# Cities and Regional Development

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**at all spatial scales, from the larger to the small**

**Regardless of the spatial scale, there is no such thing as a flat economic space**

# Do institutions (or culture, religion) matter?

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Living standards are about 10 times higher in the former than in the latter

# *Another* amazing fact

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In 2008, Greater Seoul - 11.8% of the country area and 48.6% of its population – produces 47.8% of the Korean GDP

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**Inside Greater Paris, only 12% of the available land is used for housing, plants, and roads**

**In 2000, the 38 largest metropolitan areas of the EU-15 cover less than 1% of the surface area of the Union, but accommodate 27% of its jobs and produce 29,5% of the EU-15 GDP**

# What drives spatial inequality?

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# And is it necessarily bad?

# Nature is unfair

**Nature is unfair**

**BUT**

# The Basic Trade-off

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## (i) Scale Economies

## versus

## (ii) Transportation Costs

**City Wall:** $2\pi R/\pi R^2 = 2/R$

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**Temple: local public good**

1 or 2 facilities

2 regions (East and West)

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- 1 facility: F + T
- 2 facilities: 2 F

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**1 facility if and only if $T < F$**

# The 1st Law of Economic Geography

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- ***Not everything can be made available all over the places***

**Lowering transport and trade costs fosters the geographical concentration of economic activities**

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**From 1000 to 1700, which, in Europe, was on the whole a period of progress, it can be very roughly estimated that the productivity of the whole economy was, at best, multiplied by 2**

**Between 1800 and 1910, it can be estimated that the lowering of the real average prices of transportation was on the order of 10 to 1 (Bairoch)**

# Per capita GDP of European countries expressed in 1960 U.S. dollars and prices

| Countries | 1800 | 1830 | 1850 | 1870 | 1890 | 1900 | 1913 |
|---|---|---|---|---|---|---|---|
| Austria-Hungary | 200 | 240 | 275 | 310 | 370 | 425 | 510 |
| Belgium | 200 | 240 | 335 | 450 | 55 | 650 | 815 |
| Bulgaria | 175 | 185 | 205 | 225 | 260 | 275 | 285 |
| Denmark | 205 | 225 | 280 | 365 | 525 | 655 | 885 |
| Finland | 180 | 190 | 230 | 300 | 370 | 430 | 525 |
| France | 205 | 275 | 345 | 450 | 525 | 610 | 670 |
| Germany | 200 | 240 | 305 | 425 | 540 | 645 | 790 |
| Greece | 190 | 195 | 220 | 255 | 300 | 310 | 335 |
| Italy | 220 | 240 | 260 | 300 | 315 | 345 | 455 |
| Netherlands | 270 | 320 | 385 | 470 | 570 | 610 | 740 |
| Norway | 185 | 225 | 285 | 340 | 430 | 475 | 615 |
| Portugal | 230 | 250 | 275 | 290 | 295 | 320 | 335 |
| Romania | 190 | 195 | 205 | 225 | 265 | 300 | 370 |
| Russia | 170 | 180 | 190 | 220 | 210 | 260 | 340 |
| Serbia | 185 | 200 | 215 | 235 | 260 | 270 | 300 |
| Spain | 210 | 250 | 295 | 315 | 325 | 365 | 400 |
| Sweden | 195 | 235 | 270 | 315 | 405 | 495 | 705 |
| Switzerland | 190 | 240 | 340 | 485 | 645 | 730 | 895 |
| United Kingdom | 240 | 355 | 470 | 650 | 815 | 915 | 1035 |
| **Mean** | **200** | **240** | **285** | **350** | **400** | **465** | **550** |
| **Relative standard deviation** | **12%** | **18%** | **23%** | **31%** | **38%** | **39%** | **42%** |

# Elasticity of GDP per capita with respect to distance to the UK

| | 1800 | 1830 | 1850 | 1870 | 1890 | 1900 | 1913 |
|---|---|---|---|---|---|---|---|
| Slope | –0.090 | –0.195 | –0.283 | –0.371 | –0.426 | –0.437 | –0.436 |
| Standard-deviation | 0.028 | 0.029 | 0.028 | 0.032 | 0.052 | 0.058 | 0.078 |
| $R^2$ | 0.376 | 0.717 | 0.857 | 0.883 | 0.796 | 0.764 | 0.647 |

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**distance to the UK matters more and more**

**(a correlation)**

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2 facilities if and only if S T > F

**Large regional markets foster the geographical dispersion of economic activities**

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Large markets attract firms and workers because they are large but they are large because they are attractive

**Economic journalists have celebrated**

**the *death of distance***

**the *weightless economy* or the emergence of**

**a *flat world***

**Empirical studies do not confirm such predictions**

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**Quite the opposite:**

**proximity still matters**

**for differentiated digital products (such as music or electronic games)**

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**once controlled for other key determinants such as language or internet penetration**

# The 2d Law of Economic Geography

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- ***What is nearby matters more than what is far away***

- **Market access (customers)**

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- **Supplier access (intermediate inputs)**

# Increasing returns internal to firms

**Increasing returns**
**internal to firms**

**Increasing returns**
**external to firms**

**(and workers)**

# Agglomeration Economies

# Empirical evidence shows the existence of strong

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**egg-and-chicken problem**

# Reverse causality

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***endogeneity*** → **simultaneity & omitted variables**

# employment density

**employment density**

$\neq$

**population density**

## "density economies"

$$\log lp = \alpha + \beta \log den + \varepsilon$$

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$$\log lp = \alpha + \beta \log den + \varepsilon$$

## $\beta$ ranges from 3 to 11%

**To a large extent, the elasticity of wages with respect to density is explained by differences in workers' skill**

# Does proximity matter at the age of Internet?

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**Yes it does**

- **Sharing**

- **Sharing**
- **Matching**

- **Sharing**
- **Matching**
- **Learning**

# Information and knowledge spillovers

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# Tacit and embodied knowledge

**Information and knowledge spillovers**

**Tacit and embodied knowledge**

**Cities connect (skilled) people**

# The various facets of knowledge

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**Learning-by-doing**

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**Learning from others**

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**Learning-by-doing**

**Learning from others**

**Spillovers are more profitable to skilled workers**

**The world's supply for land vastly exceeds the demand for land**

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**→ the price of land should be zero!**

# So why is housing so expensive in large cities?

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**Because proximity matters…**

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**Because proximity matters…**

**otherwise firms and people wouldn't pay high land rents**

People pay higher prices for housing **because** they earn higher wages in larger cities, and they earn higher wages **because** they are more productive in larger cities

**Land rents capitalize the benefits of being close to …**

**Land rents capitalize the benefits of being close to … something**

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# Should we plan clusters?

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Yes but they are not all good

## Should we plan clusters?

No but governments can help

# Why?

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(iii) Negative clusters

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(ii) Local governments may help coordinate private agents and provide some business infrastructure

# More?

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Sure but let's keep some material for further discussion

# The bottom line

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**Land market-savvy policies**

*Thank you for your attention*