Regional Studies Association

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

#### 1<sup>st</sup> 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
- 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...

# THEORETICAL BACKGROUND: 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.



#### 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 <u>two metropolitan areas</u>
- 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 <u>System</u>

#### Galicia:

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

#### 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 pbastos@ufpa.br







#### Table 1. Pará, GDP per sector, 2010

Industry	Pará	Brazil
Farming and ranching	22.8%	9.5%
Mining	3.5%	4.6
Manufacturing	18.6%	29.1
Utilities	4.3%	3.5%
Construction	9.9%	6.7%
Retail	5.9%	6.7%
Lodging and food	0.4%	1.3%
Transport	2.1%	1.9%
Communication	1.7%	2.2%
Financial	2.4%	6.2%
Rent	6.3%	9.3%
Public administration	18.0%	15.1%
Health and education	2.2%	2.1%
Other services	1.4%	1.4%
Domestic services	0.4%	0.5%
Total	100%	100%
Source: IBGE, 2012	ļ	





Relative Specialization Galicia/EU-27 and Galicia/Spain

Figure 1. Relative industrial specialisation. Galicia/EU-27 and Galicia/Spain. 2010

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Source: Own-Elaboration based on IGE (Galician Statistical Institute) and Eurostat data



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