Are Peripheral Regions Homogeneous? From Regional Innovation to Smart Specialization in Pará (Brazil) and Galicia (Spain)

1st DRAFT

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Presentation outline:

1. Research aims
2. Theoretical Background:
   1. Regions and innovation at peripheral regions
   2. The Smart Specialization approach
3. The cases of Pará and Galicia:
   1. Pará
   2. Galicia
4. Challenges for smart specialization strategies
5. Conclusions (very provisional)
1. RESEARCH AIM:

* To present an initial discussion, based on a comparative analysis of Galicia (Es) and Pará (Br), about the challenges and opportunities of backward regions to implement a regional development policy based on the smart specialization approach.
FEATURES of being BACKWARD

- Both regions have a slow growth and difficulties in following the same pace of developed regions: Myrdal's notion of dependency,
- Import more technological products than export, which fits very well within the Krugman's notion of center-periphery.
2. THEORETICAL BACKGROUND:

1. Innovation at peripheral regions

- The Evolutionary and Systems of Innovation approach: Interaction as a key process for innovation: science base, research and training institutions, firms, financial sector, etc... History, institutions and culture matters to understand regional innovation.

- In peripheral regions local resources “are not always there”: specialization in “low-tech” industries, low R&D business investment, low qualified workers, low absorption capacity of the knowledge created by universities and other institutions, etc...
b) The Smart Specialisation approach

- Regions are heterogeneous and present different features, so policy makers need to pay more attention to territorial specificities and trajectories when defining strategies for growth (Foray et al, 2011; McCann and Ortega, 2011).

- In the traditional model lagged regions should “follow the leader”, under the smart specialization framework agents should be looking forward to re-invent themselves.

- It is necessary to identify strategic domains and competences in the region under the logic of embeddedness and connectedness.
3. The cases of Pará and Galicia: a comparison

Population 2001: 7,792,561 hab
Grows at rate 3.7%

Population 2010: 7,763,499 hab
Declining population
a) Pará:

a) Industrial Structure: An economy dominated by the agrarian sector and relatively low presence of manufacturing.

b) Linked in a moderated dense network of cities but spread within a wide territory, polarized by two metropolitan areas.

c) Innovation capabilities:

• Low R&D intensity and patent activity. High concentration in Southeast/Sao Paulo.

• Very late establishment of S&T institutions (e.g. PhD degrees not existing until the end of the 90s).

• Poor involvement of firms in innovation activities.

• A failed tentative of building a Regional innovation System.
b) **Galicia:**

a) **Industrial Structure:** Relatively high presence of low tech manufacturing industries and traditional or non-knowledge intensive services (a different kind of periphery).

b) **Innovation capabilities:**
   - “Moderate-low” innovator region (RIS, 2012) and slightly reducing the gap with EU regions average during the last two decades.
   - Relatively poor business R&D effort and strong concentration of innovation expenditures on two industrial branches (car and ship building industries).
   - Relatively good performance of universities.
   - Similar levels of human resources in Science and Technology than the EU-27.
4. Challenges for Smart Specialization:

a) Pará: absence of critical mass?
   - The region lacks basic infrastructure that makes difficult to establish any innovation strategy.
   - S&T base and government strategies need more time to consolidate and so to articulate a regional innovation system.

b) Galicia: weaknesses at the Regional innovation system
   - There exists a regional innovation system that is articulated by the regional government, something that makes easier to establish a Smart Specialization strategy.
   - The main weakness refer to the lack of absorption of the knowledge created in the region by local firms and sectors.
   - The crisis (and recentralization) is a threat for the innovation system.
5. (Very preliminary) Conclusions

- Smart specialization strategies might be an opportunity for backward regions, but there are some aspects that must be taken into account:
  - “Peripherality” is not a homogeneous concept. Some of them, like Pará, lack critical mass (basic S&T infrastructure, R&D investment, ...), while others like Galicia just have weaknesses within the system.
  - The role of the regional government is “key” as in many cases they are the ones which articulate the regional innovation system and to develop a bottom-up Smart Specialization strategy.
5. Further research:

• To what extent the duality core-periphery is not valid any more?
• How do we establish or measure the “critical mass” when dealing with regional innovation capacities?
• How important is the role of regional government (so devolution) for establishing smart specialization strategies and which are, if any, the alternatives?
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THANK YOU VERY MUCH

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Table 1. Pará, GDP per sector, 2010

<table>
<thead>
<tr>
<th>Industry</th>
<th>Pará</th>
<th>Brazil</th>
</tr>
</thead>
<tbody>
<tr>
<td>Farming and ranching</td>
<td>22.8%</td>
<td>9.5%</td>
</tr>
<tr>
<td>Mining</td>
<td>3.5%</td>
<td>4.6%</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>18.6%</td>
<td>29.1%</td>
</tr>
<tr>
<td>Utilities</td>
<td>4.3%</td>
<td>3.5%</td>
</tr>
<tr>
<td>Construction</td>
<td>9.9%</td>
<td>6.7%</td>
</tr>
<tr>
<td>Retail</td>
<td>5.9%</td>
<td>6.7%</td>
</tr>
<tr>
<td>Lodging and food</td>
<td>0.4%</td>
<td>1.3%</td>
</tr>
<tr>
<td>Transport</td>
<td>2.1%</td>
<td>1.9%</td>
</tr>
<tr>
<td>Communication</td>
<td>1.7%</td>
<td>2.2%</td>
</tr>
<tr>
<td>Financial</td>
<td>2.4%</td>
<td>6.2%</td>
</tr>
<tr>
<td>Rent</td>
<td>6.3%</td>
<td>9.3%</td>
</tr>
<tr>
<td>Public administration</td>
<td>18.0%</td>
<td>15.1%</td>
</tr>
<tr>
<td>Health and education</td>
<td>2.2%</td>
<td>2.1%</td>
</tr>
<tr>
<td>Other services</td>
<td>1.4%</td>
<td>1.4%</td>
</tr>
<tr>
<td>Domestic services</td>
<td>0.4%</td>
<td>0.5%</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Source: IBGE, 2012
Figure 1. Relative industrial specialisation. Galicia/EU-27 and Galicia/Spain. 2010

Source: Own-Elaboration based on IGE (Galician Statistical Institute) and Eurostat data
Human Resources in Science and Technology (Percentage of total population)

Source: Eurostat, 2012
Comparison of R&D intensity of Brazilian states and regions in Spain.