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Economics and Business Association**

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Fostering clusters in the Malaysian electronics  
industry.  
Comments

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# **Comments to paper: “*Fostering clusters in the Malaysian electronics industry*”**

***Second LAEBA Annual Conference***

***Competing in the XXI Century: Revisiting the Role of Government in Latin America and Asia***

***L. Miguel Castilla***  
***Corporación Andina de Fomento***

1. Brief summary of the paper's main findings
2. Comments and suggestions
3. Lessons from the Malaysian experience
4. Lessons from clusters in the andean region

- The paper examines the agglomeration-oriented initiatives in Malaysia, especially policies to promote clustering in electronics manufacturing
- Overview of Malaysian experience
- Main hypothesis tested:
  - Penang and Kelang Valley faced different sets of state-level instruments and exhibited different performance and technological deepening indicators
- Data: Interviews 1985-2004
- Dimensions evaluated:
  - Local government coordination (systemic synergies)
  - Interfirm linkages (local firms & TNCs)
  - Clustering

- Local government coordination helped stimulate strong systemic links that helped support strong new firm creation and inter-firm links in Penang.
- The confinement of local government instruments to basic infrastructure and security coordination reduced the appropriation of such systemic synergies in the Kelang Valley.
- Weak systemic coordination in Kelang restricted network cohesion and produced less inter-firm human capital synergies for new firm creation.

- Both regions were characterized by the presence of electronics TNCs, strong institutional coordination of basic infrastructure and security, and incentives to relocate in Malaysia.
- However, Penang had a larger number of local suppliers linked to electronics TNCs and developed stronger technological capabilities, higher value added and labor productivity growth.
- Penang also enjoyed strong private sector participation in state-level governance.
- In contrast, Kelang generally faced relatively weak support in these areas.

- The strong and systemic coordination in Penang helped network cohesion and dynamic clustering, which stimulated inter-firm flows of embodied knowledge.
- The institutions approving FDI applications in Kelang, presented a lack of systematic effort to promote dynamic clustering.
- Additionally, SEDCs in Kelang diverted high labor-intensive firms to the neighboring states.
- In contrast, Penang stimulated clustering through sub-species of firms.

# Extent of policy differences accounted for different levels of success

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- In general, Kelang Valley was confronted with issues that inhibited inter-firm human capital flows:
  1. Lack of systemic coordination did not allow the resolution of collective action problems associated with human capital development.
  2. Lack of systemic coordination did not allow the promotion of new industries to support inter-firm human capital synergies.
  3. Weak inter-firm connections stimulated little skilled personnel mobility.
  4. Lack of movement of embodied knowledge in human capital restricted differentiation and division of labor.

# Comments and suggestions

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- The factors the study controls for when comparing the performance between the two clusters should be clarified. Causality may be a problem.
- It is difficult to isolate effects of these policies from other determinants.
- Also, clarification is needed on why the role of public policy is different from one place to another. A description of the institutional characteristics that explain these differences and why they are exogenous to the private sector would be helpful.
- The channels through which public policy can induce private sector networks could be made more explicit.

- Refine methodology to assess impact of policies (data limitation?)
- It would be interesting to quantify the costs incurred in the implementation of these policies.
- The lessons for Latin America (and other developing regions) could be extended.

The study highlights the importance of:

- Understanding the fundamentals of competitiveness: especially IMP2
- The need for a long term strategy
- The need to foster linkages and spillovers effects: Impact of FDI
- Human capital, R&D and knowledge based assets: Limitations on cluster development and upgrading
- The need to foster inter-firm relations: Social capital
- Geography matters

- Cluster upgrading requires: *hardware* (infrastructure R&D), *software* (human capital), *orgware* (institutions, beliefs, values, social capital).
- Spontaneous clusters is inhibited by large barriers (information, transaction, learning and cultural) and large initial sunk costs.
- This justifies state intervention but rarely cluster promotion has been part of a national agenda (only until recently).
- Industrial clusters are heterogenous (genesis, firm and organizational structure, track record, labor skill intensity).
- Natural resource based clusters are mainly extractive with little value added, technology content, frail institutional structure, limited inter firm coordination mechanisms.

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  - ✓ Frutas y hortalizas
- ✓ Cátedra Virtual de creación de Empresas de Base Tecnológica
- ✓ Programa Exporte
- ✓ Espacio Virtual de productividad
- ✓ Prospectiva tecnológica
- ✓ Evaluación convenios de competitividad exportadora



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- ✓ Promoción de Redes Empresariales de PYMES



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- Cluster development is mainly a private sector venture
  - Minimum cohesion to start with and active participant commitment and involvement (funding and time)
  - Private sector leadership
  - Problem resolution (visible results) and productivity enhancement reinforces firm cooperation and credibility
  - Importance of networks and social capital
  - Vehicles for competitiveness enhancement (economies of scale, flexibility, innovation diffusion, knowledge assets, reduction of entry barriers)

- However, there is a need for government intervention
  - Coordination (among firms and inter-institutional)
  - Ensure a proper environment (macro, institutional)
  - Cluster development as part of a national agenda
  - Information provision and promoting public awareness
  - Human capital formation and innovation

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