

# Geographical Economics

Course 1: Introduction: geography and economics

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# What this course is about ? (I)

1. Discussing the importance of geography in economics

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1. Discussing the importance of geography in economics
2. Two dimensions:
  - a) How do the decisions taken at firm level may have an impact on the territory they are settled?
  - b) Why do government plan firm-level development plan to foster welfare at local level ?

## What this course is about ? (II)

Key-issue of the geographic dimension:

*The importance of a strategic approach to implement firm-level policies to boost their competitiveness to improve the general welfare*

## What this course is about ? (III)

Key-path:

*Identification of common or complementary factors that trigger either firms' competitiveness and local development.*

## Structure of the course

- ▶ *Part I* introduces basic concepts for understanding the importance of geography in economics as well as discusses the basic tools for analysis.

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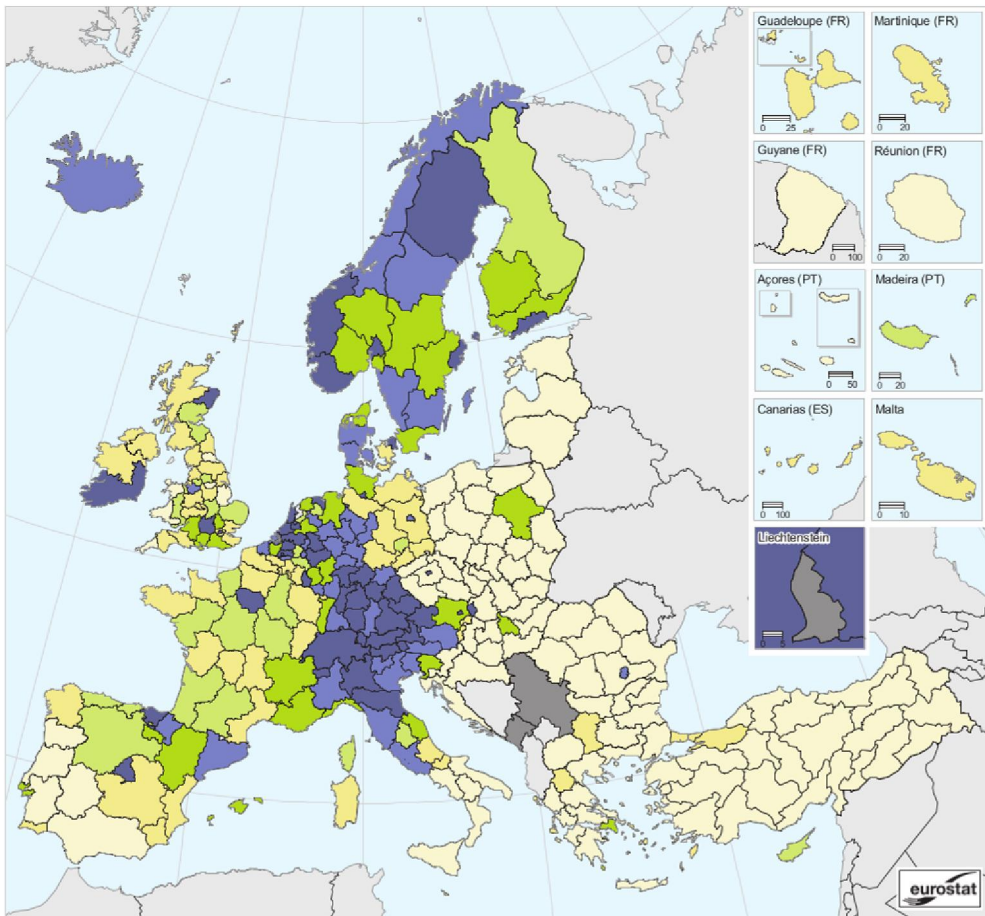
- ▶ *Part I* introduces basic concepts for understanding the importance of geography in economics as well as discusses the basic tools for analysis.
- ▶ *Part II* develops the importance of local clusters in driving local development.

# Evidence

People usually cluster together for several reasons:

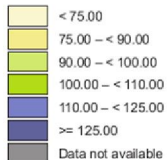
- Sociological: to interact with other persons,
- Historical: used to live in a place,
- Cultural: atmosphere,
- Geographical: amenities,
- ... Economic: job availability (see EU map)





(% of the EU-28 average, EU-28 = 100)

EU-28 = 100.00



Administrative boundaries: © EuroGeographics © UN-FAO © Turkstat  
Cartography: Eurostat — GISCO, 06/2014



## Definition:

*The uneven distribution of economic activity across space has a **fractal** dimension that is it repeats at several spatial dimensions (B-G-vM, 2009).*

- ▶ **Remark (I):** The uneven distribution of economic activities and the apparent regularity of clustering entails to have a look at the interaction between different economic centers.

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*The uneven distribution of economic activity across space has a **fractal** dimension that is it repeats at several spatial dimensions (B-G-vM, 2009).*

- ▶ **Remark (I):** The uneven distribution of economic activities and the apparent regularity of clustering entails to have a look at the interaction between different economic centers.
- ▶ **Remark (II):** Local specialization in production drives trade direction and it is a clear evidence of the economic interaction among agents.

## Discussion

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- ▶ **Did the ranking consolidate in time ?**

## Remarks:

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- ▶ **Clustering:** it usually implies that native or foreign firms/corporations help to create the business environment. Then, the competitiveness of a place is not only granted by national businesses. Mobility issue. *Example: Silicon Valley*
- ▶ **Competitiveness:** local agglomerations trigger firm competitiveness.
- ▶ **Trading partners:** the degree of competitiveness impact on the trading partners. Market selection is very important. **The determinants of this choice are the GDP reporter and destination country; distance (proxy for trade costs).**



## Empirical evidence

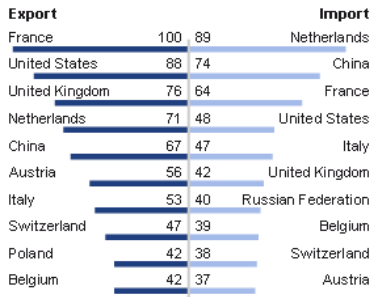
*From an empirical viewpoint data on trade flows between nations or regions clearly indicate that countries or regions predominantly trade with neighboring countries (B-G-vM, 2009).*

- ▶ **Is this true ?**

## Empirical Evidence: German trade partners (2013)

### Germany's major trading partners, 2013

in EUR bn



Preliminary result.

© Statistisches Bundesamt, Wiesbaden 2014

## Empirical Evidence: Export partners Spanish regions (2009) (%)

<b>Aragón</b>		<b>Catalunya</b>		<b>Navarra</b>		<b>Euskadi</b>	
Germany	30.9	Germany	19.8	Germany	41.9	Germany	14.0
France	10.3	France	12.3	France	15.4	France	13.6
Italy	8.3	Italy	11.4	Italy	5.6	UK	10.9

(Source: Aduanas)

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- ▶ **What else ???**

## Definition: Economies of scale (positive)

Modern literature identifies that the agglomeration of firms and people generates the so-called *economies of agglomeration that generates economies of scale or increasing returns*.

- ▶ **Economies of scale (EofS)** refer to a situation in which an increase in the level of output implies a decrease in the average production cost per unit.

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Modern literature identifies that the agglomeration of firms and people generates the so-called *economies of agglomeration that generates economies of scale or increasing returns*.

- ▶ **Economies of scale (EofS)** refer to a situation in which an increase in the level of output implies a decrease in the average production cost per unit.
- ▶ **Economies of scale classify in internal and external.**

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- ▶ *Example: love-for-variety effect; mkt for specialized inputs (industry specific skilled workers)*



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- ▶ *Example: technological or information spillovers*

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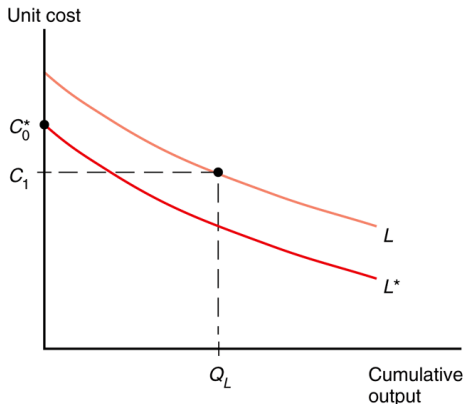
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- ▶ **Jacobian (or urbanization) externalities:** cross-sectoral spillovers.



## Dynamics EofS

There are also situations in which externalities take place through the cumulated knowledge/experience. Then, we need to consider the effect of the cumulated output ( $\sum Q$ )



## Brainstorming corner

**Question:** *in the light of the theory of externalities, why should the GDP of reporter and destination countries matter for trade intensity ?*

## Remark

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- ▶ Consumers and firms are unevenly distributed,
- ▶ The provision of goods is determined by the EofS
- ▶ Therefore, location turns out to be relevant: consumers incurs in transport costs
- ▶ How is it possible to determine the best place to locate ????

## Market potential (Harris, 1954)

Market potential ( $MP$ ) for a location  $i$ :

$$MP_i = \sum_{j=1}^n \left( \frac{M_j}{D_{ij}} \right);$$

$M_j$ : Demand by location  $j$

$D_{ij}$ : Distance from location  $j$  to  $i$

## Discussion

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- ▶ Circular causation: individuals are both consumers and workers,
- ▶ Distance.....

## Measuring distance....

- ▶ This is an open question...

([http://www.cepii.fr/CEPII/en/bdd\\_modele/presentation.asp?id=6](http://www.cepii.fr/CEPII/en/bdd_modele/presentation.asp?id=6))

## Measuring distance....

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- ▶ The easiest way: km distance between two cities. Is it representative ???

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- ▶ **CEPII project**

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## Case study: market potential for location selection

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- ▶ Main reference: Markusen (2002). This case study grants to Artige-Nicolini (2010)

## Where to locate your business in the Four Motors for Europe association ?





## Where to locate your business in the Four Motors for Europe association ? (II)

Two candidates:

Baden - Württemberg (Germany)

Lombardia (Italy)

## Where to locate your business in the Four Motors for Europe association ? (II). MKT Potential B-W.

Computing market potential for Baden- Württemberg:

Proxies:

$M_j$ : GDP per-capita neighboring regions/countries

$D_{ij}$ : Distance from Stuttgart (km)

## Where to locate your business in the Four Motors for Europe association ? (II). MKT Potential B-W.

GDP-per cap (€)	2005		
		<i>Distance from Stuttgard (km)</i>	
<b>Germany</b>	<b>27219,2</b>	<b>Belin</b>	<b>639</b>
<b>France</b>	<b>27347,5</b>	<b>Paris</b>	<b>624</b>
<b>Switzerland</b>	<b>42165</b>	<b>Bern</b>	<b>432</b>
<b>Bâle Ville</b>	<b>73832</b>	<b>Bâle</b>	<b>264</b>
<b>Bâle Campagne</b>	<b>34296</b>	<b>Liestal</b>	<b>230</b>
<b>Argovie</b>	<b>31544</b>	<b>Aarau</b>	<b>261</b>
<b>Zürich</b>	<b>44105</b>	<b>Zürich</b>	<b>219</b>
<b>Schaffhausen</b>	<b>35337</b>	<b>Schaffhausen</b>	<b>170</b>
<b>Turgovie</b>	<b>28794</b>	<b>Frauenfeld</b>	<b>201</b>
<b>Sant Gall</b>	<b>28760</b>	<b>Sant Gallent</b>	<b>249</b>
<b>Alsace</b>	<b>25758</b>	<b>Strasbourg</b>	<b>158</b>
<b>Bayern</b>	<b>32041</b>	<b>München</b>	<b>235</b>
<b>Hessen</b>	<b>32963</b>	<b>Weisbaden</b>	<b>220</b>
<b>Rheinland-Pfalz</b>	<b>24126</b>	<b>Mainz</b>	<b>217</b>

## Where to locate your business in the Four Motors for Europe association ? (II). MKT Potential B-W.

Market Potential Baden Württemberg (2005, €)			
	(GDP/Dist)		
Germany	42,6	Countries	184
France	43,8		
Switzerland	97,6		
Bâle Ville	279,7	Regions	1778
Bâle Campagne	149,1		
Argovie	120,9		
Zürich	201,4		
Schaffhausen	207,9		
Turgovie	143,3		
Sant Gall	115,5		
Alsace	163,0		
Bayern	136,3		
Hessen	149,8		
Rheinland-Pfalz	111,2		

## Where to locate your business in the Four Motors for Europe association ? (II). MKT Potential Lombardia.

Computing market potential for Lombardia:

Proxies:

$M_j$ : GDP per-capita neighboring regions/countries

$D_{ij}$ : Distance from Milano (km)

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LOMBARDIA					
GDP-per cap (€)	2005				
				<b>Distance from Milano (Km)</b>	
<b>Italy</b>	<b>24281,2</b>	<b>Roma</b>	585		
<b>Switzerland</b>	<b>42165</b>	<b>Berna</b>	354		
Ticino	26496,8	Lugano	78		
Piemonte	42165	Torino	142		
Trentino	28426,2	Trento	230		
Veneto	28643,3	Verona	167		
Emilia Romagna	29670,3	Bologna	219		

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Market Potential Lombardia (2005, €)			
	(GDP/Dist)		
<b>Italy</b>	41,51	<b>Countries</b>	<b>161</b>
<b>Switzerland</b>	119,11		
<b>Ticino</b>	339,70	<b>Regions</b>	<b>1067</b>
<b>Piemonte</b>	296,93		
<b>Trentino</b>	123,59		
<b>Veneto</b>	171,52		
<b>Emilia Romagna</b>	135,48		

## Where to locate your business in the Four Motors for Europe association ? Discussion.

- ▶ Baden-Württemberg is the preferred location



## Where to locate your business in the Four Motors for Europe association ? Discussion.

- ▶ Baden-Württemberg is the preferred location
- ▶ Proximity matters !

## Summary: key points about location theory

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- ▶ Urban areas providing specialized labor market are attractive for workers/consumers and good candidates for firm clustering,
- ▶ Agglomeration involves both demand and supply side.