Measuring Global Value Chains

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Key principles

- National perspective to measuring GVCs
- GVC Satellite accounts of the SNA
- Based on integrated business statistics with a corporate/global firm approach – large cases
- Consistent SUT and integrated accounting framework across territories of products (linking goods and services), activities (income and jobs), business functions, geography
- Multi-partner country GVC Satellite Account with shared national data compiler ownership
- Built on the work done by OECD, UNECE, WTO, IMF and others
A Global Value Chain is a set of interrelated activities (from conception to its end use and beyond) that cross economic territories which are coordinated by lead firms for the production of a product (good or service), its delivery to market(s), supports its uses, and recycling.

- The GVC framework include 4 dimensions that describe the structure, dynamics and relationships among stakeholders in GVCs:
  - Business functions
  - Geographical scope
  - Governance
  - Institutional context
Source: Frederick (2010)
How to translate this into an accounting framework?

- Define and classify the **relevant actors** in the GVC, e.g. lead firms, suppliers, (affiliated and non-affiliated suppliers)
- Define and classify the **products** relevant for the GVC
- Define and classify the **business functions** relevant for the GVC
- Identify the main (partner) **countries** in the GVC [perspective of national data compiler]
- **Collect** relevant information
- Build the accounts in cooperation with partners
Automotive GVC

Vehicle Design & Development
- Vehicle development
- System design

Parts & Components
- Electronic components
- Mechanical components
- Composite components
- Wiring
- Aluminum components
- Rubber components
- Software

Systems: Modules
- Interior System: Seat, interior trim, cockpit module
- Body System: Skin, finish, trim, doors
- Electrical & Electronics System: Ignition, chassis electronics, interior electronics
- Chassis System: Drive train, rolling chassis, front and rear end modules

Systems Integration & Final Assembly
- Final Products
  - Automobiles
  - Trucks
  - Buses
  - Trailers
  - Motorcycles
  - Electric Vehicles

Marketing & Sales
- Market Segments
  - Passenger
  - Commercial
  - Industrial
  - Buses
  - Motorcycles

Replacement Parts & Recycling
- Maintenance & Repair
- Recycling
- Technical training, and customer support

Source: Timothy Sturgeon, Jack Daly, Stacey Frederick, Penny Bamber and Gary Gereffi (2016) *The Philippines in the Automotive Global Value Chain*
Some challenges

Identification (and measurement) of the governance structure of the GVC

Lead firm
Controlled firm
Non-controlled firm

Importance of business registers, large case units to focus on lead firms and supplying firms
## Example: Automotive GVC HS codes in Morocco

<table>
<thead>
<tr>
<th>Value Chain Stage/ Subassembly</th>
<th>HS Codes (2002)</th>
<th>HS Code Descriptions</th>
<th>Producer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Passenger vehicles</td>
<td>8703</td>
<td>Passenger vehicles</td>
<td>Lead Firms</td>
</tr>
<tr>
<td>Body system</td>
<td>870600</td>
<td>Chassis fitted with engines</td>
<td>Lead Firms</td>
</tr>
<tr>
<td>Drive train</td>
<td>840733 840734 840820</td>
<td>Reciprocating piston engines used for the propulsion of vehicles of Chapter 87</td>
<td>Lead Firms</td>
</tr>
<tr>
<td>Body system (suspension,</td>
<td>401110 401211 8708 8707 7007</td>
<td>Tires, Brakes, Road wheels and parts, Suspension systems, Steering wheels, columns and boxes, Bodies, Laminated safety glass, Bumpers, Radiators, Silencers and exhaust pipes, Sealed beam lamp units, Seats, Safety seat belts, Instrument panel</td>
<td>Suppliers</td>
</tr>
<tr>
<td></td>
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<td></td>
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<tr>
<td>Drive train / Electrical</td>
<td>8708 854430 8512</td>
<td>Parts/accessories of motor vehicles of headings 87.01-05; Gear boxes, Drive-axles with differential, Clutches, Ignition wiring sets, Electrical lighting, windscreen wipers, defrosters, Air conditioning</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ISIC 72</th>
<th>ISIC 293,...</th>
<th>ISIC 292</th>
<th>ISIC 291</th>
<th>ISIC 73</th>
<th>ISIC ...</th>
<th>ISIC ...</th>
<th>Other ISIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research and development</td>
<td>Parts and Components</td>
<td>Systems: Modules</td>
<td>System integration and final assembly</td>
<td>foreign owned</td>
<td>nationally owned</td>
<td>others</td>
<td></td>
</tr>
<tr>
<td>ISIC 291</td>
<td>Lead firms</td>
<td>Marketing and sales</td>
<td>replacement parts and recycling</td>
<td>Logistic</td>
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<td></td>
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<tr>
<td>ISIC 292</td>
<td>Manufacture of bodies (coachwork) for motor vehicles; manufacture of trailers and semi-trailers</td>
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<td>ISIC 291</td>
<td>Manufacture of motor vehicles</td>
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Where

ISIC 72 - Scientific research and development
ISIC 293 - Manufacture of parts and accessories for motor vehicles
ISIC 292 - Manufacture of bodies (coachwork) for motor vehicles; manufacture of trailers and semi-trailers
ISIC 291 - Manufacture of motor vehicles
...
**Trends**

- Export and Import trends from 2004 to 2014.

**Top Traders**

- Germany, United Kingdom, France, Spain, and Italy.

**Data Availability**

- Reporter: Multiple values
- Year: 2015
- Partner: All
- Flow: Export only
- Top N Repo.: 20
- Top N Part.: 20

**Product Group**

- Final Vehicles (Pass+Comm)
- Intermediate Vehicles
- Final Apparel
- Final Apparel & Footwear
- Final Electronics
- Final Footwear
- Final Textiles
- Final Vehicles (Pass+Comm)
- Final Vehicles Commercial
- Final Vehicles Passenger

**Partner**

- Belgium
- Canada
- China
- China, Hong Kong SAR
- France
- Germany
- Ireland
Regional GVC compilation

- Experimentation and testing for regional GVCs
  - agri-food, apparel and textiles, automotive, electronics, tourism
- Research agenda
  - statistical units, classifications, format of the SUT and integrated accounts
Thank you!