- 4 SMEs selected
- 3 TNCs on board
- 2 Needs of TNC identified
- 1 Proposal to TNC

Results monitoring: Uganda

<table>
<thead>
<tr>
<th>Indicator</th>
<th>TNC 1</th>
<th>TNC 2</th>
<th>TNC 3</th>
<th>TNC 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gross margins</td>
<td>332% (8% to 360%)</td>
<td>215% (-57 to 625%)</td>
<td>105% (-37 to 133%)</td>
<td>217% (average)</td>
</tr>
<tr>
<td>Net margins</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Investments made</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Loans received</td>
<td>238,901</td>
<td>1,018,223</td>
<td>199,088</td>
<td>300,683</td>
</tr>
<tr>
<td>New clients captured</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- 15 Income increases of employees
- 14 Employment increases
- 12 SMEs expand
- 11 SMEs perform better
- 10 TNC/SME doing business
- 8 SMEs capable
- 7 SMEs action plan implemented
- 6 SMEs action plan developed
- 5 SMEs on board
- 4 SMEs selected
- 3 TNCs on board
- 2 Needs of TNC identified
- 1 Proposal to TNC
Conclusions

SMEs can participate effectively in the global economy but have to achieve collective efficiency

There is a need for industrial upgrading policies and business linkages programmes, in particular focusing on the integration of lower-tier SMEs in GVCs and RVCs
Thank you!

fulvia.farinelli@unctad.org