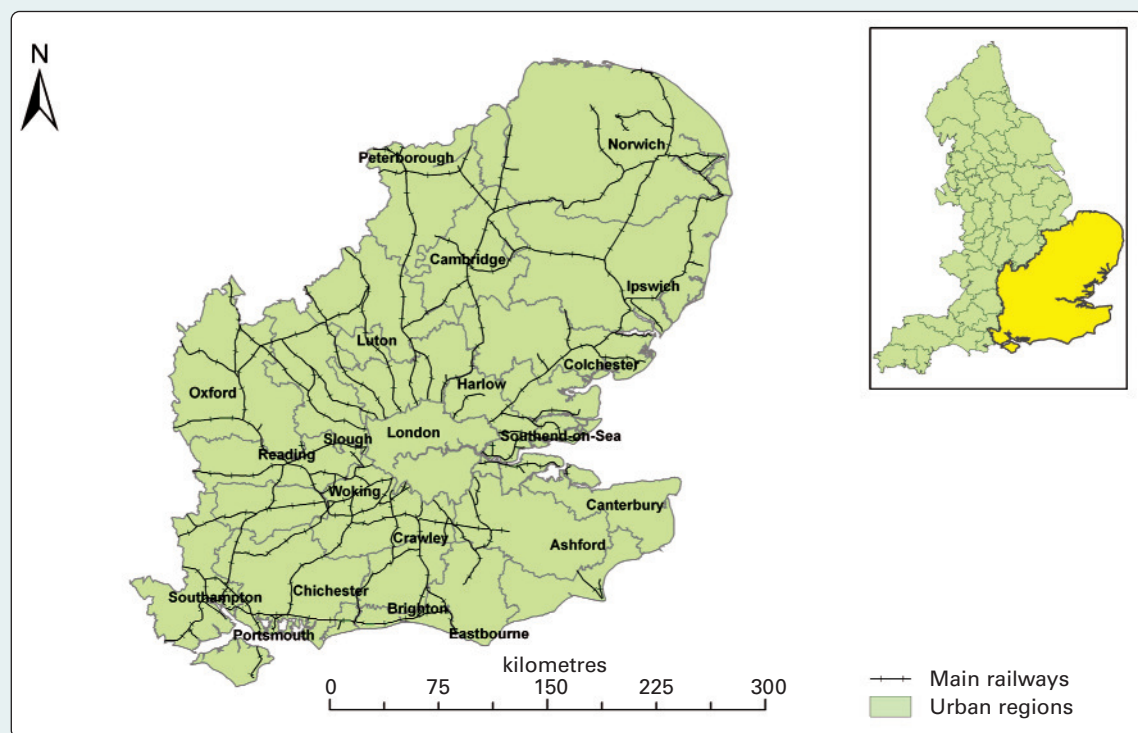


testing the 'super-region'

Using commuting and migration flow data, **Bastiaan de Goei, Martijn Burger, Frank van Oort** and **Michael Kitson** examine the spatial integration of labour market areas in the Greater South East to test whether the Greater South East can yet be properly regarded as a functional 'super-region' requiring a single integrated policy framework



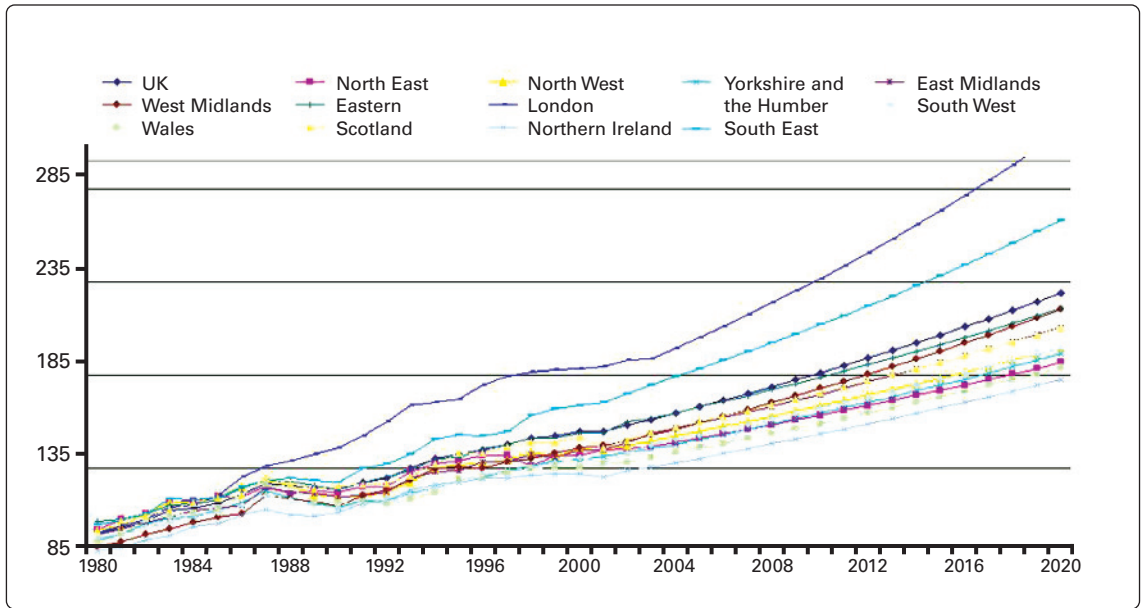
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Fig. 1 The Greater South East urban regions and the Greater South East railway network
Main railways within London not displayed

The Greater South East (shown in Fig. 1) is the global city-region in the south of the UK extending from Portsmouth to Peterborough. As such, it comprises the three Government Office regions of the South East, the East of England, and London. The three regions that make up the Greater South East are markedly different from other regions in

the UK in their higher population density, greater economic power, higher level of innovation, and faster labour productivity growth (see Fig. 2).¹

The current policy initiatives taken up by Regional Development Agencies (RDAs) suggest that the Greater South East is much more than just a collection of towns within the realm of London.



Above

Fig. 2 Regional labour productivity in the UK – actual and continuation of historical trend, 1980-2020

The UK average in 1980 is set to 100 – London, the South East, and East of England have a higher labour productivity than other UK regions, and this gap becomes larger over time.

Source: 'Unequal competitive performance across the UK regions'¹

Instead, the Greater South East is perceived as an increasingly integrated 'super-region' characterised by a network of multiple centres with their own complementary specialisations that strengthen the economic power of the super-region as a whole.² Several authors have argued that a new policy framework for the Greater South East is necessary, replacing or at least complementing the current division into three separate policy agencies for London, the South East and the East of England.^{3,4}

Nevertheless, simply bringing the three regions together under the umbrella of one administrative policy framework does not automatically make them a super-region. In order to draw this conclusion, the Greater South East should *function* as an urban network through the existence of functional linkages between the different regions. In this article, we test the extent to which the Greater South East can be perceived as a functional urban network by looking at the degree of spatial integration of its labour market.

Policy initiatives on territorial development

Despite the current trend in UK governance towards devolution and decentralisation, many stakeholders do not believe that Westminster and Whitehall are ready to devolve power over almost half the population and the economic motor of the country to a regional government.³ However, recently the Greater South East RDAs have

intensified their co-operation to improve the co-ordination of cross-regional projects and to position the super-region more strongly on the international stage. An example of this co-operation is the 'On Your Marks' initiative, in which the three RDAs worked together to target £15 million of funding from the EU European Social Fund.⁵ The three RDAs have also recently published joint research under the title *The UK's Engine for Growth and Prosperity: A Case for Targeted Investment in the Greater South East*.⁶

In addition, the Sustainable Communities Plan⁷ has appointed cross-regional growth centres within the Greater South East, of which the Thames Gateway is probably the best-known example. Other more recent central government publications, such as *A Framework for City-Regions*,⁸ issued by the then Office of the Deputy Prime Minister (ODPM), display a change in thinking towards decentralisation into city-regions – and a Greater South East super city-region is also present here.

Meanwhile, the London Plan and the spatial economic strategy plans of the Government Offices and RDAs for the South East and the East of England pay special attention to their position within a 'Greater South East' economy.⁴ In addition, the East of England and the South East strategies point out several different growth centres within their regions, promoting polycentric network formation between them. It is made explicit that, as well as

having economic linkages with each other, these growth centres also have cross-regional linkages with London and the rest of the Greater South East. Good examples are the Regional Cities East initiative in the East of England and the eight 'Diamonds for Investment and Growth' identified in the South East Regional Economic Strategy.

The Greater South East as an urban network?

The explicit identification of a Greater South East economy is based on the presumption of the Greater South East as a cohesive regional *urban network*, characterised by significant cross-regional personal, social and business connections.⁹ Networks as a concept have gained considerable popularity within the disciplines of planning, geography and economics. Networks at different spatial scales and along different social lines are increasingly seen as a useful way to understand the complexities of the spatial economy.

Apart from traditional agglomeration advantages (scale economies), economists increasingly identify network advantages (i.e. links between companies or links between companies and universities) as highly significant for the growth of firms. These networks are not necessarily spatially bound, but they do appear to be connected to agglomeration advantages of city-regions at different spatial scales. Within a business, one could think of flexible production systems where some activities are sourced out and co-ordinated from a distance, while others are kept close by. For example, innovation for

facilities like airports and seaports – while avoiding the negative externalities of urban sprawl and congestion.¹⁰ In addition, the city and its surrounding region are supposed to emerge as the new loci of international territorial competition.^{11, 12} This enhances the desire of policy-makers to promote their city-regions in order to position them more strongly on the international stage.¹³

This debate on urban networks and spatial integration is fuelled by a larger academic literature on the changing spatial organisation of cities at the intra-urban and inter-urban level.⁹ In this literature, it is often argued that recent advances in transport and communication technology, globalisation, and the individualisation of production have had a significant impact on the spatial configuration of urban regions.

At the local scale, cities are developing from a monocentric urban city towards a more polycentric urban configuration. Concurrently, the geographical scope of social and economic processes is continuously increasing. At the super-regional scale this would cause cities and regions to become increasingly interconnected, ultimately forming a fully integrated economy. As such, the greater urban conurbation loses significance as an independent 'daily urban system' and would instead form part of an urban network. Cross-regional labour market relations (commuting and migration patterns) are among the most visible reflections of such an integrated super-regional economy.¹⁴

An empirical test – commuting and migration flows in the Greater South East

There are relatively few analyses of economic relations in the Greater South East. Most research focuses on activities *within* a city (i.e. 'city A' provides a lot of employment and 'city B' provides a lot of employees). However, in order to properly analyse the spatial integration, one should focus on activities that function *between* cities. In the POLYNET research, Hall and Green find that on the basis of commuting relations for the South East of England there is a high degree of urban network formation between London and the western part of the region.¹⁵ More specifically, Hall and Pain suggest that, compared with other polycentric regions in Europe (for example Rhein-Ruhr region in Germany or the Randstad in Holland), the South East of England – and especially the settlements in the western part of the region – has only limited functional linkages that are not directed at London.¹⁶

Building on the POLYNET research, we focus on the spatial integration of labour market areas in the Greater South East by looking at commuting and migration flows. (It should be noted that cities are functionally connected not only through labour market relations, but also through trade, capital movements, leisure trips, and shopping trips.¹⁴

'The pattern indicates that economic interactions at the urban region level, often centred around a larger local core city, are more dominant than flows across the Greater South East or even flows towards the regional core city of London'

which a lot of face-to-face interaction is needed may be carried out within networks at a regional scale, whereas low-skill production may be undertaken within networks at a national or global scale.

Planners and policy-makers within the RDAs and Government Offices of the Greater South East are increasingly thinking in terms of networks. In particular, urban networks are promoted as a means of taking advantage of the positive externalities that come with large agglomerations – such as an enlarged labour and housing market and major

However, given data limitations, we focus only on the former here.)

In geographical research, these types of linkages are often used to delimit functional regions.¹⁷ The Greater South East's commuting and migration flows for 2001 are shown in Figs 3 and 4 overleaf. The units on the maps (urban regions) are slight adaptations of NUTS III areas, which are commonly regarded as appropriate for conceptualising daily urban systems.¹⁸ The flows shown are between the different districts within the Greater South East.

The flows are colour-coded according to their Theil index value. The Theil index is a method derived from information theory and gives an indication of the degree to which a flow between two districts is larger or smaller than the value one would expect on the basis of the size of these districts.¹⁹

Naturally, the likelihood of spatial link formation between two large districts in the Greater South East is larger than the likelihood of spatial link formation between two small districts, and this is accounted for with this method. As such, the Theil index determines the degree of randomness of the commuting and migration network by analysing whether the number of interactions between districts displays a significant deviation from the number of interactions based on the size of the districts concerned (see work by Frenken and Van Oort *et al.* for an elaboration on how to apply the Theil statistic to measure spatial integration^{19,20}).

In Figs 3 and 4 the flows that are as large as or larger than expected are marked red, and the flows that are smaller than expected are marked blue. In a perfectly integrated Greater South East, the Theil index value would be zero for each flow (in that case, the flow is exactly what one would expect in a fully integrated system). Of course, this will never be the case, but by analysing the *pattern* of flows that are smaller or larger than one would expect we can evaluate the structure of the Greater South East economy.

The maps show strong commuting and migration flows *across* the Greater South East, and especially towards London. However, these flows towards London are smaller than one would expect based on the size of the districts. Instead, both in terms of migration and commuting, it appears that the flows *within* an urban region are significantly larger than expected on the basis of the size of the districts. This pattern indicates that economic interactions at the urban region level, often centred around a larger local core city (such as Oxford), are more dominant than flows across the Greater South East or even flows towards the regional core city of London. There are only few cross-regional corridors, which seem to follow the railway and road network in the Greater South East.

For commuting, there is evidence for Cambridge-Peterborough, Portsmouth-Southampton, Colchester-

Southend-on-Sea and Chichester-Eastbourne corridors. With respect to the migration-based labour market in the Greater South East, we find strong evidence for cross-regional integration through a corridor between the Portsmouth-Southampton-Woking, Reading-Slough-Woking,

'The Greater South East is not (yet) a spatially integrated urban system. Instead, the Greater South East is better perceived as a collection of co-located regional economies... more intensive co-operation between the current governmental bodies for the Greater South East is therefore more efficient than the creation of a Greater South East authority'

Peterborough-Cambridge-Norwich and Colchester-Harlow-Southend-on-Sea districts. Overall, migration is more cross-regional than commuting in the Greater South East. Yet the cross-regional corridors still have a strong geographical dimension and between many district pairs in the Greater South East (more than 50 per cent) no or hardly any commuting and migration is taking place.

In research reported by De Goei *et al.*, commuting behaviour within the Greater South East was formally modelled dynamically (using three points in the past 20 years – 1981, 1991 and 2001).²¹ The model yields results that are similar to those suggested here. In addition, with this sequence of models it is possible to analyse the evolution of flows between districts in the Greater South East over time. It appears that there is a small trend towards more spatial integration of the labour market in the Greater South East. However, the analysis also shows that it would take at least another 80 years before the labour market in the Greater South East could be perceived as fully spatially integrated.

Discussion and policy implications

Looking at the labour market from commuting and migration perspectives, the Greater South East cannot yet be considered an integrated economic system, as most interactions between the districts in the region are much lower than predicted by chance. Hence policies aimed at unifying the

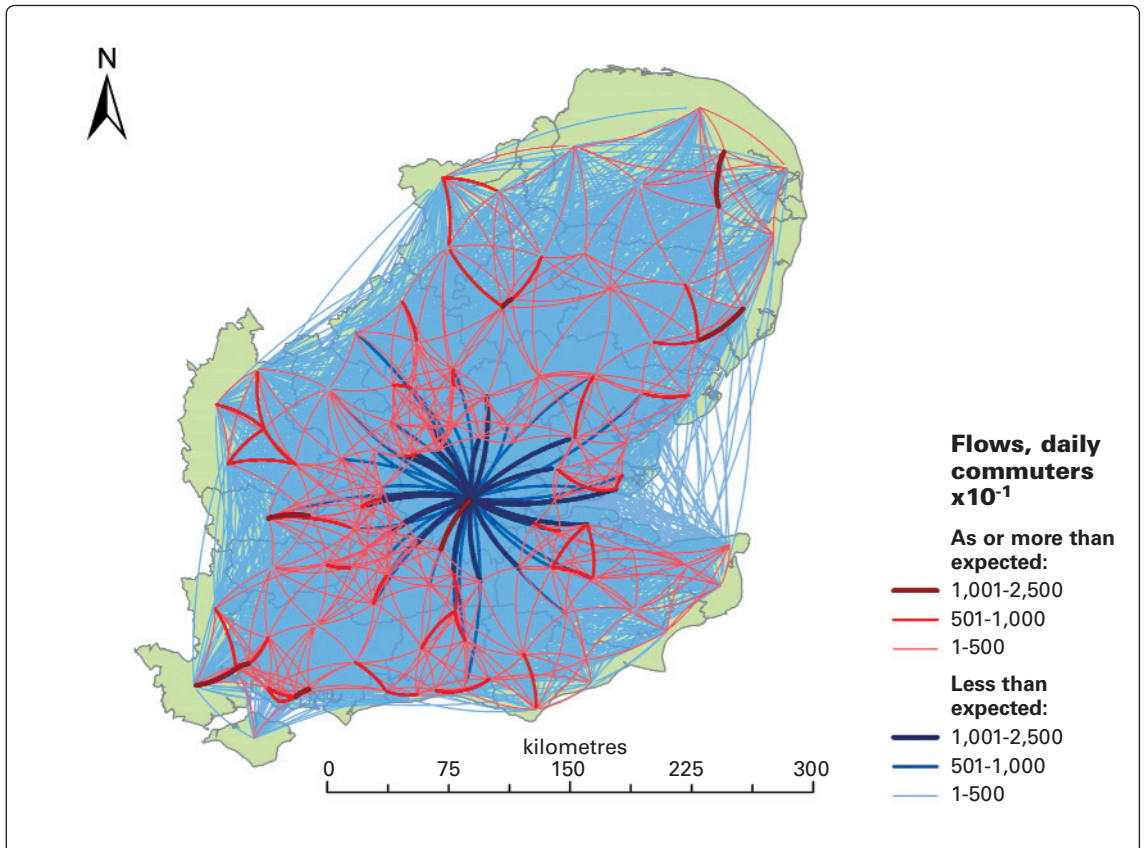
Greater South East and devolving power to such an entity should be considered carefully.

Yet some authors argue that changes anywhere in a dense metropolitan area with overlapping labour markets can cause chain reactions.²² Owing to this so-called ripple effect, changes in one side of the urban region could cause changes in other parts of the urban region. Although the latter is hard to model or analyse with current data, it is something that policy-makers should take into account. However, on their own such ripple effects are not a sufficient argument for the establishment of a Greater South East authority. It is not clear how a Greater South East authority could make the Greater South East more efficient or competitive on that basis alone. After all, ripple effects do not signify true economic integration and their direction is unpredictable.

Another, possibly more problematic issue concerns territorial competition. Porter²³ claims that territorial competition enhances the competitiveness

of the region as a whole, as it stimulates specialisation of different units. However, from a policy point of view, Cheshire and Gordon²⁴ argue that when governmental bodies cover less than the effective functional region, they will engage in zero-sum territorial competition. While this is true, the matter then turns to the definition of the effective functional region.

In this article, it is argued that the Greater South East is not (yet) a spatially integrated urban system. Instead, the Greater South East is better perceived as a collection of co-located regional economies. To conclude that there is system integration, one would at least expect development towards cross-town commuting or migration within the Greater South East. However, trend analyses over the past 20 years indicate that this is not the case.²¹ The overall majority of economic interactions take place at a lower level. The creation of a Greater South East authority is unlikely to make policy-making



Above

Fig. 3 Greater South East commuting flows, 2001

Red lines: Flows that are as large as or larger than expected

Blue lines: Flows that are smaller than expected

Flows are between districts. Flows to and from London boroughs are aggregated

Data obtained from the 2001 Census: *Special Workplace Statistics (Level 1)*. Crown Copyright; and 2001 Census: *Special Migration Statistics (Level 1)*. Crown Copyright

more efficient. Devolving more power to institutions on the NUTS III level or keeping the *status quo* with the current RDAs would therefore, currently, be more efficient.

However, it is undeniable that most of the economic power of the UK is concentrated in the Greater South East.¹ A more polycentric structure, capitalising efficiently on the different specialisations by means of efficient cross-regional infrastructure, could improve the competitiveness of the Greater South East.¹⁰ Higher innovative activities and knowledge workers are especially likely to benefit from such a polycentric structure.

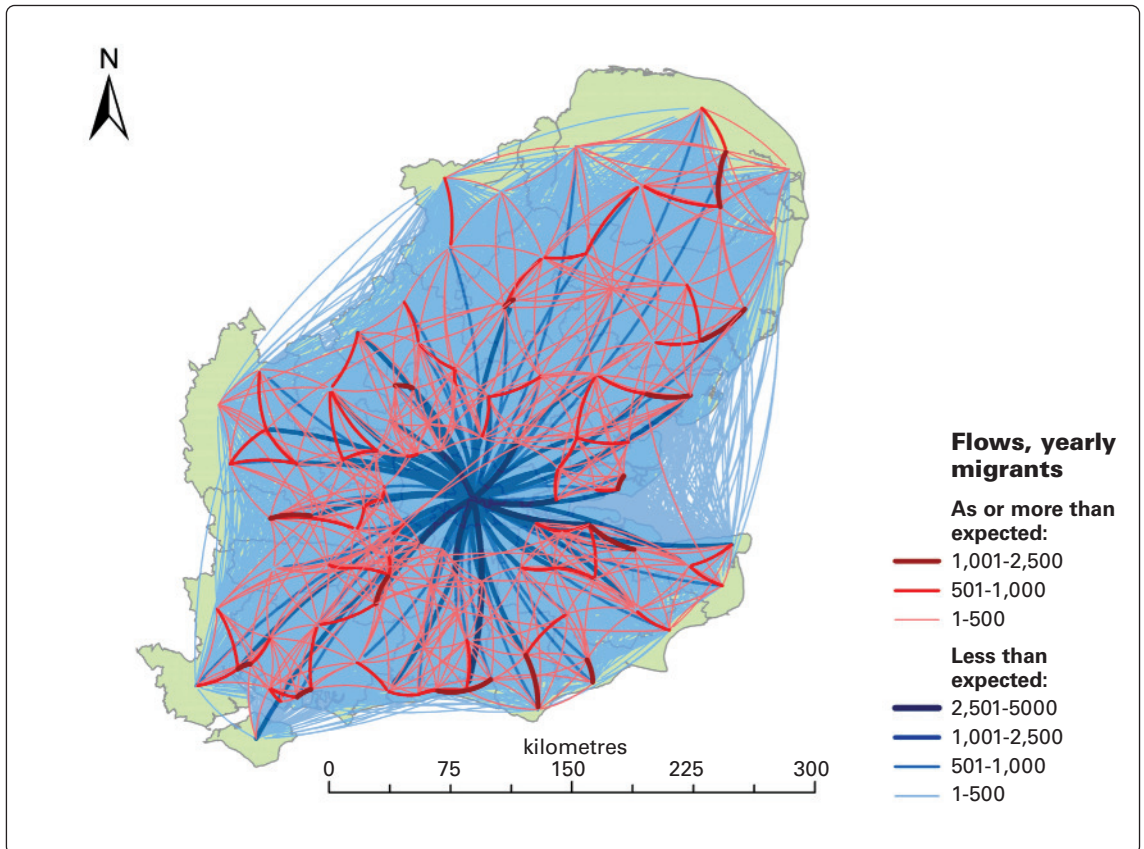
However, the latter covers only a specific and rather small proportion of the total Greater South East economy. We therefore argue that more intensive co-operation between the current governmental bodies for the Greater South East is more efficient than the creation of a Greater South East authority. However, continued political support

for large investments in cross-regional infrastructure, such as Crossrail, is necessary to make such co-operation successful.

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Notes

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Above

Fig. 4 Greater South East migration flows, 2001

Red lines: Flows that are as large as or larger than expected

Blue lines: Flows that are smaller than expected

Flows are between districts. Flows to and from London boroughs are aggregated

Data obtained from the 2001 Census: *Special Workplace Statistics (Level 1)*. Crown Copyright; and 2001 Census: *Special Migration Statistics (Level 1)*. Crown Copyright

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