Cluster Initiatives in Developing and Transition Economies

Göran Lindqvist
Christian Ketels
Örjan Sölvell

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About CSC
Center for Strategy and Competitiveness

ISC
Harvard

Dr Christian Ketels

CSC
Stockholm

Prof Örjan Sölvell

Dr Robin Teigland

Göran Lindqvist
Center for Strategy and Competitiveness

Clusters and Competitiveness

Microeconomic Policy

Knowledge in Networks

Strategy and International Business

Research Agenda
About GCIS
GCIS 2003 – The Cluster Initiative Greenbook

- Results from the 2003 survey (GCIS 2003)
- Available free of charge at:
  www.cluster-research.org
Cluster initiatives

A cluster initiative is an organized collaboration between companies and government and/or academia in order to enhance the competitiveness of a cluster.
CIPM
Cluster Initiative Performance Model

Note: The model has been updated after the Greenbook
GCIS 2003 and the Greenbook: CI profiles

- CIs in advanced economies often address “high-tech” industries, such as biotech and ICT
- They typically engage in a wide range of activities
- Whether initiated by government or industry, their most influential party is usually the business sector
- Almost all of them have facilitators, and most have offices
GCIS 2003 and the Greenbook: performance drivers

Better performance was reported by CIs that...

- ... operate in environments with **high trust** in government initiatives and with influential **local/regional government agencies**
- ... address **economically important** clusters
- ... **competed** with other clusters for government funding
- ... developed a clear and explicit **framework**, based on the cluster’s own strengths, and spent time and efforts on sharing this with all parties
New findings: developing and transition economies
GCIS 2005: 1400 CIs identified globally

GCIS 2005 was financed by:

United States Agency for International Development (USAID)

FROM THE AMERICAN PEOPLE
GCIS 2005:
An online survey

Page 9 - Policy environment

In this section we will ask some questions about what economic policy is like in your country.

1 - Disagree completely
7 - Agree completely

Economic development policy is driven by initiatives on the national government level, not the local/regional level.
The national government has a clear strategy for improving competitiveness.

Cluster policies are a core element in economic development policy.
Competitiveness is a key issue in the economic policy debate.
## GCIS 2005: 713 replies from 71 countries

<table>
<thead>
<tr>
<th>Developing</th>
<th>100</th>
</tr>
</thead>
<tbody>
<tr>
<td>India</td>
<td>10</td>
</tr>
<tr>
<td>South Africa</td>
<td>7</td>
</tr>
<tr>
<td>Iran</td>
<td>5</td>
</tr>
<tr>
<td>Nicaragua</td>
<td>5</td>
</tr>
</tbody>
</table>

Also: Afghanistan, Bangladesh, Bolivia, Brazil, Chile, China, Colombia, Dominican Republic, Ecuador, Egypt, Gabon, Grenada, Indonesia, Jamaica, Lebanon, Mexico, Mongolia, Mauritius, Pakistan, El Salvador, Turkey, Uganda, Venezuela, Vietnam, and transnational.

<table>
<thead>
<tr>
<th>Transition</th>
<th>76</th>
</tr>
</thead>
<tbody>
<tr>
<td>Slovenia</td>
<td>11</td>
</tr>
<tr>
<td>Estonia</td>
<td>7</td>
</tr>
<tr>
<td>Lithuania</td>
<td>5</td>
</tr>
<tr>
<td>FYR Macedonia</td>
<td>5</td>
</tr>
</tbody>
</table>

Also: Albania, Armenia, Bulgaria, Bosnia and Herzegovina, Czech Republic, Georgia, Croatia, Hungary, Latvia, Poland, Russia, Serbia and Montenegro and transnational.

<table>
<thead>
<tr>
<th>Advanced</th>
<th>536</th>
</tr>
</thead>
<tbody>
<tr>
<td>Germany</td>
<td>49</td>
</tr>
<tr>
<td>USA</td>
<td>44</td>
</tr>
<tr>
<td>Sweden</td>
<td>41</td>
</tr>
<tr>
<td>UK</td>
<td>32</td>
</tr>
<tr>
<td>Canada</td>
<td>31</td>
</tr>
<tr>
<td>New Zealand</td>
<td>31</td>
</tr>
<tr>
<td>Australia</td>
<td>20</td>
</tr>
<tr>
<td>Austria</td>
<td>19</td>
</tr>
<tr>
<td>Japan</td>
<td>17</td>
</tr>
<tr>
<td>Spain</td>
<td>16</td>
</tr>
<tr>
<td>Norway</td>
<td>14</td>
</tr>
<tr>
<td>Finland</td>
<td>10</td>
</tr>
</tbody>
</table>

Also: Argentina, Belgium, Switzerland, Cyprus, Denmark, France, Greece, Ireland, Iceland, Israel, Italy, Luxemburg, Netherlands, Portugal, Taiwan, and transnational.

Note: Number of complete or partial replies.
Statistics

By type of **economy**
- Developing
- Transition
- Advanced

By type of **initiator**
- Business
- Government
- Donor
Topics

Policy environment
- Industry selection
- Cluster strength
- Objectives
- Business participation
- Influence
- Measuring impact
Policy environment

Economic dev’t policy is driven by initiatives on the **national gov’t level**, not local/regional.

The national government has a **clear strategy** for improving competitiveness.

**Cluster policies** are a core element in economic development policy.

Competitiveness is a key issue in the **economic policy debate**.
Policy environment

Economic dev’t policy is driven by initiatives on the national gov’t level, not local/regional

The national government has a clear strategy for improving competitiveness

Cluster policies are a core element in economic development policy

Competitiveness is a key issue in the economic policy debate

Initiator: Bus. Gov't Donor

Average response

Developing and transition economies.
Policy environment: observations and issues

- There is a non-linear relationship from developing to transition to advanced economies.
- High degree of centralization in developing and transition economies – what is the role of local government?
- Transition economies are more focused on macroeconomic issues – are microeconomic policy overlooked?
Topics

- Policy environment
- Industry selection
- Cluster strength
- Objectives
- Business participation
- Influence
- Measuring impact
## A simple industry grouping

<table>
<thead>
<tr>
<th>Agriculture, food, basic manufacturing</th>
<th>Agriculture; Fishing; Furniture; Jewelry; Leather; Shoes; Textiles; Wine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capital intensive manufacturing</td>
<td>Automotive; Chemicals; Forest products, paper; Metal manufacturing; Oil, petrochemical; Plastics; Power equipment</td>
</tr>
<tr>
<td>“High tech”, advanced services</td>
<td>Aerospace; Biotechnology; Entertainment, media; Environment services; Finance; ICT; Medical equipment; Pharmaceuticals; Photonics; Printing and publishing; Transports and logistics</td>
</tr>
<tr>
<td>Tourism</td>
<td>Tourism</td>
</tr>
</tbody>
</table>
Industry selection

Share of respondents

- Agriculture, food, basic manufact.
  - 65% Dev
  - 34% Trans.
  - 65% Adv.
- Capital intensive manufact.
  - 20% Dev
  - 40% Trans.
  - 60% Adv.
- "High tech", advanced services
  - 65% Dev
  - 20% Trans.
  - 80% Adv.
- Tourism
  - 0% Dev
  - 20% Trans.
  - 100% Adv.
Industry selection

Share of respondents

- Agriculture, food, basic manuf.: 43%
- Capital intensive manuf.: 45%
- "High tech", advanced services: 42%
- Tourism: 0%

Developing

- Bus.: 55%
- Gov't: 69%
- Donor: 58%

Transition

- Bus.: 0%
- Gov't: 100%
- Donor: 0%
Social capital

- Average response
- Dev.
- Trans.
- Adv.

- Firm’s trust in other firms
- Firm’s trust in government
- Firm’s trust in academia
- Government’s trust in firms
Social capital

Initiator:  
- Bus.  
- Gov't  
- Donor

Average response

1 7

Firm’s trust in other firms  
Firm’s trust in government  
Firm’s trust in academia  
Government’s trust in firms

Developing and transition economies.
Industry selection: observations and issues

- Business takes initiative where they can, i.e. when trust is high
- In transition economies, business focuses on “high tech”, government on capital intensive, and donors on basic industry
Topics

- Policy environment
- Industry selection
- Cluster strength
- Objectives
- Business participation
- Influence
- Measuring impact
Cluster strength

- Innovative capacity
- Competitive position
- Related and supporting industries
- Levels of value chain
- Business environment
- Global market reach
- Growth
- Cluster maturity
- Economic importance
- Rivalry

Average response

1

7

Cluster strength

Number of firms

Levels of value chain

Economic importance

Developing only.

TCI Conference, Hong Kong, November 2005, Lindqvist
Cluster strength

Transition only.
Cluster strength

Developing and transition.
Cluster strength: observations and issues

• There is a general focus on export oriented clusters – is regional trade or local services overlooked?

• Donors end up with smaller and weaker clusters with less trust
Objectives

- Increase value-added
- Increase exports
- Support innovation
- Supply chain dev't
- Incr. employment
- Improve bus. environ't
- Attract firms and investment
- Reduce prod'n costs
- Seek funds
- Commercialize academic research

Share of respondents

- Dev.
- Trans.
- Adv.
Objectives

Graph showing the share of respondents' objectives across different sectors (Bus., Gov't, Donor) for "Developing" and "Transition" stages.

Objectives include:
- Increase value added
- Increase exports
- Increase employment
- Support innovation
- Com'lize academic research

The bar chart indicates the percentage of respondents prioritizing each objective for both sectors.
Objectives: observations and issues

- Surprisingly low focus on attracting FDI; expected to be higher in transition economies
- Donors have innovation-oriented objectives in developing economies, but firm-oriented objectives (value chain, export) in transition economies
Seven groups of activities

- **Value chain**
  - Joint purchasing
  - Joint logistics
  - Joint production
  - Supply-chain dev’t

- **Process/HR**
  - Technical training
  - Management training
  - Technical standards
  - Education system
  - Production processes

- **Bus. environment**
  - Regulations and policy
  - Infrastructure investment

- **Firm formation**
  - Incubator services
  - Spin-off promotion
  - Business services

- **Joint marketing**
  - Joint product branding
  - Joint region branding
  - Joint foreign market promotion

- **Intelligence**
  - Market intelligence
  - Technical trends

- **Joint R&D**
  - Joint R&D projects
Topics

Policy environment

Industry selection

Cluster strength

Objectives

Business participation

Influence

Measuring impact
Company participation

<table>
<thead>
<tr>
<th>Company Size</th>
<th>Share of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-10 companies</td>
<td>15%</td>
</tr>
<tr>
<td>11-20 companies</td>
<td>37%</td>
</tr>
<tr>
<td>21-50 companies</td>
<td>46%</td>
</tr>
<tr>
<td>51+ companies</td>
<td>0%</td>
</tr>
</tbody>
</table>

- Median:
  - Development: 18
  - Transition: 25
  - Advancement: 40

- 1-10 companies: 37%
- 11-20 companies: 15%
- 21-50 companies: 46%
- 51+ companies: 0%
Company participation

Share of respondents

--- | --- | ---
Participation rate:
- < 10%
- 10-25%
- 26-50%
- 51-75%
- 76-90%
- > 90%
Size of participating firms

Share of participating firms:
- 0-9%
- 10-50%
- 51-100%

Share of respondents:
- 0%
- 20%
- 40%
- 60%
- 80%
- 100%

Micro (1-9 empl.)

Small (10-50 empl.)

Informal sector
Foreign-owned participants

Share of participating firms:

- 0-9%
- 10-25%
- 26-100%
Participants: observations and issues

- Fewer companies are participating in developing and transition economies – simply because clusters are smaller, or by design to have “manageable” CIs?

- We expected the share of foreign-owned companies to be higher, especially in transition economies.
Topics

Policy environment

Industry selection

Cluster strength

Objectives

Business participation

Influence

Measuring impact
### Influence: short run

<table>
<thead>
<tr>
<th>Stage</th>
<th>Bus.</th>
<th>Gov't</th>
<th>Donor</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Developing</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Initiate CI</td>
<td>33%</td>
<td>33%</td>
<td>39%</td>
</tr>
<tr>
<td>Select initial participants</td>
<td>34%</td>
<td>34%</td>
<td>55%</td>
</tr>
<tr>
<td>Decide initial activities</td>
<td>47%</td>
<td>49%</td>
<td>47%</td>
</tr>
</tbody>
</table>

**Notes:**
- **Influence:** short run
- Share of respondents
- **Developing**
  - Bus: 33%
  - Gov't: 33%
  - Donor: 39%
- **Transition**
  - Bus: 34%
  - Gov't: 34%
  - Donor: 55%
- **Advanced**
  - Bus: 47%
  - Gov't: 49%
  - Donor: 47%
Influence: long run

Business sector’s current influence on activities

- **Business initiated**:
  - 2003-2005
  - 2000-2002

- **Government initiated**:
  - 2003-2005
  - 2000-2002

- **Donor initiated**:
  - 2003-2005
  - 2000-2002

Transition and developing.

TCI Conference, Hong Kong, November 2005, Lindqvist
Control and influence: observations and issues

• Conflicting observations: in the initiation phase, donors hand over less influence over to business than government; in the long run they hand over more

• Donors appear to be reluctant to involve government
Topics

- Policy environment
- Industry selection
- Cluster strength
- Objectives
- Business participation
- Influence
- Measuring impact
Measuring impact

Share of respondents

- Number of companies
- Production and sales volume
- Employment
- Exports
- Innovation
- Business environment
- Imports
- Gov't funding and subsidies
- FDI
- Wages
- Prices, value-added
- Prod. cost and productivity

Measuring impact: observations and issues

- More measuring in transition than in developing – need or ability?
- Donors measure below average in developing but above average in transition economies
New findings: advanced economies
Funding patterns over time

Note! Includes all respondents in all types of economies.
Regional “flavours”
### CI geographical focus

<table>
<thead>
<tr>
<th>Region</th>
<th>Local Focus</th>
<th>National Focus</th>
<th>Transnational Focus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Japan</td>
<td>~15% local</td>
<td>~15% national</td>
<td>~10% transnational</td>
</tr>
<tr>
<td>S Eur</td>
<td>~20% local</td>
<td>~10% national</td>
<td>~10% transnational</td>
</tr>
<tr>
<td>Aus NZ</td>
<td>~15% local</td>
<td>~10% national</td>
<td>~10% transnational</td>
</tr>
<tr>
<td>N Am</td>
<td>~10% local</td>
<td>~10% national</td>
<td>~10% transnational</td>
</tr>
<tr>
<td>N Eur</td>
<td>~10% national</td>
<td>~10% transnational</td>
<td>~10% transnational</td>
</tr>
<tr>
<td>W Eur</td>
<td>~15% national</td>
<td>~10% transnational</td>
<td>~10% transnational</td>
</tr>
</tbody>
</table>

* Could be an effect of single-source respondent search
## Government initiation

<table>
<thead>
<tr>
<th>Region</th>
<th>Initiation Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Japan</td>
<td>100% by government*, national</td>
</tr>
<tr>
<td>S Eur</td>
<td>60% by government, mostly local/regional</td>
</tr>
<tr>
<td>W Eur</td>
<td>50% by government, mostly local/regional</td>
</tr>
<tr>
<td>Aus NZ</td>
<td>40% by government, mostly local/regional</td>
</tr>
<tr>
<td>N Am</td>
<td>40% by government, mostly local/regional</td>
</tr>
<tr>
<td>N Eur</td>
<td>40% by government, mostly local/regional</td>
</tr>
</tbody>
</table>

* Could be an effect of single-source respondent search
## Activities

Compared to the others:

<table>
<thead>
<tr>
<th>Region</th>
<th>Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Japan</td>
<td>High on joint R&amp;D, joint production, subsidies</td>
</tr>
<tr>
<td></td>
<td>Low on regional branding</td>
</tr>
<tr>
<td>Aus NZ</td>
<td>High on product branding</td>
</tr>
<tr>
<td></td>
<td>Very low on joint R&amp;D, technical intelligence</td>
</tr>
<tr>
<td>N Am</td>
<td>High on infrastructure lobbying</td>
</tr>
<tr>
<td></td>
<td>Low on joint R&amp;D</td>
</tr>
<tr>
<td>N Eur</td>
<td>High on education development, regional branding</td>
</tr>
<tr>
<td></td>
<td>Low on market intelligence</td>
</tr>
<tr>
<td>W Eur</td>
<td>(Do not stick out much)</td>
</tr>
<tr>
<td>S Eur</td>
<td>High on market intelligence, technical intelligence</td>
</tr>
<tr>
<td></td>
<td>Low on regional branding</td>
</tr>
</tbody>
</table>

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Some tentative performance drivers

Better performance were reported by CIs that...

- operate in economies with **cluster policies** and **competitiveness debate**
- operate where **trust** among firms and government trust in firms is high
- have access to **resources** (website, office, staff, high budget)
- work with **growing** clusters
- **cooperate** with other CIs (particularly outside own region)
- high **company participation** (both relative and absolute)
- have **quantitative targets**
- do **not** focus on **reducing production costs**
The GCIS Statistics Database
Extract your own GCIS 2005 statistics

1. Choose data
2. View the graph
Select the statistics you want

1. Pick a question you are interested in

2. Select the geographical area

3. Select industries

4. Draw the graph
Would you like to be a test pilot?

Please leave your business card!
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