

Delocation and European Integration: Is Structural Spending Justified?

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Outline

1. Scenarios for development of the EU's economic geography
2. The role of policy
 - Evidence
 - Conjecture
 - Transport infrastructure
 - State aids
3. Lessons for policy

Part 1

The Economic Geography of the EU

EU15 location patterns

- Economic activity less geographically concentrated than US
- Individual industries less geographically concentrated than US
- Countries slowly becoming more specialized
- A mixed picture for regional specialization
- Convergence between countries, divergence within countries
- Spatial dimensions of inequality increasingly important

Economic geography: Critical determinants

- Agglomeration gains
 - Strength
 - Extent (between or within)
- Mobility
 - Degree
 - Factors
- Transport costs

Integration and location

Agglom gains Mobility	Small	Large inter- industry	Large across industries
Low	Dispersion	H-O localisation	
Labour low Capital high	Spec and FPE	Industry black hole	Polarisation
High			1 black hole

The role of transport costs

- High transport cost
 - Firms sell mainly in local market
 - Competition effect limits agglomeration
- Intermediate transport cost
 - Weakens the effect of local competition because increases share of sales in other regions
- Low transport cost
 - Price of local factors higher in core regions
 - Factor price differences may dominate for low transport cost

Part 2

**The role of policy:
evidence & conjecture**

The returns to development funds

- Some evidence of differing returns for different types of EU expenditures
 - Infrastructure returns small
 - Business support returns small
 - Investment in education and human capital has medium term positive significant effects

EU investment in transport infrastructure

- Seen as playing a key role in reducing disparities
- Trans-European Networks
 - 14 priority projects and large number smaller projects
 - 300,000 million (1993 prices)
 - High community support
 - High investment rates in some Cohesion countries (e.g. 2.7% GDP in Spain)

Transport as capital stock

- Regional production function approach
 - Output a function of regional endowments: skilled labour, private capital, public capital
 - Initially, high estimates of returns to infrastructure expenditure (one for one!)
 - More recent estimates much more moderate returns
- Ignoring network dimension to many new projects (especially rail projects)

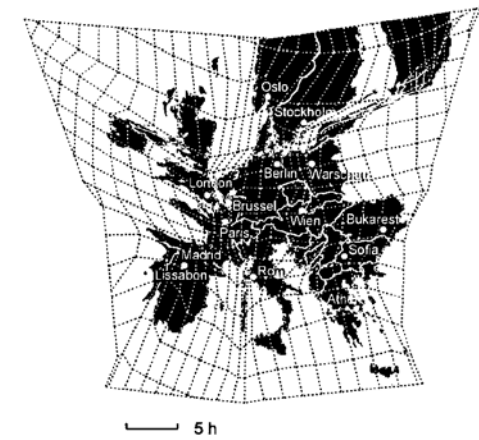
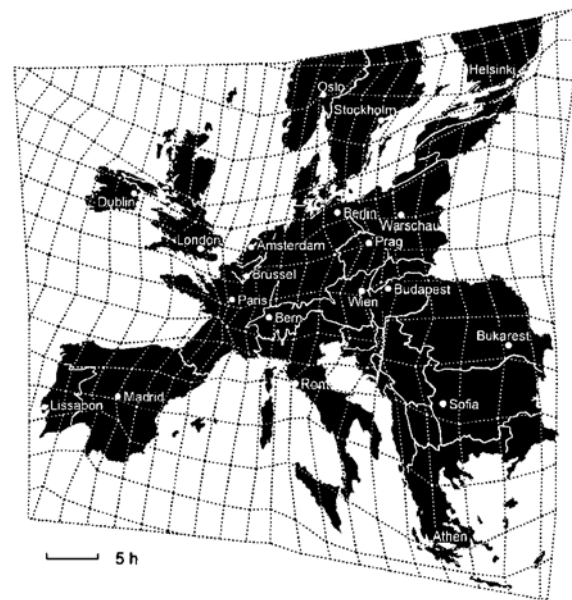
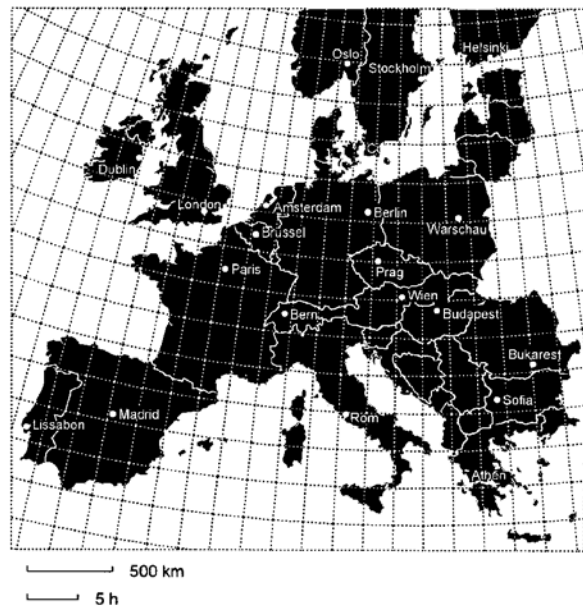
The “two-way” roads problem

- Roads run both ways
 - Gives access of peripheral firms to core market
 - Allows core firms access to peripheral markets
- Theory suggests that if
 - Limited migration
 - Low regional wage flexibility... this can be bad for the periphery
- Not just theory – c.f. Southern Italy 1950s

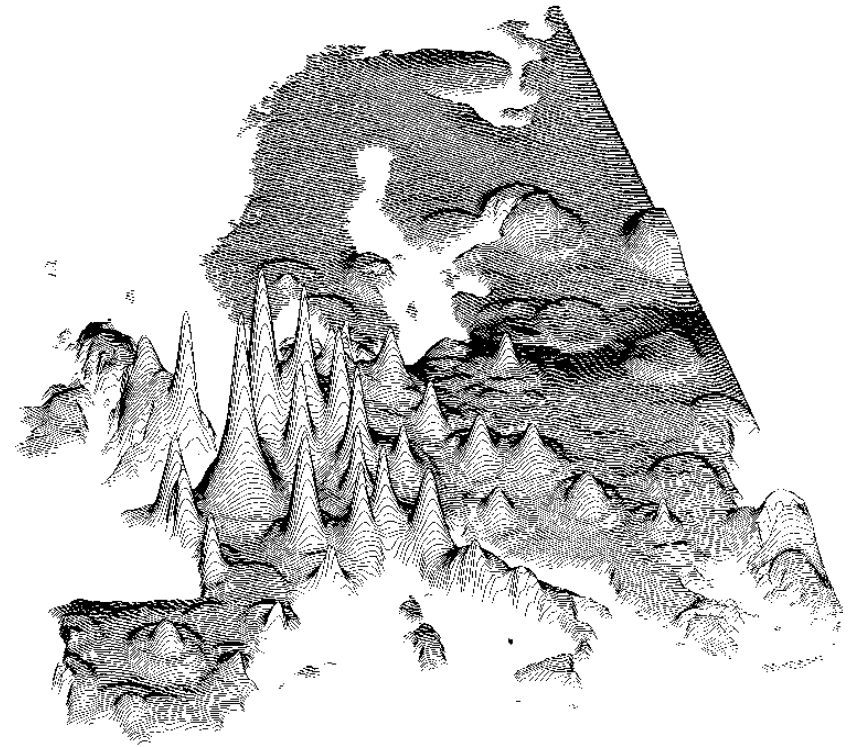
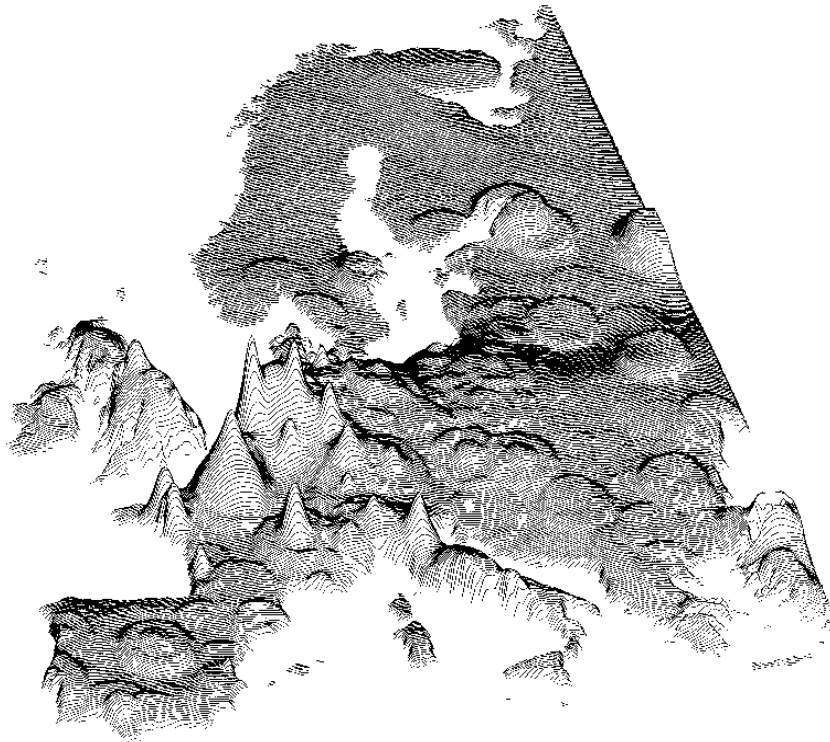
Transport networks and regional development

- Intra-regional transport projects benefit peripheral regions
- Inter-regional transport projects can harm peripheral regions
- Hub and spoke networks can harm peripheral regions

TENs and accessibility (rail)



TENs and accessibility (rail)



From accessibility to activity

- Work for the Cohesion Fund highlights the idea that:
 - Some projects can benefit a wide number of regions (e.g. Madrid ring road)
 - Some projects can benefit a limited number of regions (e.g. Rias Bajas Motorway)
 - Some projects can benefit one region to the detriment of other regions (e.g. Tagus crossing)

CBAAs and the role of transport infrastructure in development

- Cost benefit analysis looks at activities closely related to project
- Assumptions
 - Distortions and market failures not significant so that private and public valuations close
 - Induced changes in activity fade fairly quickly as we move away from close activities
- NEG suggests these conditions not met

The role of business support

- Role of EU regional aid in changing industrial structure of regions
 - Attracts low IRS activities
 - No effect on skill intensive activities
 - Attracts R&D intensive activities
- At national level changing endowments of medium skill do not attract medium skill intensive activities

The regional problem?

- Regional polarization
- Possibility that increasing medium skill endowments not attracting industry
- Government policy being used to attract high-tech activities counter to comparative advantage
- Specialisation is good
 - 30 Objective 1 regions: 10 winners, 20 losers
 - 8 out of 10 winners became more specialised

Part 3

Lessons for Regional Policy

Transport policies

- Need to think about the network effect of individual transport policies
- Transport policies plus regional flexibility can encourage firms in to the periphery
- High costs in peripheral regions can mean transport policies have negative effect

State aid

- Can be used to attract high tech activities
- Usually runs counter to comparative advantage
- Theoretical possibility to create “technopoles” – self reinforcing agglomerations of high tech activity
- Econometric analysis suggest that *on average* this policy just doesn’t improve regional GDP
- Successful projects are outliers

Specialisation and training

- Workers will need help during adjustment period.
- Trade off when designing training programmes
 - Sector specific skills will help deepen comparative advantage and protect against temporary shocks
 - General skills will help with permanent shocks

The role of skills

- Appropriately skilled labour allows regions to develop comparative advantage in sectors that use that sector
- The only development policy that *on average* seems to show positive returns

Skills and mobility

- Skilled people are more likely to move
- Is regional policy about developing the GDP of a region or the well being of the people that live in that region?
- Even if newly “skilled” workers move it can still be good for the region if it reduces unemployment (GDP per capita will rise)

Firm mobility

- Bribing firms to move appears to have some effect on industrial structure, but a weak effect on GDP
- Large movements of firms needed to overcome cumulative advantage of existing centres
 - Allows core to tax higher if it wants to (harmonizing taxes hurts periphery)
- Biggest incentive will usually be low wage costs in the periphery

Wage differentials and adjustments

- Large amount of opposition to allowing nominal wage differentials to emerge
 - Nominal wage differentials contribute to regional development by attracting firms
 - Firms need lower wage costs to offset disadvantage of periphery
 - Unemployment worse than low wages?
 - Real wages tend to be higher in the periphery!

Encouraging mobility

- Worst regional outcomes occur when firms are mobile and workers aren't
- Encouraging mobility *out of* peripheral areas may be the best way to
 - Maximize aggregate income
 - Minimize adverse affects of peripherality

Key messages

- Regional flexibility and deeper integration are the key *economic* mechanisms that will help deal with problem regions
- Governmental role should be to
 - Ensure flexibility
 - Support business and training programmes appropriate to regional characteristics
 - Encourage worker mobility

Appendix 1

EU location patterns (evidence)

Based on:

Combes and Overman (2004) “Spatial Distribution of Economic Activities in the European Union” Forthcoming, Handbook of Urban and Regional Economics (volume 4)

Midelfart and Overman (2002) “Delocation and European Integration: Is Structural Spending Justified?” Economic Policy, 35.

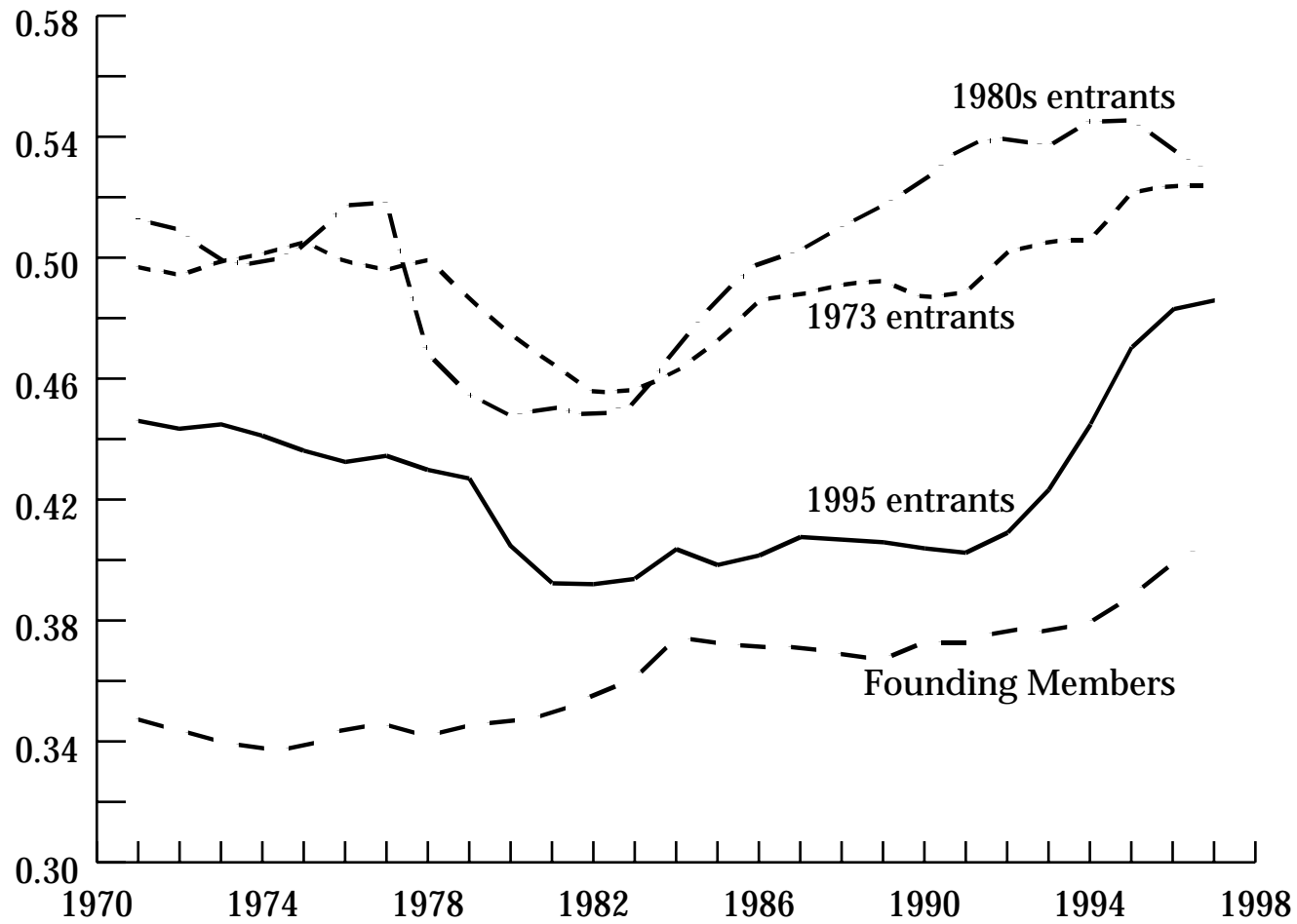
Economic activity

- 50% of EU industrial employment is concentrated in 27 NUTS 1 regions
 - 17% of EU surface area
 - 45% of EU population
- 50% of US industrial employment is concentrated in 14 states
 - 13% of US surface area
 - 21% of US population

Spatial separation

	1970/73	1994/97
Industrial mach	0.918	1.03
Electronic equip	0.829	0.848
Motor vehicles	1.46	1.3
Textiles	1.91	2.03
Leather products	1.46	1.24
Average	1.12	1.14

Countries more specialised I



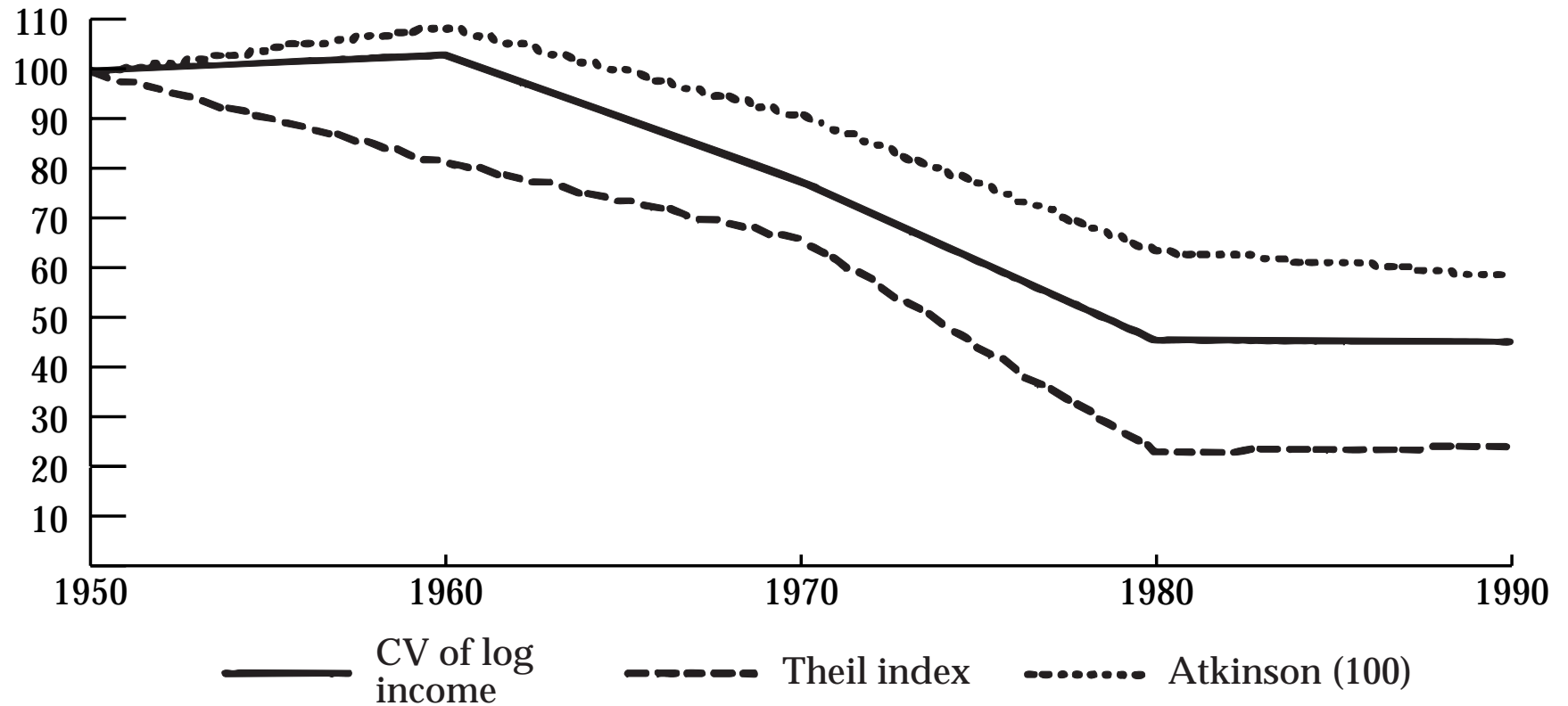
Countries more specialised II

- Of EU 15 all countries more specialised in 1990s than 1970s (except Netherlands)
- Often an unravelling of specialisation patterns just before integration and then increased specialisation after
- Jump in specialisation on entry even if part of EFTA previously

A mixed picture for regional specialisation

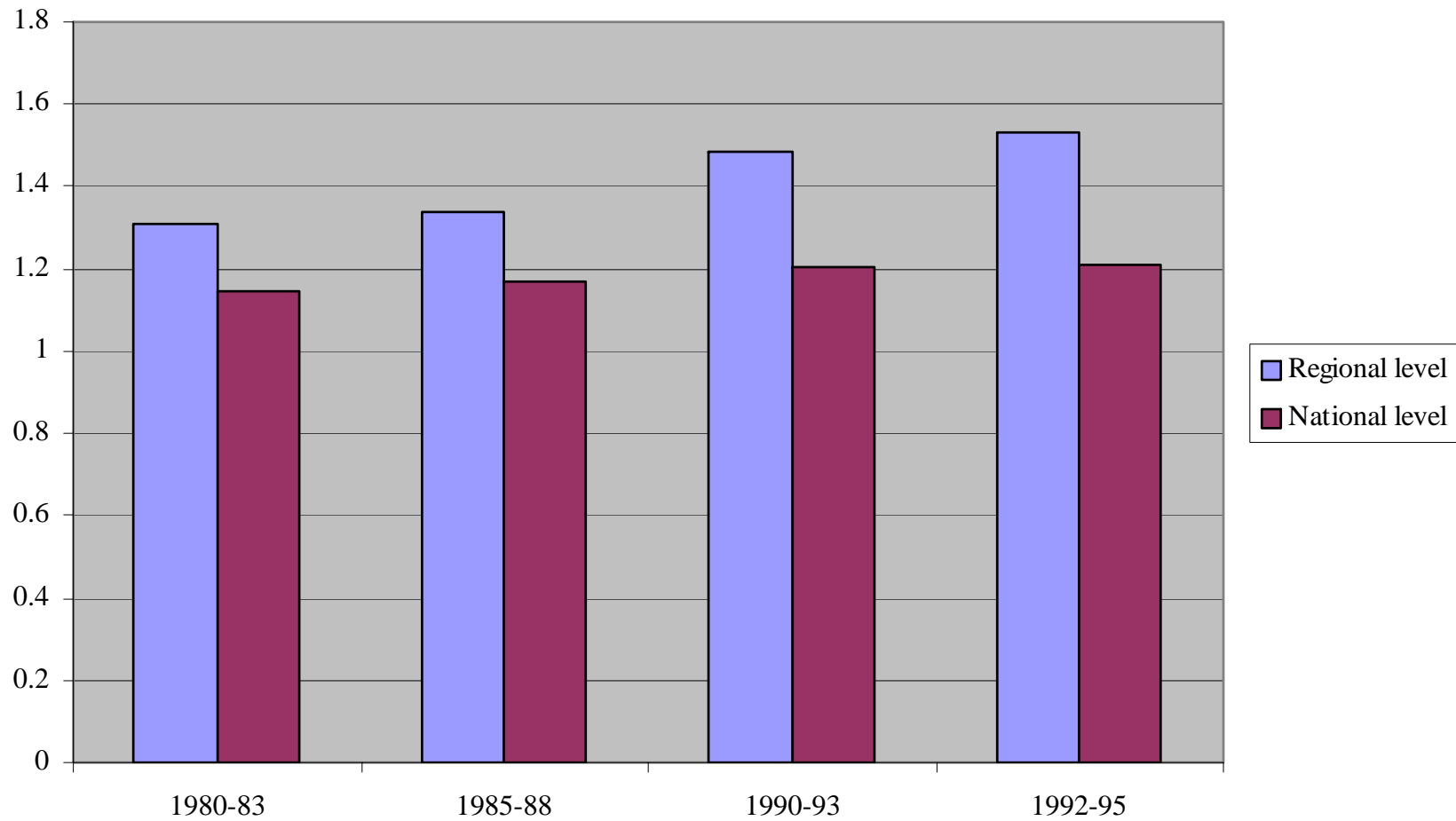
- Between 1980 and 1995
 - 53% regions more specialised
 - 47% less specialised
- Health warning
 - Difficult to get regional data (exclude Austria, Finland, Greece, Sweden)
 - Not very disaggregated industrial classification

The evolution of EU regional inequalities: no more convergence

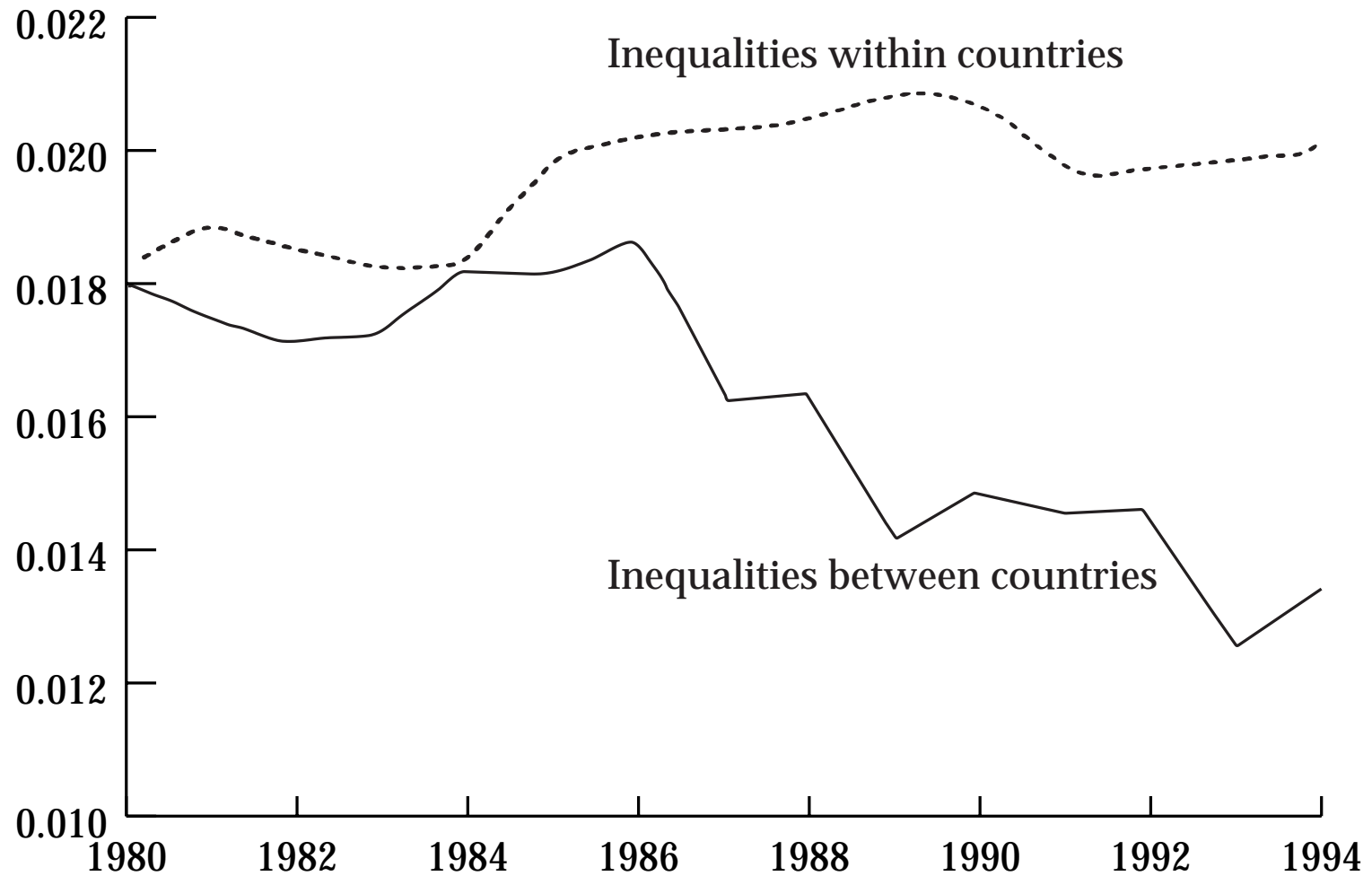


Some regional divergence

(coefficient of variation man shares)



Divergence within countries



Spatial dimensions

- Spatial dimension to polarisation of both GDP and unemployment
- Regions move with neighbours (even when control for type of industry, availability of skills, national institutions)
- Blurring of national boundaries

Appendix 2

EU location patterns (theory)

Based on:

Midelfart and Overman (2002) “Delocation and European Integration: Is Structural Spending Justified?” *Economic Policy*, 35.

Puga (2002) “European Regional Policies in light of recent theories”, *Journal of Economic Geography*, 2(4)

Comparative advantage and specialisation

- Traditional models of comparative advantage help us understand some increasing specialisation with integration
- CA provides weak explanation of spatial concentration of activity
- Need increasing returns to scale to explain uneven distribution across areas with similar endowments

The Krugman-Venables core periphery model

- Two regions (core & periphery)
- Two factors of production (mobile across sectors but immobile across regions)
- Core has larger endowments (60%) but the same relative endowments (no CA)
- One CRS sector, freely traded (agriculture)
- One IRS sector, differentiated goods, costs to trade (manufacturing)

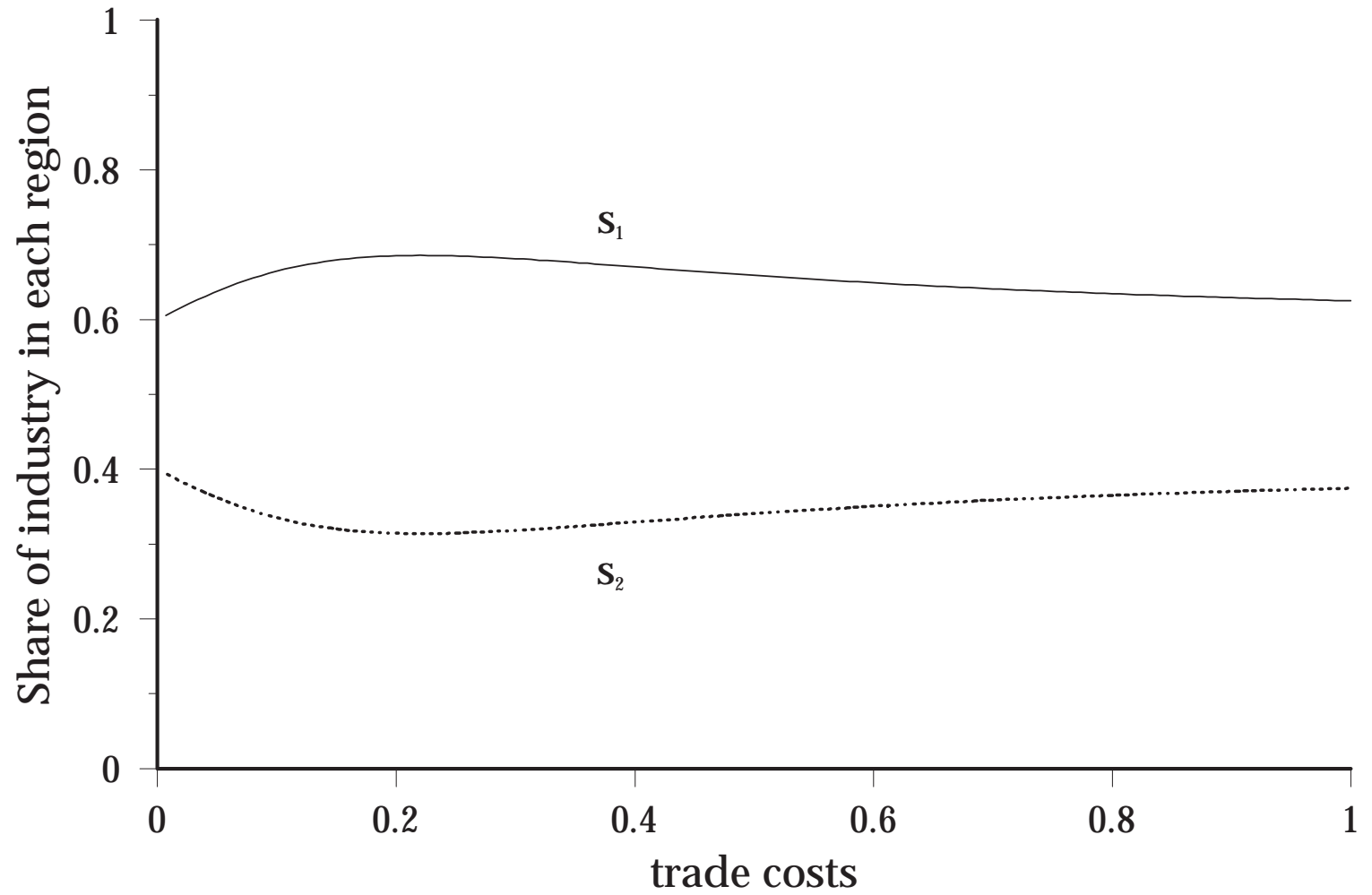
The home market effect

- Would expect core region to have more manufacturing
- The surprise is that the core gets a more than proportionate share
- Core exports manufactures – “the home market effect”
- Core firms have better access to larger markets. Larger sales of firms in core → larger profits (IRS) → firms enter in response to profits

The role of transport costs

- High transport cost
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Trade costs and location



Mobility & endogenous geography

- If some factors mobile between regions, eases pressure due to concentration
- Start from symmetric equilibrium and imagine effect on profits of firm moving
 - Product and labour market competition
 - No migration → end of story
 - Fall price index, rise wages attracts workers
 - Increase local expenditure and eases pressure in labour market

European mobility

- Mobility of workers low within and between countries
 - High average unemployment rates reduce incentives
 - Institutional barriers
 - Social housing (within countries)
 - Pensions/social security (between countries)
 - Government regulations that reduce regional wage differentials

The role of regional wage differentials

- Impact depends on whether or not agglomeration happens anyhow
- If agglomerate:
 - Labour demand will be lower in the periphery
→ high unemployment, low regional income
 - Lack of wage effect can actually reinforce agglomeration
 - Subsidies to firms to offset locational disadvantage will need to be ongoing

Input-output linkages

- Linkages between firms are sufficient to drive agglomeration even when labour is immobile (good access to suppliers and customers)
- Two forces moderate agglomeration
 - Wage differences
 - Lack of cumulative effect from migrating workers
- At low transport costs wage differences can drive relocation to periphery (an inverted U)

Using the models

- US more agglomerated than EU because workers are more mobile
- Convergence between countries if wages reflect differences between countries
- Divergence within countries if institutional structures prevent wage differentials
- Spatial dimension to development
- What about specialisation patterns?

Agglomeration and specialisation

- Specialisation driven by comparative advantage
- Agglomeration effects can reinforce or counter specialisation
 - Externalities/linkages intra-industry will reinforce specialisation
 - Externalities/linkages inter-industry will promote diversification

Appendix 3

Accessibility: Road

TENs and accessibility (roads)

