

Onward the Spatial: Is the Game Up for the 'Region' and Regional Economics?

Colin Wren

University of Newcastle upon Tyne

Paper delivered to U&RESG meeting on
'Urban and Regional Economics: Progress, Problems, Prospects'
University of Glasgow, Glasgow
10-11th January 2008

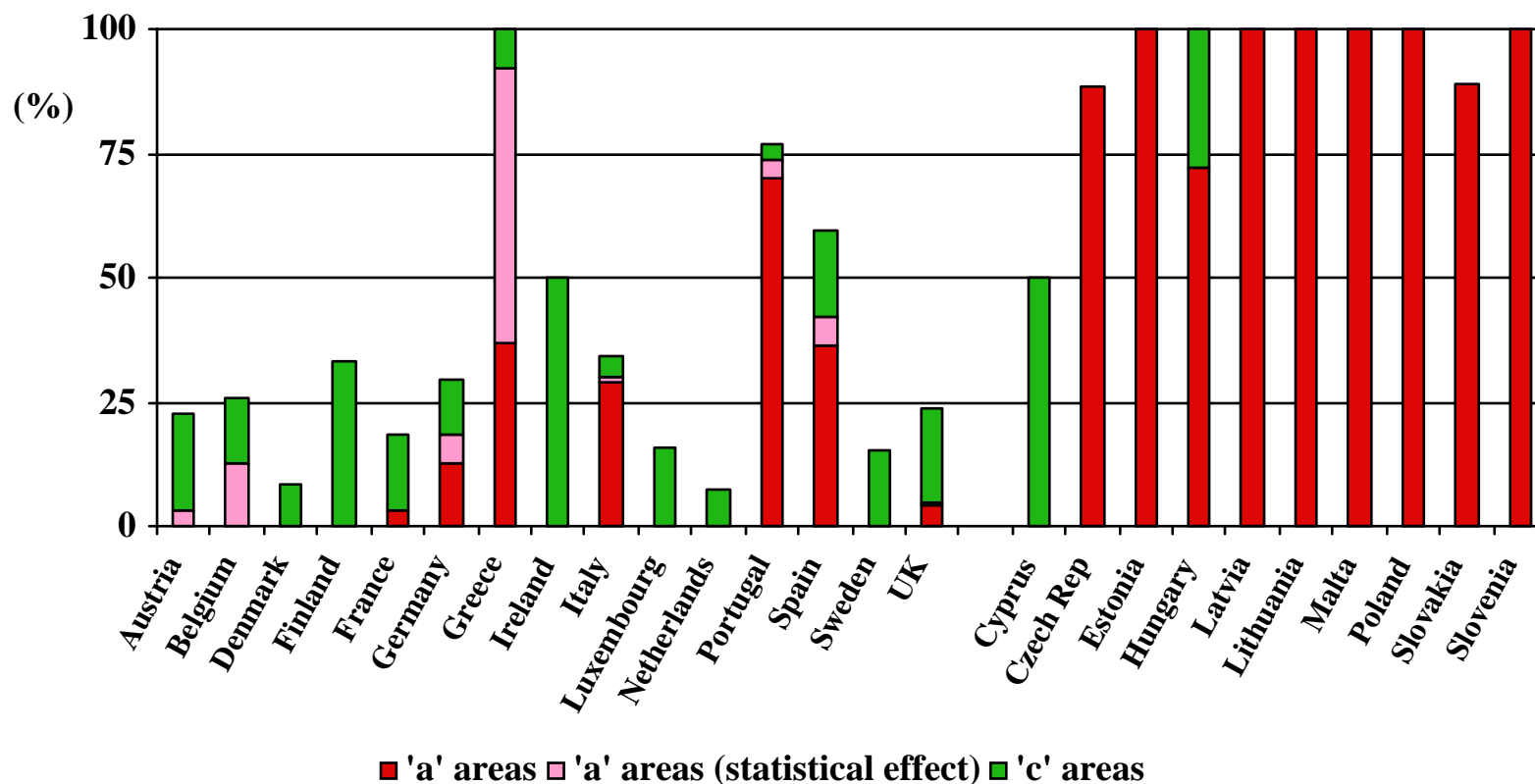
1.1: Introduction

- Advances in spatial analysis, embracing economic theory, empirical methods and applied work, have reinvigorated and introduced a whole range of specialisms:
 - *new* trade theory
 - *new* economic geography
 - *new* endogenous growth theory
 - *new* economics of urban and regional growth
 - *new* regional policy.
- As disciplinary boundaries crossed, old debates resurfaced:
 - e.g., Martin and Sunley (2001) on ‘economic geography proper’.
- Critiques from different disciplinary viewpoints: e.g. Neary (2001); Barnes (2004); and Roberts and Setterfield (2007). Recently, Behrens and Thisse (2007) on regional economics.

1.2: The ‘Loss of Currency’

- The ‘region’ and regional economics have lost currency:
 - The UK ‘new regional policy’ - a framework with which economic geographers “previously unfamiliar” (Fothergill, 2005, p. 660).
 - A new journal, *Spatial Economic Analysis* in 2006, but making little reference to the notion of a ‘region’.
 - From 2008 a new ESRC Spatial Economics Research Centre.
- Underlying doubts about whether ‘region’ is appropriate spatial unit, with regional economics squeezed from either end:
 - Keller (2002) finds productivity effects of knowledge flow for over 1000 km, while Glaeser (2000) views new urban and regional growth as about cities.
 - EU spatial policy driven towards the national scale, while national regional policies akin to small-area local employment policies.

European Union Regional Policy Areas: 2006 Guidelines



Source: European Commission (2006) and Wislade (2008).

Notes: 'a' areas where GDP per head is less than 75 per cent of the EU-25 average;

'a' areas (statistical effect) areas where the 75 per cent per capita GDP threshold is met for the pre-2004 EU-15;

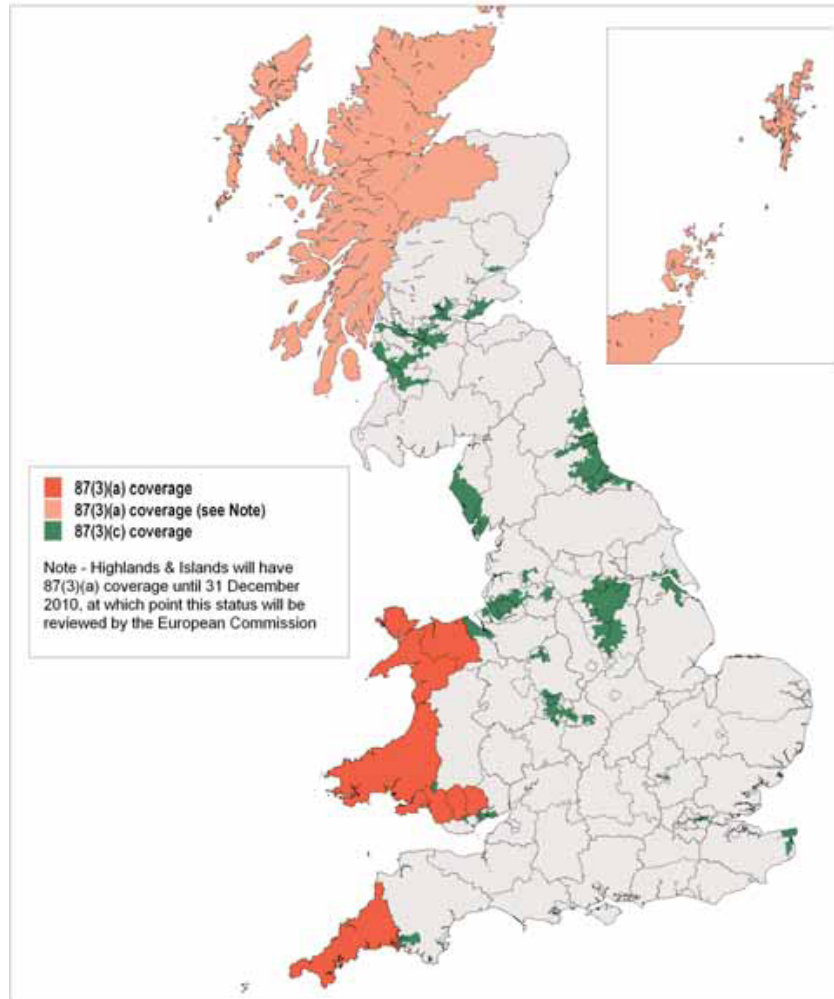
'c' areas either designated by the EU or Member State (earmarked or non-earmarked) reflecting national disparities.

In addition, there are transitional 'c' areas (not shown) that run until 2008, amounting to 3.8 per cent of the EU-25 population. Statistical effect 'a' areas may be downgraded to 'c' status from 2010.

Assisted Areas in Great Britain, 2007-13

Assisted Areas in Great Britain, 2007-2013

Northern Ireland will have full 87(3)(c) coverage



Source: Department for Business, Enterprise and Regulatory Reform.

1.3: Purpose of Presentation

- New spatial theories make little reference to regional economics, and chiselling away at what we understand as a ‘region’.
- Purpose: explore recent developments in theory (NEG and NGT), empirics and policy to examine implications for ‘region’ and ultimately regional economics.
- We ask whether ‘region’ and regional economics still constitute a useful scale and mode of analysis, or if in light of developments regional economics should be re-evaluated.

2: Structure of Talk

3: The Nature of Regional Economics

4: The New Spatial Theories (NEG and NGT)

- Endogenous treatment of spatial development and growth.

5: The Appropriate Spatial Scale and Development Policy

- Reveal about ‘region’ and regional economics.

6: Conclusions

3.1: Nature of Regional Economics

- Regional economics product of post-war generation, which Richardson (1969) attributes to conservatism of Economics:
 - Classical notions of price flexibility and factor mobility meant market forces could be relied on to correct regional imbalances.
- Distinguishing feature of regional economy is ‘openness’, with high degree of interdependence in goods and factor markets:
 - Common legal, political, language, institutions, culture.
 - Absence of barriers to trade and factor mobility.
 - Common fiscal arrangements, e.g. currency and interest rates.
 - National transfers and inducements, e.g. regional policy.
- Difficulty of defining ‘region’:
 - Impossibility of unambiguous definition (Behrens and Thisse, 2007).
 - Regions defined in different ways for purpose (Armstrong and Taylor, 2000).
 - Three approaches: homogeneity; core-periphery; and policy (Meyer, 1963).

3.2: Foundations of Regional Economics

- Twin pillars are international trade and location theory.
 - Original interest of Isard was failure of trade theory to pay attention to the cost of overcoming ‘spatial separation’.
 - Isard and colleagues later produced first major textbook in the field (Isard *et al*, 1960), then known as *regional analysis*.
- Four theoretical roots or ‘tools’ of regional analysis:
 - Location theory; multiplier theory; input-output analysis; and mathematical programming (Meyer, 1963).
 - Location theory important in *urban economics* and *regional science*.
 - Other tools, and developments therein, found application in what we today understand as *regional economics*.
- Regional economics emphasises ‘regional problem’ and policy: i.e. why significant regional disparities arise and persist.

3.3: Subject Matter of Regional Economics

Chapter Title	Brief Description of Content
1: Output and Employment Determination in Regional Economies	The multiplier, economic base and Keynesian income-expenditure approach.
2: Input-Output Approach to Modelling the Regional Economy	The input-output method.
3: Regional Growth Disparities: Neoclassical Models	One-sector and two-sector growth models.
4: Export-Led Models of Regional Growth	Export-base approach and models of cumulative causation.
5: Interregional Trade	Heckscher-Ohlin theorem and other explanations.
6: Interregional Migration	Classical and human capital approaches to labour migration.
7: Regional Employment Growth	Shift-share and components of change.
8: Regional Unemployment Disparities	Neoclassical, Keynesian and supply-side influences.

‘Tools’

‘NCT?’

‘Regional problem’

‘Openness’

Source: Contents of: Armstrong and Taylor (1985), Part I.

3.4: Changing Nature of *Regional Studies*

	2007	1987
Technique		
'Tools' of regional analysis ¹	5	5
Regression analysis	18	3
Other statistical methods ²	4	2
Tabular or cross-tabular analysis	2	14
Other ³	5	10
Spatial scale		
Local (of which: cross-local)	8 (7)	5 (3)
Regional (of which: cross-regional)	20 (15)	17 (12)
National (of which: cross-national)	2 (0)	7 (6)
Other ⁴	4	5
Topic		
'Regional problem' or regional policy ⁵	11	7
Growth	10	12
Other	13	15

Source: Analysis of the 34 main paper articles published in *Regional Studies* in 1987, and for the same number of papers from the beginning of the year 2007.

Notes: Where a paper involves more than one 'technique', the category listed first in the table is selected, while when an analysis is conducted at different spatial levels the finer level of disaggregation is chosen. Most papers ultimately have implications for spatial disparities or growth, but 'topic' separately identifies the papers with a direct implication.

1. Input-output, multiplier, location analysis and regional economic modelling.
2. Cluster, discriminant, factorial analysis, transitional matrices and spatial data analysis.
3. Mapping techniques and theory, possibly narrative in nature.
4. Rural areas and where spatial unit not specified.
5. Uneven development, unemployment and convergence studies.

4.1: New Economic Geography

- Arose from new trade theories, reflecting inability of Heckscher-Ohlin model to explain important observed phenomena.
- International trade founding pillar of regional analysis, but not until Krugman (1991) that NEG introduced:
 - Decentralised model of trade-off between the forces of agglomeration and dispersal from a GE treatment, rooted in mainstream economics.
- Agglomerative forces introduced in two ways:
 - Labour mobility (Krugman, 1991)
 - Intermediate inputs (Venables, 1996).
- Analyses (local) stability of a ‘diversified economy’ equilibrium, and the role of transport costs.

4.2: NEG and Regional Economics

- NEG has responded to original concern of Isard by integrating transport costs in a theory of international trade:
 - In its sub-national guise it is more accurately described as a new regional analysis.
 - Resource-based explanation not central to geographical specialisation, i.e. ‘accidents of history’, but ‘history matters’.
- Accounts for phenomena of interest to regional economics:
 - Neary (2001): policy implications “too stark to be true” (p. 556).
 - Behrens and Thisse (2007): 2-region model may not be extrapolated, and Dixit-Stiglitz monopolistic competition model not general.
 - Unemployment does not feature.
 - Not clear if agglomeration beneficial for peripheral economy.
 - Suggests regional policy unnecessary / ineffective.

4.3: New Growth Theories

- NGT rely on technological external effects or externalities in the form of knowledge spillovers.
- Two variants of NGT:
 - Neoclassical endogenous growth theory (Romer, 1986; Lucas 1988). Reconciles endogenous growth with competitive markets.
 - Porter cluster approach: origins in business strategy and emphasis on Marshallian localisation economies.
- Roberts and Setterfield (2007) describe Lucas model as origin of new economics of urban and regional growth:
 - In Romer, knowledge is unintended by-product of investment, but in Lucas knowledge is embodied in human capital i.e., ‘proximity’.

4.4: NGT and Regional Economics

- Focused attention on knowledge spillover and two traditions:
 - Marshall-Arrow-Romer externality between firms in an industry.
 - Jacobs (1969) externality, associated with scale and heterogeneity.
 - Suggest different industrial structures are optimal for growth.
- Like NEG, cluster approach plays down location factors, but transmission mechanism is non-pecuniary:
 - Cooperation rather than competition important.
 - Also known as asocial network (McCann and Sheppard, 2003).
- It is an alternative view of (regional) growth, and promoted considerable empirical work, but:
 - Link to theory rarely made explicit.
 - Cluster approach not based on economic methods and elusive.

5.1: Appropriate Spatial Scale: Theory

- Theory does not offer much support for any spatial scale:
 - Lamorgese and Ottaviano (2002): Pecuniary effects of NEG suggest greater geographical reach than externalities of NGT.
- Nothing intrinsic to NEG to identify spatial scale, save for assertions about level where agglomeration works (Neary, 2001):
 - In Fujita *et al* (1998) factor mobility coincides with the ‘region’, and intermediate inputs with the ‘nation’, but little support offered.
- NGT offers inconclusive support for ‘proximity’:
 - Proximity unimportant if knowledge codified as ‘information’, but even tacit knowledge may be transmitted between spatially distant agents (Gertler (2001).
 - Clusters present “in rural and urban areas, and at several geographic levels (for example, nations, states, metropolitan regions, and cities)” (Porter, 1998, p. 204).

5.2: Appropriate Spatial Scale: Empirics

- “[W]ide-spread consensus that spatially confined knowledge-spillovers are an important empirical phenomenon” (Döring and Schnellenbach, 2006, p. 383), but:
 - Much less consensus on the distance over which the spillovers occur.
 - “[M]ajority of studies refuse to quantify the range at all” (p. 384).
- ‘Distance’ found depends on methodology and activity:
 1. Counts of business units at different spatial scales:

“localisation economies attenuate rapidly [with distance] in the first few miles but slowly thereafter” (Rosenthal and Strange, 2003, p. 385).
 2. Effect of R&D spending in surrounding areas on innovative activity:

Typically find much larger range for knowledge spillovers up to 300 km.
 3. Case studies in cluster work:

Simmie (2004) and Niosi and Zhegu (2005) find national or international collaboration more important to innovative firms than local linkages.

5.3: Application to Spatial Policy

- Policies promoted by new theories also have little to do with regional economics.
- NEG has had a limited impact on spatial policy:
 - “there is no general indication of the direction in which governments should push with regional policies when seeking efficiency” (Puga, 2002, p. 401).
- Main application of NGT in UK is ‘new regional policy’:
 - Moves policy beyond straightjacket of Solow-Swan growth model.
 - Still on supply-side (5 productivity ‘drivers’).
 - Implementation decentralised to RDAs / devolved administrations.
- But little to do with regional economics:
 - Seeks to correct market failures.
 - Emphasis on productivity overdone (60% of regional GDP / head differentials).
 - Fails to recognise interdependence of UK regional space.
 - Weak on equity – e.g., redistribution of private activity between regions.
 - Likewise, cluster policy does not utilise any ‘tools’ of regional analysis.

6.1: Conclusion

- Increased ‘openness’ suggests ‘national’ more important, and that ‘region’ and regional economics less important:
 - ‘Regional problem’ no longer regional at EU and UK levels.
 - Spatial development policies little to do with regional economics.
- However, many researchers emphasise ‘local’ over ‘region’, although support for appropriate scale is inconclusive in both theory and empirical evidence.
- Explanations for use of term ‘spatial’:
 - New theories and evidence, and uncertainty over spatial scale.
 - Advances in statistical methods in spatial analysis (see McCann, 2008), applicable at any scale.
 - Increased availability of large, spatially-referenced datasets for Europe and US and increased computing power.

6.2: Implications for Regional Economics

- New theories (as applied at regional level) may be more properly described as ‘new regional analysis’.
- Use of the term ‘spatial’ appropriate though, as Isard had initially wanted regional analysis to be known as spatial analysis (Barnes, 2004).
- The ‘region’ still appears relevant (or not irrelevant), while developments in theory and statistical methods derive from the same roots as regional economics.
- In pursuit of its agenda on the causes and consequences of regional inequality, no reason to suppose that regional economics will not take on board these developments.