Looking for a regional competitiveness bias in the EU area

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UNIVERSITÉ LE HAVRE NORMANDIE

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Introduction

- **Brexit**
- **Trump**
- **Press the Panic Button Please!**
- ***Competitiveness under exam***

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Introduction

- **Competitiveness**
- Meeting international market
- In an era of emerging countries (low wage, good skill)
- Inequalities
- Franxit, Germanxit, Hungaryxit?

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Introduction

- **Competitiveness**
- **GOOD – firms**
- **BAD – enlarged to Nation, more poorly defined, wrongdoing**
  - **- no bottom line**
  - **- externalities**
  - **- growth is related to productivity**

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Introduction

- **Competitiveness**
- **Consensual definition**

“Competitiveness is our ability to produce goods and services that meet the test of international competition while our citizens enjoy a standard of living that is both rising and sustainable”
Laura D’Andrea Tyson 1992

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Introduction

- **Competitiveness**

EU competitiveness policy has been enlarging to Regions

Issue : GOOD or BAD?

Research: Looking for a competitiveness bias

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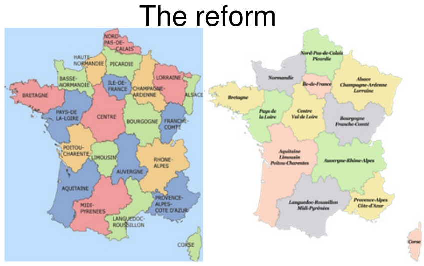
CONTENT

1 – The French Regional Reform as a Structural Policy for Competitiveness

The reform



1 – The French Regional Reform as a Structural Policy for Competitiveness

- « …Je propose donc de ramener leur nombre de 22 à 14. Elles seront ainsi de taille européenne et capables de bâtir des stratégies territoriales »
- « Demain, ces grandes régions auront davantage de responsabilités. Elles seront la seule collectivité compétente pour soutenir les entreprises et porter les politiques de formation et d'emploi, pour intervenir en matière de transports… Elles auront en charge l'aménagement et les grandes infrastructures……Cette grande réforme s'inscrit dans la volonté de moderniser notre pays et de le rendre plus fort »

François Hollande
The French Republic President

1 – The French Regional Reform as a Structural Policy for Competitiveness

Conclusion:

The French State wants Regions to become a "competitiveness" policy tool. This is also the willing of the European Commission in its "Competitiveness Obsession".

2 – The Regional Competitiveness Index: A « Shanghaï-ranking- shape» European Commission Policy

EU regions from NUTS 2

2 – The Regional Competitiveness Index: A « Shanghaï-ranking- shape» European Commission Policy

<u>For improving the understanding of</u> territorial competitiveness at the regional level, the European Commission has developed the Regional Competitiveness Index (RCI) that shows strengths and weaknesses of every EU NUTS 2 regions.

2 – The Regional Competitiveness Index:
A « Shanghaï-ranking- shape» European Commission Policy

Regional competitiveness index (RCI)
I. Basic sub-index
i) Institutions
ii) Macroeconomic stability
iii) Infrastructure
iv) Health
v) Basic education
II. Efficiency sub-index
vi) Higher education
vii) Labour market efficiency
viii) Market size
III. Innovation sub-index
ix) Technological readiness
x) Business sophistication
xi) Innovation

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2 – The Regional Competitiveness Index:
A « Shanghaï-ranking- shape» European Commission Policy

EU Competitiveness Obsession

How a so-called “neutral” tool turns into a territorial competitiveness policy?

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2 – The Regional Competitiveness Index:
A « Shanghaï-ranking- shape» European Commission Policy

Lisbon strategy: from States to Regions

ACT 1: AIMS

EU policy: « Jobs and Growth » as a response to globalisation: to reach first place in knowledge economy

To stay competitive with traditional trading partners like US and Japan and with emerging economies like China and India, the EU needs to be more innovative

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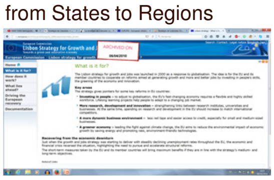
A « Shanghaï-ranking- shape» European Commission Policy

Lisbon strategy: from States to Regions

ACT 2: EU POLICY



Promoting National Reform Programmes in Public Finance, Education, Research and Developement, Business Environment, Labor Market
Promoting National Policy towards Competitiveness

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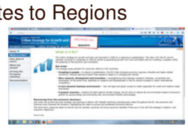
A « Shanghaï-ranking- shape» European Commission Policy

Lisbon strategy: from States to Regions

ACT 3: FAILURE



Cohesion and the Lisbon Agenda: The Role of the Regions.
2005: How regions can make Lisbon work?
The European Union’s 254 regions have a key role to play for re-launching the Lisbon strategy.

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A « Shanghaï-ranking- shape» European Commission Policy

ACT 4: NEW DEAL

EUROPE 2020 STRATEGY

“We need cohesion policy that concentrates on growth and jobs”

“There are signs that competitiveness is improving in some Member States…We will only succeed with full ownership and commitment from all levels, particularly from regional and local levels. Regional and local authorities have key competences and are often best placed to implement the necessary reforms in crucial areas…”

José Manuel Barroso
President of the European Commission

Quoted from Document: “The Committee of the Regions’ contribution to the Europe 2020 strategy's seven flagship initiatives” 2013

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2 – The Regional Competitiveness Index:
A « Shanghaï-ranking- shape» European Commission Policy

Consequence 1: Regional Competitiveness Obsession Policy

this obsession is related to a focus on trade performance, trade surplus, the credo that good jobs are in the export sector, high value-added sector is export one, innovative and high-technology firms is synonym of high value-added.

2 – The Regional Competitiveness Index:
A « Shanghaï-ranking- shape» European Commission Policy

Consequence 2:

For Regions, the "Competitiveness" Obsession may turn regional policy towards a "base" development model benchmarking at the expense of other benchmarking: "domestic" development model, global productivity development model

2 – The Regional Competitiveness Index:
A « Shanghaï-ranking- shape» European Commission Policy

Tiebout (1960): "the economic activities of a region are divided into those producing for the export market and those producing for the local market. In defining exports, allowance is made for such items as the income of commuters, capital flows, government transfers, and linked industries, all income coming from outer source

2 – The Regional Competitiveness Index:
A « Shanghaï-ranking- shape» European Commission Policy

- ***Theoretical Benchmark model 1***
- $Y = Y_x + Y_n$ (1)
- $C = g.Y$ (2)
- $Y_n = h.C$ (3)
- Y_x = exogenously set (4)

$Y_n = b.Y$ (2a)

$$Y = \frac{1}{1-b} Y_x$$

2 – The Regional Competitiveness Index:
A « Shanghaï-ranking- shape» European Commission Policy

The export base model: an old-fashion model

compared to all new models that has been emerging in the literature in the last thirty years (the growth model, the new economic geography model, the cluster model)

The export base model was first designed by Sombart (1916) stressing that urban development main factor was the income grabs from outside

2 – The Regional Competitiveness Index:
A « Shanghaï-ranking- shape» European Commission Policy

The Base model is always used by agencies and policy deciders when legitimating their decision by job or growth multiplier.

That's the case when a city looks at hosting a great international event (Olympic Games, Soccer World Cup) where inner economic fallouts are closely considered.

Even for minor event as considering a festival event on summer time.

So we assume that the export base model is lining up with the regional policy-decider interest function: looking forward for a fast economic development, putting forward exports as a way to secure growth Deciders are prone to adopt an export base model as a benchmark

3 – Looking for Regional Competitiveness with Cambridge Econometrics and Gabor BEKES

- **« A Study on the Factors of Regional Competitiveness »**
- **A draft final report for The European Commission Directorate-General Regional Policy**
- Cambridge Econometrics

3 – Looking for Regional Competitiveness with Cambridge Econometrics and Gabor BEKES

A. Classical theory : trade gain, specialization, comparative advantage (specialization driven by sectorial price ratio)

<table>
<tr><th colspan="2">Table 1 - KEY ELEMENTS OF THE CLASSICAL THEORY</th></tr>
<tr><td>Key assumptions
• Division of labour leads to difference in productivity among countries
• Trades based on absolute advantage (Smith) and later comparative advantage (Ricardo)
• Within countries, labour is perfectly mobile across industries (not capital)</td><td>Key driving factors
• Investment in capital enhances the division of labor (specialization) then productivity
• Free Trade is an engine for Growth</td></tr>
<tr><td colspan="2">Implication for regional competitiveness
• All countries have a role in the international division of labour (specialization) based on their comparative advantage. But if technology, then productivity in the same across countries, there is no Trade gain.
• Even though a country may be more productive in the production of a good (efficiency, comparative advantage), it may nonetheless see the indutry decline with free trade</td></tr>
</table>

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B - Neoclassical theory

<table>
<tr><th colspan="2">Table 2 - KEY ELEMENTS OF THE NEO-CLASSICAL THEORY</th></tr>
<tr><td>Key assumptions
• Perfect informaton (same technology across countries, constant retrun to scale and full divisibility of all the factors lead to a world of perfect competition.
• Trade based on factor endowment (labour and capital)
• Within countries, capital and labour are perfectly mobile across industries</td><td>Key driving factors
• Free Trade provides an engine for Growth</td></tr>
<tr><td colspan="2">Implication for regional competitiveness
• All countries have a role in the international division of labour (specialization) based on their relative factor proportion. If the porportion is the same across countries, there is no Trade gain. Theroy most relevant for North-South trade.
• Factor Price equalisation implies convergence of returns to cpaital and labour
• Given perfect competition, the market is self equilibrium, the notion of « competitiveness » is not relevant in the long run.</td></tr>
</table>

3 – Looking for Regional Competitiveness with Cambridge Econometrics and Gabor BEKES

C – Keynesian economic theory

<table>
<tr><th colspan="2">Table 3 - KEY ELEMENTS OF KEYNESIAN THEORY</th></tr>
<tr><td>Key assumptions
• Price adjustment may be slow, leading to adjutments in quantity
• Markets are not necessarely in equilibrium : shortage on demand and supply side
• Capital and Labour are complementary</td><td>Key driving factors
• Capital yield expectation
• Investment and interest rate
• Government spending such as investment in the public domain and subsidies/tax cut for firms</td></tr>
<tr><td colspan="2">Implication for regional competitiveness
• Governement can intervene successfully in the cycles of the economy : timing is crucial
• Assumtion of impefect market allows for regional difference
• Convergence of regions can be achieved through economic policy
• Capital yield expectation increases productivity and Growth</td></tr>
</table>

3 – Looking for Regional Competitiveness with Cambridge Econometrics and Gabor BEKES

D – Development Theory

<table>
<tr><th colspan="2">Table 4 - KEY ELEMENTS OF DEVELOPMENT THEORY</th></tr>
<tr><td>Key assumptions (observed facts)
• Incomes do not necessarily converge over time
• Some countries develop more successfully than others
• Economic policy plays an important role in determining this success</td><td>Key driving factors (observatons)
• Move from agriculture to higher value adedd sectors
• Openness to trade
• Foreign Direct Investment (FDI)
• Foreign Developement Funds</td></tr>
<tr><td colspan="2">Implication for regional competitiveness
• « Central » regions wtih initial productive advantage are likely to maintain their lead over less productive « peripheral » regions
• Catch-Up in productivity between regions is likely to be a slow process
• Policies should take into account a region stage of developement.
• Policies are needed to promote « spread effect », eg through FDI or developement Funds</td></tr>
</table>

3 – Looking for Regional Competitiveness with Cambridge Econometrics and Gabor BEKES

E – New Economic Growth Theory

<table>
<tr><th colspan="2">Table 5 - KEY ELEMENTS FROM NEW ECONOMIC GROWTH THEORY</th></tr>
<tr><td>Key assumptions
• Technological Progress is not « a gift from heaven »
• Increasing returns from accumulation of knowledge
• Introduction of human capital as production factor
• Markets don't automatically generate optimum
• Path dependancy (hungarian engineering)</td><td>Key driving factors
• R§D expenditure
• Innovation (patents)
• Education level
• Spending on investment in human capital (schooling, training)
• Effective dissemination of knowledge (knowledge centers)</td></tr>
<tr><td colspan="2">Implication for regional competitiveness
• Regional differences in Productivity and Growth can be accounted for by differences in tehnology and human capital
• Improvement in technology and cpaital humanare engines for growth
• Open trade may be supportive of growth and technological development
• Investment in research and developement are crucials
• Improving human caital (by schooling and training) is of key importance.</td></tr>
</table>

3 – Looking for Regional Competitiveness with Cambridge Econometrics and Gabor BEKES

F – New Trade Theory

Table 6 - NEW TRADE THEORY	
Key assumptions • Technology is an explicit and endogeneous factor of production Progress is not « a gift from heaven » • The production of new technology reflects decreasing returns to the application of capital and labour • The production of new technology creates externalities • There are increasing return to scale in the use of technology • While technology is mobile (across compagnies and countries), there is imperfect mobility of the ability to use technology • Imperfect competition	**Key driving factors** Factors influencing « first mover » advantage, eg : • Skill labour • Specialised infrastructure • Networks of suppliers • Localised technologies
Implication for regional competitiveness • Specialisation is needed at the industry/branch level, in order to allow external economies of scale • Size of home market is crucail for obtaining internal economies of scale • Investing in skilled labour, specialised infrastructure, networks of suppliers and localised technologies enhance external economies of scale.	

3 – Looking for Regional Competitiveness with Cambridge Econometrics and Gabor BEKES

Gabor Bekes Survey

- the relationship between agglomeration and performance
- the role of FDI in regions
- the key aspect of local institutions

4 – The Paul Krugman's Competitiveness Bias

- Competitiveness: a dangerous obsession
- When deciders are focusing only upon international or interregional trade
- Then producing an emperor's intellectual wardrobe where competitive advantage, trade performance, export surplus are key words".

The BIAS:

- this wardrobe suit is full of "wrongdoings":
- Countries are not like firms
- export opportunities is import from other countries
- trade performance may turned into a living standard decline depending on trade terms

4 – The Paul Krugman's Competitiveness Bias

What is the nature of the bias ?

Krugman:

"Competitiveness is tied to domestic productivity and not to the fabric of international champions"

The bias is relayed by Porter (1998, 2001) then by a large panel of scholars (Gardiner, 2004; Turok, 2004) in the region realm.

5 - Competitiveness Bias: The Regional Issue

Krugman statement is well established for countries: following a base model as development policy benchmark may be wrong, domestic productivity secures living standard rising

But what for regions ?

- About competitiveness Bias

5 - Competitiveness Bias: The Regional Issue

- The regional level is different from the national one and the "competitiveness" concept may be there more consistent. As International / interregional trade is a larger part of their economy, focusing upon competitiveness may be more suitable as policy goal
- The export base model as a good benchmark depends on the boundary size of the considered locality
- the larger a region is, the less "benchmark consistent" for policy export base is. Inversely, the smaller a region is, the larger export base is consistent

5 - Competitiveness Bias: The Regional Issue

The Base Development Model in Small Areas

If we consider an exchange economy with one people, this people is wholly dependent on his ability to export his services. For this person, the export base model is a good benchmark, as its standard of living is related to export income growth

Domestic services, activities produced by himself, gardening, cooking, tinkering plays no role as domestic dynamic force of development

5 - Competitiveness Bias: The Regional Issue

The Base Development Model when Area gets larger

When boundaries are enlarged, the export base sector should have a declining role in economic development, domestic activities and inner dynamic forces plays a larger role as drivers of the living standard.

In the regional economy, as the share of export is decreasing comparing to small areas, "*the dynamic forces causing income shift will be found inside its borders*" Tiebout (1960, p 161).

Theoretically: the larger an area is, the larger domestic sector productivity matters, the larger competitiveness bias is.

5 - Competitiveness Bias: The Regional Issue

Region level and the productivity issue

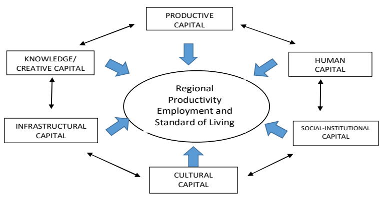

Figure 1 Bases of regional competitive advantage

Gardener's Methodology. Living standard growth can be associated with the unique regional productivity factor.

Although there is large list of influent factors at regional level extracted from NEG, Endogen growth, cluster approaches.

6 – The bias study - Test, Model, Results

Testing the role of the domestic sector in regional development?

the test answering the bias issue at regional level is very simple and oriented to answer to the question: do domestic sector productivity influence regional living standard? Ranging Regions according to their size, we will test the following hypothesis.

6 – The bias study - Test, Model, Results

Hypothesis 1: the smaller size, the larger trade openness, the smaller domestic sector productivity will influences the living standard of Regions.

We can associate a related claim to test:

Hypothesis 2: for Regions with the same size, the larger their domestic sector productivity, the greater their living standard.

The model

Regions competitiveness model

$$Yi = \beta_{0i} + \beta_{1i}X_i + \beta_{2i}Z_{di} + \beta_{3i}Z_{bi} + u_i$$

Where

Y_i is the standard of living of region i

X_i is the export base size in the whole economy for region i

Z_{di} is the productivity of the domestic sector for region i

Z_{bi} is the productivity of the base sector for region i

β_{0i}, β_{1i}, β_{di}, β_{bi} are respectively the intercept and coefficients attached to every variable

u_i is the error term

DATA

OUTPUT (Y): The living standard measure is the regional GDP per inhabitant mean on five years starting 2009.

SIZE (X): We have crossed population size with geographic size . Year 2012 is the reference measure.

TRADE STRUCTURE (X): B Nace sector (extractive industry) and C sector (Manufacturing industry) are associated to Base activities. G Nace sector (wholesale and retail trade, repair of motor vehicles) I Nace sector (Accomodation and food service activities) and L Nace sector activities (Real estate activities) are associated to Domestic activities.

PRODUCTIVITY: the measure is the regional GDP upon total hours worked.

Econometric results

Linear regression

Number of obs = 174
F(3, 170) = 118.10
Prob > F = 0.0000
R-squared = 0.6737
Root MSE = .21153

ILS	Robust Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
lsize	- .0227726	.0123216	- 1.85	0 .066	-.0470957	.0015505
lbaseprod	.2902488	.060304	4.81	0.000	.1712076	.4092899
ldomprod	.2071474	.078147	2.65	0.009	.052884	.3614108
_cons	12.03288	.1727976	69.64	0.000	11.69177	12.37398

The Boundaries Issue - small

For the small group of 57 regions

Linear regression

Number of obs = 57
F(3, 53) = 16.41
Prob > F = 0.0000
R-squared = 0.2348
Root MSE = .26266

ILS	Robust Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
Lsize	.0020383	.0227587	0.09	0.929	-.0436099	.0476864
lbaseprod	.2999237	.068068	4.41	0.000	.1633966	.4364509
ldomprod	.0356724	.2075386	0.17	0.864	-.3805972	.4519421
_cons	11.27442	.6215434	18.14	0.000	10.02776	12.52108

The Boundaries Issue - medium

For the Mid-size 58 regions

Linear regression

Number of obs = 58
F(3, 54) = 100.24
Prob > F = 0.0000
R-squared = 0.8227
Root MSE = .17395

ILS	Robust Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
lsize	-.106213	.0634803	-1.67	0.100	-.2334833	.0210573
lbaseprod	.4431605	.1197464	3.70	0.001	.2030834	.6832375
ldomprod	.1017743	.1260219	0.81	0.423	-.1508843	.3544329
_cons	13.20177	.7426913	17.78	0.000	11.71276	14.69078

The Boundaries Issue - Large

For the group of 59 larger regions

Linear regression

Number of obs = 59
F(3 , 55) = 35.87
Prob > F = 0.0000
R-squared = 0.7459
Root MSE = .18074

ILS	Robust Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
lsize	.0215278	.0343272	0.63	0.533	-.0472654	.090321
lbaseprod	.1348311	.1251424	1.08	0.286	-.1159598	.3856219
ldomprod	.345847	.1500279	2.31	0.025	.0451843	.6465096
_cons	11.34712	.4665113	24.32	0.000	10.41222	12.28203

Results

- For the large Regions sample, domestic productivity is significant while base sector productivity is no more significant.
- The significance of base sector productivity is decreasing with the size of regions while the significance of domestic sector productivity is rising. $\beta_2 = 0.34$: a 1% of increase in living standard may be reached by a 3% rising in domestic sector productivity
- The hypothesis is satisfied: there is a bias presence associated with competitiveness obsession for large Region

Conclusion

1. The study has put forward the existence of a bias associated with a competitiveness obsession behavior at regional level.
2. Consequence: EU regional policies tends to focus exaggeratedly to the base sector at the expense of the domestic sector productivity that is of real importance in the living standard.
3. Young entrepreneurs has more easily access to domestic sector (see microfinance role), there is a large innovative potential for growth if policy are orienting to young entrepreneur and domestic sector.