

N8 Research Partnership

**The impacts of demographic change in the
functional economies of the North of England**

Final Report, Strand 2: Understanding the demand for skills and labour in the North of England

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About the N8

The N8 is a group of the eight most research intensive universities in the North — Durham, Lancaster, Leeds, Liverpool, Manchester, Newcastle, Sheffield and York. All N8 universities are ranked in the top 200 of the World University Rankings. Combined, the N8 universities have 125 “top 10” subject rankings in the UK (RAE 2008).

The N8 partnership was created in 2007, establishing virtual research centres in Regenerative Medicine and Molecular Engineering. It was a novel way of creating a confluence of research assets and capabilities across the partnership, with sufficient scale and critical mass, to move on broader industrial and commercial opportunities.

The initial collaborations were focused on areas of scientific and technological research. This project marks the first venture for an N8 collaboration into the social sciences. The multi disciplinary research team which delivered this work combines economists, geographers, labour market, healthcare and housing experts from across the N8 Universities.

About the Northern Way

The Northern Way was a unique initiative, bringing together partners across the North of England from public, private and other sectors to work together to improve the economic performance of the North.

Created in 2004, the Northern Way conducted ground-breaking policy research in innovation, private investment and transport, and produced a wide-ranging economic evidence base on other issues facing the North ranging from the impact of long term global challenges on the North, through to strategies to address local deprivation.

As a result of the Government decision to close the Regional Development Agencies by March 2012, funding for The Northern Way ceased on 31st March 2011, at which point the initiative closed.

However, to ensure that the important research and intelligence produced by the Northern Way is not lost, the website remains available at www.thenorthernway.co.uk. The website enables public access to the various research reports and further information regarding the work of the initiative.

Contents

	Page
Contents	iii
List of Figures	iv
List of Tables	iv
1 Project Aims	1
2 Policy Context	2
3 Literature Review	5
4 Methodology	6
5 Research Questions and Results	7
The North during the boom	8
The North's experience of recession	15
Northern futures	22
6 Policy Implications and Further Research Questions	28
Appendix A: Greater Manchester Case Study	31
References	34
Appendix B: SOC(HE)	35
Classification of Graduate and Non-graduate Jobs	35

List of Figures

Figure 1. GVA in UK NUTS 3 areas, 2006	9
Figure 2. GVA change in UK NUTS 3 areas, 1996-2006	10

List of Tables

Table 1.	Sectoral structure of employment in Northern regions, 2008: location quotient (UK=100)	11
Table 2.	Private sector job growth in cities, 1998-2008	13
Table 3.	Regional unemployment rates (JSA Claimant counts)	16
Table 4.	Change in JSA claimant count by NUTS 3 area (March, 2008-January, 2011)	17
Table 5.	Involuntary part-time work	19
Table 6.	Time-related underemployment	20
Table 7.	Logistic Regression: Involuntary part-time work and time-related underemployment	21
Table 8.	Over-education (modal measure) 2009/10	22
Table 9.	Percentage of Employed NVQ Level 4/5 holders working in SOC(HE) 'Non-Graduate' Occupations	22
Table 10.	Logistic regression: Over-education	23
Table 11.	Public Sector Employment (self reported) by NUTS 2 Area, Jan-Mar 2010	25
Table 12.	Revenue spending power* changes by local authority area, 2011-12: most and least affected areas	26
Table 13.	Most and least resilient local authority areas in England by BBC region	27

1 Project Aims

- 1.1 This project was designed as a context-setting piece for the more detailed work on the challenges and opportunities arising from an ageing society in the North that was undertaken, in parallel, by sister projects within the N8 'demographics' study. It was felt to be important given that predictive work on demographic change, irrespective of the geographical scale(s) on which it focuses, inevitably makes assumptions about population sizes not only on the basis of core determinants such as fertility levels and mortality rates but also with respect to factors related more to comparative economic buoyancy. The most important amongst these are domestic and international migration trends which, at least in part, reflect the propensity of individuals and households to move in search of work. In this sense, the future distribution and balance of employment across the North, in terms of scale, occupational characteristics and levels of remuneration, is an important but often under-analysed factor in demographic change.
- 1.2 The main aim of the project, in essence, was to examine the state of knowledge that currently enables us to anticipate where the most dynamic employment centres within the North are likely to be, in future, and how the sort of work that people in the North do might change. Quite how older age groups respond to and/or are affected by changes in the nature and distribution of employment across the North depends upon a variety of factors — for example in relation to pension entitlements and remuneration levels, changes in the statutory retirement age, the level of demand for public and private care services for older people and the balance between technological and personal forms of care provision, the supply of and demand for employment by older age groups — that were addressed in other projects.
- 1.3 The subsidiary aims of the project were therefore to analyse, synthesise and summarise existing knowledge about the past, current and potential future patterns of spatial economic change in the North and the labour market characteristics that have been or might be associated with them. This was approached in sequential stages which involved looking at evidence of change during the long, pre-crisis boom, through the post-crisis recession and onward to the early stages of economic recovery, including the particular challenges that the North faces as a result of the potential impact of public expenditure constraint, and future changes anticipated by economic forecasters.

2 Policy Context

- 2.1 It is important, when considering the policy context for a process as complex and multi-faceted as spatial economic change, to distinguish between what might be termed explicit and implicit spatial policies. Explicit spatial policies, comprising initiatives that aim overtly to stimulate development and dynamism in specific places, have been an internationally recognized feature of the UK policy environment, particularly since the late 1970s. The variety of neighbourhood, urban and regional economic development and regeneration programmes and institutions that accompanied explicit spatial policy development have tended to dominate academic and professional debate on the promotion and management of spatial economic change even though their scale and (hence) impacts have been relatively limited.
- 2.2 Implicit spatial policies, whose cumulative impact is much greater, come in two main forms. On one hand there are policy areas within which public services, and the human resources that enable their delivery, are provided on the basis of personal and/or household circumstances or the sizes and characteristics of resident populations in administratively-defined areas. The overall effect of these 'needs-based', implicit spatial policies is redistributive, i.e. resources are effectively transferred from more affluent/lower need areas to less affluent/higher need ones. On the other hand, there are what might be called 'place blind' policies that, because of their 'lumpy' nature, inescapably prioritise some locations over others but whose effects on spatial development patterns are rarely considered in policy design. The spatial consequences of place blind policies are hard to evaluate. Indeed, it is difficult even to identify the spatial distribution of expenditures that are associated with them. Nonetheless the uneven allocation of resources associated with place-specific policy decisions — for example with respect to investments in transport infrastructure or higher education/research and development — produce significant, and largely unintended, effects upon spatial development.
- 2.3 Whilst illustrative reference is made to key aspects of explicit and implicit spatial policy evolution in this paper, operationalising the distinction between them would be a major undertaking. To do so effectively would mean recognizing, for example, that the redistributive consequences of implicit needs-based policies are affected by changes in service provision, in entitlements to services and/or by transfers of service provision from public to commercial sectors. It would also have to acknowledge that the degree to which implicit policies are place blind can vary over time (as has been the case, for example, with certain transport investments). From a broad brush reading of policy change over the last decade or so, though, we can identify some clear lines of overall continuity as well as some important contrasts in approaches to explicit and implicit spatial policies.

- 2.4 In broad terms, explicit spatial policies and the programmes that give them substance have been in decline since the early 'noughties'. Initially, within a context of national economic growth that drew large numbers of economically inactive people (as well as international immigrants) into the labour market, this decline saw the focus of explicit policy shift away from area-based economic development and regeneration and toward labour market and related initiatives designed to improve the employability of benefit-dependent people in areas where worklessness was particularly concentrated. This shift was eventually accompanied by the 'de-ringfencing' of many area-based programmes and their consolidation into a single Area-Based Grant for local authorities. Post-crisis policy reform has witnessed an acceleration in this process to the extent that area-based policies have either been discontinued (e.g. Housing Market Renewal, Working Neighbourhoods Fund) or privatized (as in the case of the new Work Programme) and those local authority areas that benefited most from Area-Based Grant have witnessed some of the largest reductions in national grant funding. In addition, the regional agencies that previously played a prominent role in the delivery and oversight of explicit spatial development programmes have been abolished.
- 2.5 The new, emerging policy regime, nominally based upon private sector-led Local Enterprise Partnerships (LEPs), is characterized by continuity insofar as the development of policies at the level of functional economic areas (including sub-regions and city-regions) that was a growing feature of the last Labour government's reforms has guided the designation of LEP areas, at least in principle¹. Private firms also have a critical role to play in the allocation and use of the temporary, three-year Regional Growth Fund (RGF), a partial reversion to traditional regional policy focused mainly upon employment growth in manufacturing. In addition, the 2010 budget announced the designation of ten out of a proposed twenty new Enterprise Zones, a further move, announced shortly before the outbreak of the country's worst urban rioting in thirty years, was the designation of a 'Minister for Cities' and the creation of a Ministerial Group, chaired by the Deputy Prime Minister, with a brief to 'develop new ideas for cities and consider the impact of existing policies'.
- 2.6 Most of the national resources which supported explicit spatial development policies, however, have been withdrawn and the regional planning frameworks to which they ostensibly had regard have been abolished. The expectation is that more innovative

¹ A combination of 'top down' and 'bottom up' influences and administrative factors have seen the ostensible need to cover functionally inter-related areas become only one of the criteria employed when designating LEP areas. The others are: (a) Governmental/departmental preferences, as signalled informally to prospective LEP leaderships, (b) local (small or large 'p') political preferences concerning which areas can work most effectively together, which has meant that the geography of LEPs, in practice, has covered areas defined by 'coalitions of the willing', and (c) a pragmatic rule of thumb whereby the whole of any one local authority area, rather than that part of it that might relate most strongly to one of more neighbouring areas, is included within the boundary of a LEP area.

exploitation of local public and private sector resources, along with the provision of further financial incentives to local authorities to pursue new commercial and residential development, will effectively decentralize responsibility for policy and programme development and result in greater sensitivity to local contexts.

- 2.7 A mixture of continuity and contrast also characterizes changes in respect of implicit spatial policies. The programme of public investment completed by the last Labour administration, particularly in health, education and housing, meant that implicit, needs-based policies bolstered demand and employment-creation in all areas of the country, including those in which private sector job-creation was limited or even negative. At the same time, however, there was a process of re-alignment with respect to place blind policies which started with the Sustainable Communities Plan in 2003, continued through major policy reviews in the fields of transport (Eddington), housing and planning (Barker) and skills (Leitch) and was reflected in both the Review of Sub-National Economic Development and Regeneration and that Government's final Comprehensive Spending Review (both 2007). This saw greater attention paid to the challenges of growth management, particularly in the London super-region, and a broad consensus emerge on the importance of alleviating 'growing pains' as experienced, for example, in the form of transport congestion or key worker housing and skills shortages (Burch, Harding and Rees, 2010).
- 2.8 The context in which the current Government is operating is, of course, very different from that pertaining up to 2007. The strong focus on deficit management, which was set to dominate the agenda of any post-2010 election Government, irrespective of party political composition, means that spending on implicit, needs-based policies is set to shrink at an unprecedented rate, thereby reducing the redistributive impact of public investment in mainstream services and the automatic dampening effect this tends to have on the difference in fortunes between areas with varying experience of private sector employment change. With respect to reform of place blind policies, the de facto refocusing around growth management imperatives that characterized the later years of the Labour government has given way to a more diffuse commitment to 'rebalancing'.
- 2.9 There are many aspects to current policies with respect to rebalancing, the spatial implications of which vary depending upon whether the focus is upon shifting the balance between: services and manufacturing employment, domestic consumption and exports, public and private employment, polluting and 'clean' industries and energy sources, or statutory and non-statutory provision of services.
- 2.10 With respect to 'rebalancing' between the Greater South East and the rest of England, the overt aspirations of the current government are similar to those of its predecessor. Whilst these are no longer expressed as formal targets whose success

or failure can be verified by specific, quantitative indicators of change,² spatial rebalancing has featured prominently in public statements by senior Government ministers. Thus, for example, the Deputy Prime Minister, in his introduction to the Local Growth White Paper (BIS/CLG 2010: 3), argued that ‘Governments of the past have contented themselves with growth concentrated heavily in some areas of the country.. and within a limited number of sectors — notably, financial services. Yet the banking crisis and ensuing recession have proved that model is unsustainable. Crucially, it is also deeply unfair’. Similarly, the Chancellor, in his 2011 budget speech, noted that ‘[y]es, we want the City of London to remain the world’s leading centre for financial services, but we should resolve that the rest of the country becomes a world leader in advanced manufacturing, life sciences, creative industries, business services, green energy and so much more.’

- 2.11 In two major respects, there are continuities in the national government approach to North-South rebalancing. On one hand, there is a lack of clarity about how the cumulative impact of a variety of implicit spatial policies choices affects the degree of difficulty in attaining this particular goal. On the other, few formal mechanisms are identified that can clearly focus the benefits of a post-crisis growth regime outside the increasingly dominant London super-region. Just as it was unclear how the explicit spatial policy mechanisms that survived under the previous administration were expected to bring about significant spatial rebalancing, there remain significant doubts as to how various post-election initiatives — the Green Investment Bank, the Regional Growth Fund, Technology and Innovation Centres, Enterprise Zones — even if they are suitably targeted, can realistically have a marked impact on the spatial development patterns produced by market change and other aspects of public policy.

3 Literature Review

- 3.1 The time and resource available for the study meant that the research team necessarily had to be parsimonious in the range of literature it reviewed. In practice, given the needs of the project, it concentrated mainly upon published material that dealt directly, at least in part, with economic and labour market change in the North. Particularly in the case of more contemporary material, this meant focusing upon literature produced for official sources or by think tanks and commercial research providers rather than academic authors, whose work typically takes longer to appear in the public realm.

² This contrasts with the Public Service Agreement target on Regional Economic Performance (2002) which committed earlier governments to ‘make sustainable improvements in the economic performance of all English regions and over the long term reduce the persistent gap in growth rates between the regions’.

3.2 With respect to potential future change, it meant relying on publications based upon the work of economic forecasters. However the project team also reviewed the limited literature available on two strands of research that were felt to be particularly relevant to this exercise — that on the importance of agglomeration economies in the transition from a mature industrial to a more knowledge-intensive economy and more speculative explorations of the future of work. As noted below, future research could usefully engage more critically with this more peripheral literature when looking at potential future scenarios.

4 Methodology

4.1 In addition to the review work noted above, the project involved two elements of fresh empirical enquiry. The first, designed to understand the way in which labour markets in the North had responded to recession, involved a sub-project that attempted to explain one of the key features of the recent downturn — the lower-than-expected rise in unemployment, compared to previous recessions — and to assess experience within the North through looking at the degree of under-employment associated with the retention of labour. The second, facilitated by the co-operation of our project partner, the Commission for the New Economy, entailed exploratory, bespoke use of the Greater Manchester Forecasting Model, both to assess the local economic 'futures' predicted by the model and to assess the extent to which forecasts predict or can adjust to the effects of shocks that disrupt the parameters they are set up to deal with.

4.2 In reviewing existing work and in analyzing primary data as part of its empirical investigations, the project had to live with the fact that some of the core indicators of spatial economic and related change, notably Gross Value Added (GVA), are not disaggregated to the local authority level by official statistics. It was not therefore possible to construct geographical data units that map precisely onto LEP boundaries. Instead, the project relied primarily on data on 'NUTS 2' areas, which correspond to the administrative units covered by existing and former counties and the long-abolished metropolitan county council areas, on the basis that these represent a pragmatic 'best fit' approximation to LEP areas. The differences between the two are not so great, particularly in the North, that they prevent broad comparisons between findings based on these alternative definitions of sub-Northern and sub-regional geographies. Data on NUTS 3 areas, and on sub-local authority units, were used when finer-grained analysis could shed light on differences within LEP/NUTS 2 areas.

5 Research Questions and Results

- 5.1 As noted in Section 2, the key questions examined by the project centred upon the way in which economic and labour market change had impacted upon, and was likely to impact upon the North and its constituent places through three broad periods: the last, sustained period of economic growth, the recession, and the recovery, both in the short term (including the period in which the effects of planned public sector expenditure reductions will become apparent) and insofar as economic forecasts enable it to be analysed, the longer term. This section summarises the results of the study's analysis of each of these periods in turn. Before turning to the detail, though, it is important to note that the period under consideration here represents only the latest stage in a profound transformation that has seen enormous sectoral, occupational and spatial change in the economy of the UK and other parts of the developed world.
- 5.2 The major components of this transformation, brought about by the combined effects of technological change, falling communication costs, the selective removal of international trade barriers and an intensification in the global circulation of money, people, goods, services and information, are by now relatively familiar but include, inter alia:
- *Sectoral changes*, including: a steep fall in primary and manufacturing employment as a result of capital intensification, the offshoring of labour intensive production to countries with lower labour costs, competition from low cost imports and the absorption or expansion of indigenous companies into global enterprises and/or production chains; the growth of producer and consumer services as sources of employment, output and (in the former case) exports; long-run increases, albeit subject to cyclical fluctuations, in non-traded (public and quasi-public) services; growth in 'parastate' employment as a result of increased contracting out of public service provision; a second wave of global offshoring of lower value services, and; a blurring of the distinction between manufacturing and services as firms increasingly engage in 'manuservices' and add value to physical goods through service provision (maintenance, upgrading etc).
 - *Occupational changes*, including growth in (a) managerial, professional and technical occupations demanding higher level skills and advanced educational qualifications, (b) personal service and sales/customer service occupations, demanding lower skills and educational attainment, which are comparatively insulated from substitution by imports, offshoring or technological alternatives, and (c) part-time working, the holding of more than one job, and the proportion of women in the workforce; and decline in (a) elementary occupations, (b) to a smaller extent, skilled (trade) and semi-skilled (operative) manual work, and (c)

administrative, clerical and secretarial occupations which are more vulnerable to substitution by offshoring and technological alternatives. One effect of these patterns of growth and decline has been ongoing polarization of personal incomes.

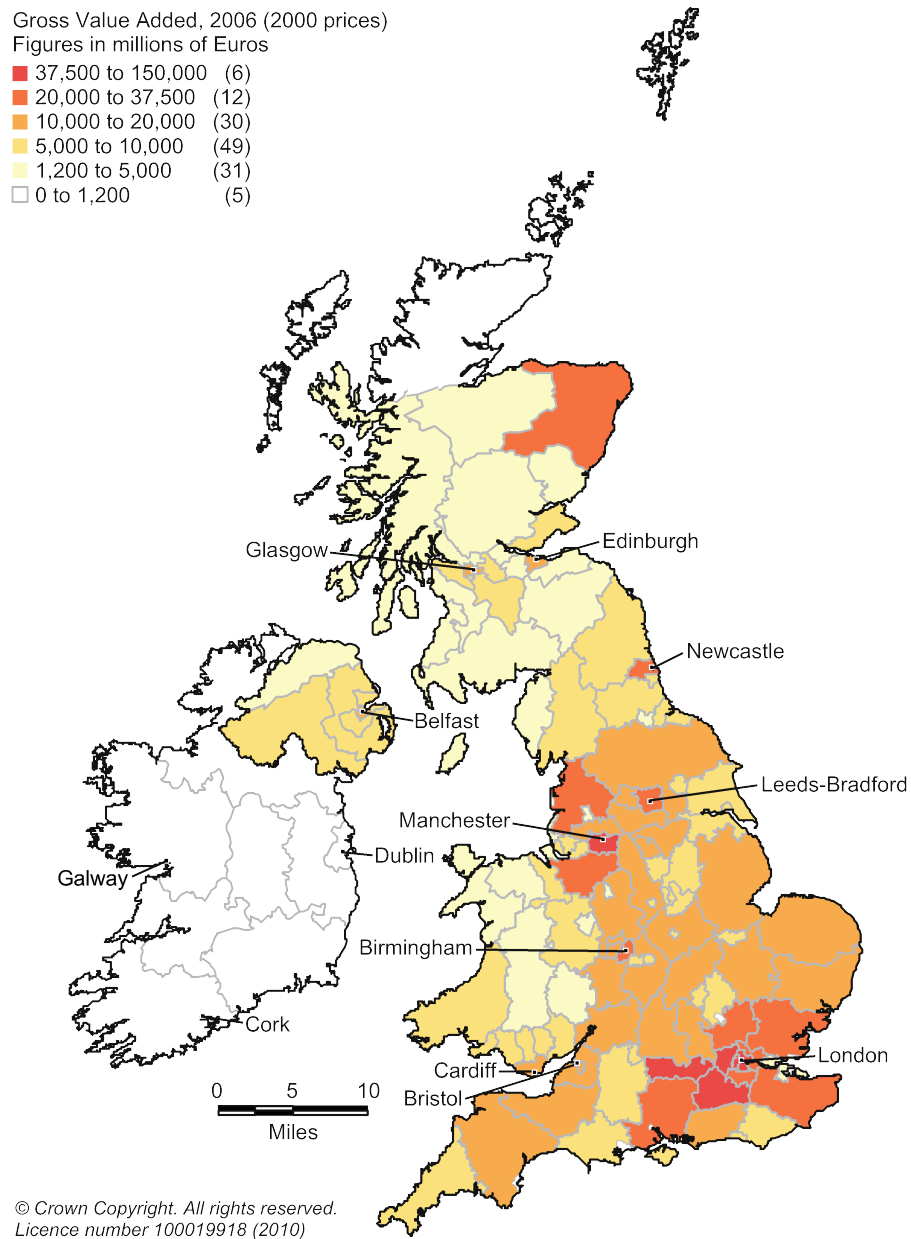
- *Spatial changes*, driven by (a) the impact of sectoral and occupational changes on place-specific historic employment specialisms and (b) a 'stretching' of national and international spatial economic hierarchies that has seen the economic performance of larger, job-rich, diverse and well-connected metropolitan areas that are well-endowed with key knowledge economy assets — international airports, research intensive universities (and hence a ready supply of high level skills), centrality within surface and electronic communications networks, traditional concentrations of regional or national private and public service functions — outstrip smaller centres that lack these attributes.
- *Household income changes*, resulting from the combined effects of each of the above and the growth in single person, dual income and no income households, the effect of which has been to magnify the impact of polarization in personal incomes.

5.3 The actual and potential experience of the North and its component parts in the three periods on which the study focused clearly depends on the way in which its (or their) historic economic and labour market characteristics have been or may be affected by these broad changes.

The North during the boom

5.4 The changing economic geography of the North during the last decade of the boom years, seen within the broader national context, is summarised in Figure 1, which maps deflated data (at constant 2000 prices) on Gross Value Added (GVA) at the NUTS 3 scale for 2006 — the last data point before the 2007 financial crisis — and Figure 2, which depicts change for the same GVA data set over the 1996-2006 period. The first tells a familiar story of the concentration of economic activity in the UK and the extent to which the national economy is dominated by the 'London super-region' which takes in the capital itself and fans out along the major arterial routes that connect it to the rest of the South East (particularly to the north and west), the southern half of the East of England region and, arguably, into those areas of the South West and Midlands that are best connected to the capital. Beyond this area, the largest GVA concentrations were to be found in and around the principal provincial metropolitan areas, especially Manchester, Leeds, Birmingham and Newcastle and in other, less continuously urbanised areas in which GVA-rich industrial strengths have traditionally (e.g. in Lancashire) or more recently (e.g. around Aberdeen) been clustered.

Figure 1. GVA in UK NUTS 3 areas, 2006

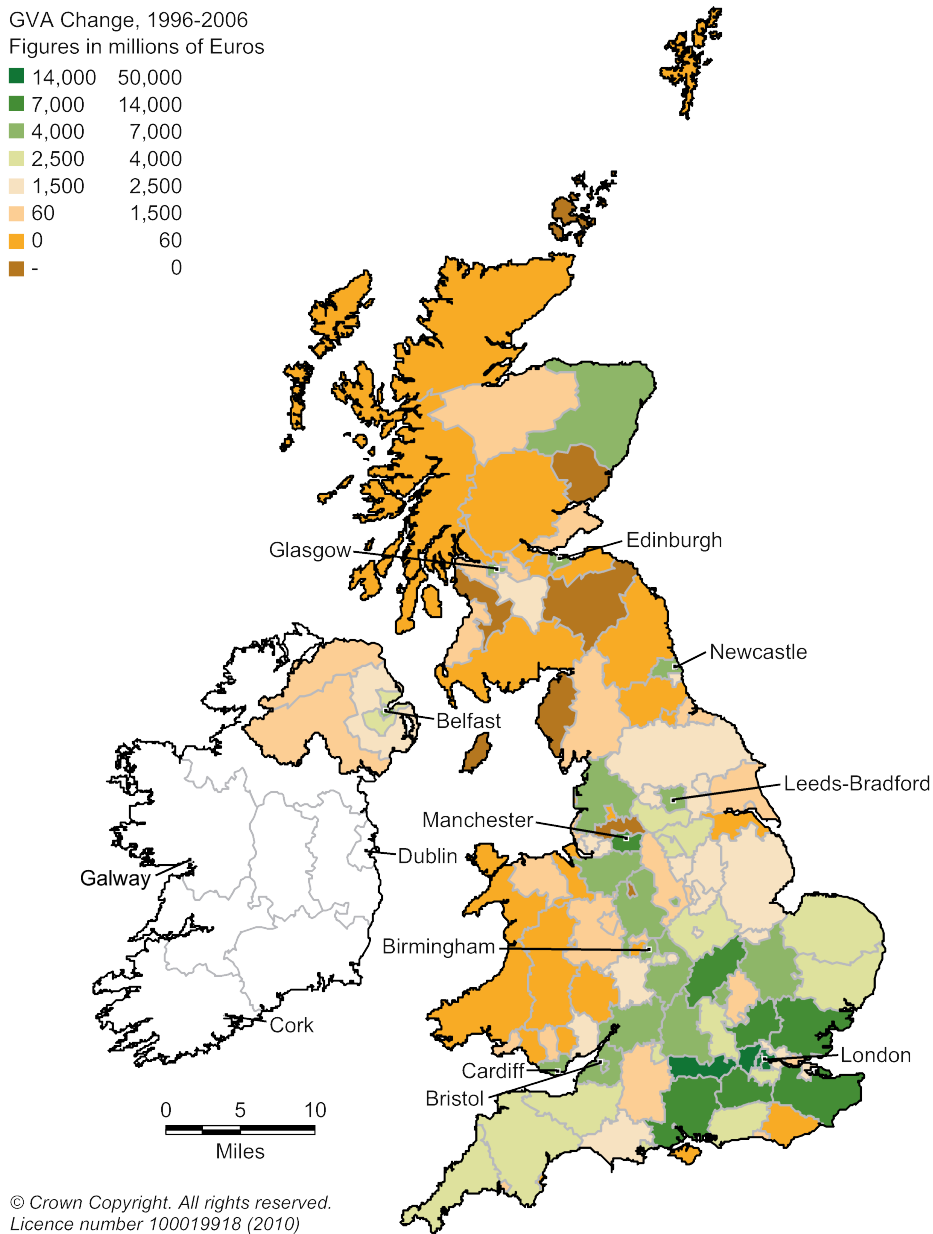


Maps supplied by Commissions for the New Economy, drawing on real GVA data for NUTS 3 areas, derived from NOMIS

5.5 Figure 2 shows how this pattern became even more pronounced when change over the decade before the financial crisis is examined, with the bulk of the highest GVA growth areas being concentrated in the London super-region, especially along the M4 corridor. More modest 'echoes' of the level of GVA growth experienced in the south occurred along the M6, which connects the West Midlands to the North West, and the M62 corridor area which connects Liverpool, in the west, through northern Cheshire and southern Greater Manchester, to Leeds. (Similar patterns, albeit less pronounced and extensive, occurred in and around the principal non-English conurbations, centred on Belfast, Cardiff, Edinburgh and Glasgow). The contrast between the North

and the London super-region is not only about the scale of change, however. It also reflects differences in the extent of internal variation. The North, for example, contained two of only seven NUTS 3 areas that experienced GVA decline in the period (Greater Manchester North and West Cumbria) and growth in eastern and northern areas of the North — with the exception of Tyneside — was far more modest than in the 'south of the North'.³ GVA discrepancies in the London super-region, by contrast, are less stark and are limited to variations within the higher growth bands.

Figure 2. GVA change in UK NUTS 3 areas, 1996-2006



Maps supplied by Commissions for the New Economy, drawing on real GVA data for NUTS 3 areas, derived from NOMIS

³ Low growth in eastern areas of the North would be more evident if GVA in North Yorkshire, the large, primarily rural area north of Leeds, could be disaggregated into smaller component parts and reveal the extent to which its principal wealth-creating areas are concentrated around Leeds and York.

- 5.6 It is important to note two things about these GVA figures. First, they are workplace-based and therefore tell us nothing, in and of themselves, about the extent to which residents of NUTS 3 areas benefit from, or are disadvantaged by, patterns of spatial economic concentration and change within ‘their’ areas. The links between place-specific jobs and those employed within them depend upon travel-to-work patterns and the way in which housing markets ‘sort’ people of different levels of education and skills into distinct residential areas.
- 5.7 Second, the changes in the period considered here continued a trend that has persisted since the mid-1970s whereby spatial differences in economic performance have widened consistently within the UK. This contrasts, domestically, with the 30-year period after World War 2, when disparities narrowed and, internationally, with the experiences of other developed economies in which recent sub-national differences in growth rates have either diverged more slowly (e.g. in the US) or continued to narrow, albeit at a slower rate than previously (e.g. in France, Germany and Italy) (BIS, 2010: 37-38). The explanation of the UK trends that has appeared in official reports — that they are related to ‘international economic trends such as globalisation and technological progress’ (BIS/CLG, 2010: 7) — have not, as yet, been accompanied by evidence on why the international factors that ostensibly drive sub-national economic divergence operate differently in the UK context.
- 5.8 These overall patterns of change in the North, relative to the rest of the country, during the later ‘boom’ years are captured by various measures that are sometimes held to be ‘drivers’ of differential economic performance but are often best seen as symptoms rather than causes of change. One element of the difference is found in the sector structure of employment. As Table 1 shows, relative to the UK, all three Northern regions, and especially the North East, remained over-represented in terms of their sectoral share of employment in manufacturing, public administration and health and under-represented in banking, finance and insurance.

Table 1. Sectoral structure of employment in Northern regions, 2008: location quotient (UK=100)

Sector	North East	North West	Yorkshire & the Humber
Manufacturing	1.15	1.14	1.16
Construction	1.11	0.96	1.00
Public administration, education & health	1.11	1.01	1.03
Mining & quarrying; energy & water	1.06	0.81	0.78
Other services	1.03	0.95	0.92
Distribution, hotels & restaurants	0.96	1.07	1.06
Transport & communications	0.96	1.05	1.02
Agriculture & fishing	0.76	0.77	0.89
Banking, finance & insurance etc.	0.71	0.85	0.81

Source: Green, 2010

5.9 The difference in sub-Northern economic trajectories during a period of sustained national economic growth is illustrated by changes in GVA per head.

“For example, in 2005, in terms of gross value added (GVA) per person, the highest ranked (NUTS 3) regions in the UK were West Inner London and Berkshire with GVAs of £44,050 and £39,850 respectively. The lowest ranked were Liverpool and Blackpool, with GVAs that were half of those in London and Berkshire: £19,800 and £21,050. These individual examples are representative of a broader trend — the top ranked 10% of UK (NUTS 3) regions have GVA at least 50% higher than the bottom ranked 10%.”

(Overman, 2010)

5.10 The same pattern of differentials in economic performance with greatest dynamism in the Greater South East, is especially apparent when considering the private sector contribution to GVA growth.

5.11 Differences are also apparent in levels of net private job creation and the percentage of private sector jobs growth.

5.12 The second geographical message that comes through strongly is the flipside: the relative decline of areas on the periphery (especially port cities such as Liverpool and Hull); and areas that were once at the heart of the industrial revolution and centres of manufacturing, as shown in Table 2. Overall, the sorts of analyses carried out by Centre for Cities reinforce the picture of decline in areas of traditional manufacturing and especially those that are peripheral, have poor environments, outdated amenities, and deprivation and low skills. There is strong evidence to suggest these trends will remain in place: “variations in private sector performance are driven by major long term trends like globalisation and technological change, which successive governments have failed to counteract even though they have spent many billions of pounds trying to do so” (Webber and Swinney, 2010, p 3).

5.13 A further reason to suggest that we will see an intensification of these trends is what we know from the recent application of insights from New Economic Geography and in particular work on ‘agglomeration’. Agglomeration describes the concentration of people and businesses within a geographical space, usually but not always a city or city-region. In an increasingly knowledge-based economy urban areas with dense concentrations of people and businesses generate ‘urbanisation economies’ whereby advantages gained by households as well as firms, regardless of sector, from dense concentrations of economic activity and co-location of workers. Urbanisation economies are partially based on ‘economies of scope’ which offer agents located in densely populated markets the opportunity to take advantage of

positive externalities, such as those associated with knowledge spillovers and improved firm-worker matching — and are particularly associated with the service sector. In practice it is difficult to disentangle the contribution of these various effects (BIS, 2010).

Table 2. Private sector job growth in cities, 1998-2008

City	%	City	%
Brighton	24.8	Stoke	-16.4
Milton Keynes	23.7	Burnley	-14.3
Preston	16.2	Birkenhead	-11.2
Portsmouth	15.4	Gloucester	-10.5
Bristol	15.4	Blackburn	-10.5
Northampton	13.8	Oxford	-9.8
Bournemouth	12.7	Birmingham	-7.7
Wakefield	12.5	Nottingham	-7.3
Reading	10.3	Swindon	-7.1
Newcastle	10.2	Blackpool	-6.3

Source: Webber and Swinney, 2010.

- 5.14 Recent research has measured agglomeration effects, producing a range of estimates of 2 to 20% increase in productivity from a doubling of economic mass (Brühlhart, and Mathys 2008, Sensier and Curran, 2010). A study of agglomeration in the UK found that a doubling of the working age population in an area is associated with a 3.5% increase in productivity in the areas (Rice *et al.*, 2006). It is important to recognize that this measure of ‘economic mass’ does not necessarily refer to total population but to the importance of proximity and linkages, highlighting the importance of travel to work times, mobility and good infrastructure connectivity (Harding and Rees, 2010). Indeed, another indicator that size does not automatically confer agglomeration benefits is that England’s large ‘second tier’ cities appear to ‘underperform’ given the size of their urban populations (Overman and Rice, 2008); and this was highlighted in the more detailed research on Manchester in the Manchester Independent Economic Review (MIER, 2009).
- 5.15 Other recent research found that agglomeration effects have become more important over time across Europe (Harding *et al.*, 2010). The MIER research and the subsequent ESPON CAEE project focusing on Manchester found evidence that agglomeration economies were substantial in Greater Manchester, with a locus around the more dynamic South Manchester NUTS2 area (MIER, 2009; Harding *et al.*, 2010).

- 5.16 Arguably differentials in economic/labour market performance would have been even greater without the compensation made by the growth in public sector employment over a similar period. In terms of the impact on the north the growth in parts of the public sector was always a stealthier approach to altering the geographical distribution of employment and economic development, and included both public sector relocation (BBC to Salford, DWP/HMRC civil service cluster in Sheffield) and general expansion of the public sector.
- 5.17 There was a rapid increase in public sector employment in the 'Labour decade', between 1998-99 and 2008-09 the share of public sector employment and spending expanded as a percentage of the economy as a whole (Larkin, 2009). Using the ABI definition of 'public administration, education and health', public employment grew on average by 2.5 % per year between 1998 and 2007, with expansion especially apparent in health and education.
- 5.18 In terms of urban areas and particularly those in the north it is apparent that central and local governments were to an extent pursuing a 'public sector growth model' (Larkin, 2009). For example, overall 840, 300 (69%) of the 1.2million net additional jobs created in UK cities between 1998 and 2007 were in the public sector.
- 5.19 In Manchester, despite its success in replacing manufacturing jobs in the period, witnessing net private sector jobs growth (MIER), public sector jobs accounted for 59 % of net additional jobs. The figure in Leeds was 55%. (Larkin, 2009).
- 5.20 As Figure 4 shows, there was considerable variation in the extent to which cities benefitted from growth in the public sector. In addition to the general growth in health and education employment the more spatially selective relocation of central department offices as well as RDAs and other quangos saw the growth of the public administration sub-sector by more than 30 % in Sheffield, Birmingham, Liverpool and Cardiff in the period.
- 5.21 One final consideration is that a substantial proportion of the private sector jobs that were created during the period of national economic growth, both in England generally and across the North more specifically, were dependent on the growth in public spending. Some estimates suggest that over half of all private sector jobs created in the last decade were dependent, indirectly, on high levels of public spending (Buchanan *et al.*, 2010).
- 5.22 The growth of this para-state activity included the rapid growth of construction sector as result of 'Urban Renaissance' and hospital/public works, and consultancy as result of central and local government contracting.

The North's experience of recession

- 5.23 Following the recent international financial crisis, UK output first began to contract in the second quarter of 2008, resulting in around a 6% drop in GDP by the end of 2008. Although the drop in GDP witnessed was the deepest and most prolonged for almost 30 years, with increases in unemployment and a slowing of wage growth impacting heavily on the economy, its effect on jobs did not follow the patterns of the previous two recessions, being characterised by a smaller fall than anticipated (Figure 5).
- 5.24 The effects of Government/central bank intervention likely cushioned impacts on unemployment, through monetary measures (interest rate policy, quantitative easing etc); supporting demand (neo-Keynesian type policies) and a variety of public and private labour market support measures (expansion of public sector employment, short time working etc). Nevertheless there is an absence of rigorous evaluation of the combined effects of these actions, the longer-term consequences, or likely labour market impact once levels of public sector demand are reduced. Furthermore, an alternative possible explanation of the lower than expected drop in unemployment is that firms have yet to fully adjust to the economic crisis (Dolphin, 2009), meaning that continued difficult economic conditions are likely to lead to further increases in unemployment.
- 5.25 In terms of regional differences, using March 2008 as a baseline, Table 3 shows that the growth in unemployment as measured by the Job Seeker Allowance (JSA) claimant count was most pronounced in Northern Ireland, the North East, the West Midlands, and Yorkshire and Humber. In England, outside of the West Midlands, most of the areas that had the biggest increase in unemployment after March 2008 were northern city regions, with areas with high levels of unemployment prior to recession generally being the most hardest hit (see Dolphin, 2009).
- 5.26 Table 3 examines change in JSA claimant counts by NUT3 geographical areas in England between 2008 and January 2011. This confirms broader trends, with areas in the North East ranking high in terms of percentage point increases. Seven out of the top ten ranking areas for percentage point increases in JSA claimant counts in England over this time period are in Northern England (out of 99 areas).
- 5.27 Different sectors of the economy were more or less exposed to the economic downturn. The sectoral composition of the labour market within geographical areas is thus a key factor shaping the impact of the recession. Although the recession has been portrayed as originating within the banking and finance sector, leading to predictions that the recession would be a 'white collar' and South East recession, this depiction undoubtedly under-represents the extent to which after state intervention the banking and finance sector remained adjusted to economic risks through lending

restrictions, effectively passing capitalisation problems on to other parts of the economy. The importance of relaxed lending and house price inflation to fuelling consumption and growth prior to recession forms a further part of the story of why broader sectors of the economy were hit fairly quickly by recession.

Table 3. Regional unemployment rates (JSA Claimant counts)

	March 2008	Sept 2009	Change (pp)
Northern Ireland	2.7	6.2	3.5
North East	3.9	7.3	3.4
West Midlands	3.4	6.7	3.3
Yorkshire and Humber	2.9	6.0	3.1
Wales	2.8	5.8	3.0
North West	3.0	5.8	2.8
East Midlands	2.4	5.1	2.7
East	1.9	4.3	2.4
Scotland	2.5	4.7	2.2
South West	1.3	3.5	2.2
South East	1.4	3.5	2.1
London	2.6	4.7	2.1

- 5.28 Given the aforementioned antecedents and the centrality of the banking and finance sector to leveraging the preceding boom, job losses as would be expected were not confined to banking and finance. Although all sectors of the economy were affected, the largest labour market impacts were distributed across the manufacturing, construction and financial services sectors (Figure 8). Between the first quarter 2008 (peak private sector employment) and the first quarter 2009, public sector employment actually grew by 1.0 percent. In comparison, employment in the private sector fell by 1.9 percent (Larkin, 2009).
- 5.29 Within manufacturing, differences are found within sectors in terms of reductions in output, such as related to the type of manufacturing, for example whether this is low value added or high value added, with the former experiencing greater pressure from international competition prior to recession (Dolphin, 2009). Male and younger workers were most affected in terms of their unemployment rates (ONS, 2009). However, increased female unemployment is likely once public sector cuts begin to take hold where more female dominated sectors become more exposed to job losses.
- 5.29 The skills profiles of areas further appear related to the extent of the impact of the recession on unemployment levels. Lee *et al.* (2009) found a relationship between low skills in Local Authority Travel to Work areas and increases in unemployment.

Although this is likely due to the concentration of lower skilled workers into sectors which have been more adversely affected by the recession, this could further be due to employers being more likely to retain higher skilled workers, for example due to avoid the greater recruitment and training costs when firms wish to increase skilled capacity during recovery.

Table 4. Change in JSA claimant count by NUTS 3 area (March, 2008-January, 2011)

NUTS 3 AREA	Rate (2011)	pp change (base = March 08)	% change	pp. change RANK (England out of 99)
Kingston upon Hull, City of	7.7	3.2	69.7	1
South Teesside	7.1	2.9	68.6	2
North and North East Lincolnshire	5.4	2.6	88.7	4
Hartlepool and Stockton-on-Tees	6	2.6	74.2	5
Blackpool	6.1	2.6	72.2	7
Barnsley, Doncaster and Rotherham	4.9	2.3	91.8	8
Darlington	5	2.2	75.4	9
Sheffield	4.4	2.1	90.5	12
Calderdale, Kirklees and Wakefield	4.4	2.1	89.4	13
Bradford	5	2.1	71.5	14
Sunderland	5.2	2	61.1	17
Sefton	5	2	63.0	18
Leeds	4.3	2	83.5	19
Derby	4.5	2	80.1	20
Greater Manchester North	4.6	2	75.8	23
Durham CC	4	1.8	86.2	32
Tyneside	5	1.8	54.2	33
Halton and Warrington	4.1	1.8	77.4	34
Greater Manchester South	4.3	1.8	74.7	35
East Merseyside	5.3	1.8	52.8	36
Liverpool	6.7	1.7	33.7	38
Blackburn with Darwen	4.3	1.7	67.2	41
East Riding of Yorkshire	3.1	1.5	93.3	47
East Derbyshire	3.6	1.5	69.3	48
Northumberland	3.9	1.4	55.1	59
West Cumbria	3.5	1.4	61.6	60
York	2.7	1.3	87.6	63
North Yorkshire CC	2.6	1.3	100.4	64
Cheshire CC	2.8	1.2	81.8	74
Wirral	4.5	1.1	33.0	75
Lancashire CC	2.9	1.1	64.2	83
East Cumbria	2	0.9	76.9	93

Source: ONS NOMIS, own calculations

- 5.30 Although the percentage change drop in the employment rate was less substantial than in previous recessions, the percentage change drop in the total number of hours worked in the economy was fairly similar (see ONS, 2009, Figure 2.5). This could suggest that, compared to prior recessions, more employers were able to adjust to reduced demand through reductions in working hours rather than the open shedding of labour. Increases in involuntary part-time employment and time-related underemployment further support this view (see Walling and Clancy, 2009). Time related underemployment exists when the hours of work of an employed person are insufficient in relation to an alternative employment situation in which the person is willing and available to engage (ILO, 1998). This includes people who are willing to work extra hours in their present job, in an additional job, or in a new job in replacement of their current employment. Some estimates suggest that more than half of all workers in the UK have experienced a pay cut, a reduction in hours or a loss of benefits since the recession began (Keep Britain Working, 2009).
- 5.31 During recession employers can use reductions in working hours as a way of maintaining staff to avoid labour shedding and the recruitment and training costs associated with rehiring. Such practices may occur through voluntary arrangements, but also through reducing working hours offered to new-recruits, increasing levels of involuntary part-time work or broader time-related underemployment. Time-related underemployment occurs where a person is unable to find work meeting their preferred level of labour supply, such as the full number of hours they wish to work per week.
- 5.32 In times of economic downturn, reductions in working hours thus potentially lead to smaller increases in open unemployment, substituting time-related underemployment for unemployment. During economic recovery one potential consequence of this that, where increases in labour demand are first met by employers increasing working hours amongst retained time underemployed staff rather than through open recruitment or job creation, high growth in time-related underemployment during recession potentially reduces the extent of job creation witnessed for a corresponding unit of GDP growth during recovery. This may create a delay between GDP and employment growth, or lead to a slower labour market recovery as measured by employment and unemployment rates than in previous recessions.
- 5.33 Time related underemployment and involuntary part-time worker were particularly marked in certain Northern NUTS 2 areas. Using the UK Labour Force Survey, Table 5 indicates that in 2009/10, seven out of eleven Northern NUTS 2 areas were ranked in the top ten in England (out of 30) for levels of involuntary part-time work. Across the UK, NUTS 2 areas experienced around a 50% increase in the proportion of part-time work that was involuntary between 2007/8 and 2009/10.

Table 5. Involuntary part-time work

	% employed part-time	% of part-time involuntary	Rank (NUTS2 England)	Involuntary pt % change (base =2007/8)	(n=)
East Yorkshire & North Lincolnshire	29.0	19.4	4	75.6	1,316
South Yorkshire	28.2	16.1	10	71.6	1,808
Greater Manchester	24.4	18.3	7	61.7	3,466
Tees Valley & Durham	25.2	19.2	5	59.8	1,611
Merseyside	24.8	16.2	9	58.4	1,714
North Yorkshire	28.0	12.8	22	52.7	1,117
Cheshire	23.0	10.5	27	52.1	1,541
Lancashire	24.2	16.3	8	49.4	2,027
Northumberland	23.8	19.7	2	45.0	2,097
West Yorkshire	24.4	13.1	20	25.5	3,221
Cumbria	26.6	15.5	11	17.4	736
Inner London	17.2	20.0	1	6.1	2,800
Rest of England	24.9	13.7	-	50.0	44,820

- 5.34 Some of the highest rates of growth in involuntary part-time employment were witnessed in East Yorks and North Lincs, South Yorkshire, and Greater Manchester. Growth was much lower in inner London, although starting from a considerably higher baseline in 2007/8. The growth in many other areas thus reflected a process of catching up to inner London levels. Levels of broader time-related underemployment in 2009/10 were fairly similar across the UK counties (Table 6). Three outliers in the Northern regions however were East Yorkshire and North Lincs, Greater Manchester, and Tees Valley which were ranked 1st, 4th and 6th in England respectively.
- 5.35 Although Inner London was ranked number 1 for involuntary part-time employment, within the multivariate analysis after controlling for compositional differences between areas, the risk of involuntary part-time work was significantly higher in the Tees Valley and Durham, Northumberland, and East Yorkshire and North Lincs (Table 7). Individual differences were apparent with the odds of experiencing involuntary part-time employment and broader time-related underemployment being higher for women, people with lower educational attainment, and those with shorter job tenure.
- 5.36 In addition to time-related underemployment, a further potential manifestation of underemployment is that due to a lack of suitable employment, people take on paid work below their skills or qualification levels. Skills-related underemployment refers to the involuntary confinement to employment that does not sufficiently utilise skill levels or qualifications due to a lack of better matched opportunities. Skills-related underemployment is important in that it represents an additional dimension of macro-economic under-productivity and mismatch in the labour market. At a

regional level, a lack of employment opportunities that meets skills or qualification levels may further lead to internal economic migration or 'brain drain' to other geographical areas with greater opportunities, particularly amongst the younger or more highly qualified.

Table 6. Time-related underemployment

	% of employed	Rank (NUTS2 England)	% change (base =2007/8)	(n=)
East Yorkshire & North Lincolnshire	12.0	1	85.2	1,316
Greater Manchester	11.0	4	56.8	3,466
South Yorkshire	10.7	8	53.3	1,808
West Yorkshire	9.9	17	46.2	3,221
Merseyside	9.4	24	40.1	1,714
Tees Valley & Durham	10.9	6	33.9	1,611
Lancashire	10.3	15	27.9	2,027
North Yorkshire	10.8	8	26.3	1,117
Cheshire	8.0	29	21.4	1,541
Northumberland	9.6	21	19.2	2,097
Cumbria	8.1	27	-8.5	736
Inner London	9.6	22	28.4	2,800
Rest of England	9.9	-	39.0	44,820

Special License QLFS 2009/10 pooled, employed (men 16-65yrs women 16-60yrs). Seasonally unadjusted, weighted to 2009 mid year population estimates. Rank is ordinal position in English NUTS2 areas (out of 30). Number of observation is unweighted base

- 5.37 Although skills-related underemployment is difficult to measure in survey data, measures of over-education provide one potential proxy. Over-education refers to where people hold qualifications that are in excess of those required for their job (e.g. Rumberger, 1987). In comparison to those better matched to their job, research indicates that over-educated people exhibit wage penalties (Hartog, 2000), lower job satisfaction (Battu *et al.*, 1999), and higher turnover (Sloane *et al.*, 1999).
- 5.38 A modal 'realised matched' measure of over-education was used to explore patterns of over-education amongst the general population (see Hartog, 2000; Verdugo and Verdugo, 1989), whereas the SOC(HE) classification of graduate and non-graduate jobs (Elias and Purcell, 2004) was used to examine 'graduate level' over-education amongst people holding degree level (NVQ level 4/5) qualifications. For the first measure, the modal NVQ level qualification (levels 1 to 4/5) for each 3 digit Standard Occupational Classification (SOC 2000) code was calculated. This was compared to the highest qualification level held by respondents. Respondents were defined as over-educated if their qualification levels were above the modal level for their occupation.

Table 7. Logistic Regression: Involuntary part-time work and time-related underemployment

	Model I: Involuntary PT employment		Model II: Time-related underemployment	
	Odds Ratio	Std. Err.	Odds Ratio	Std. Err.
NUTS 2 (0=Inner London)				
Cumbria	1.25	0.20	0.99	0.10
South Yorkshire	1.11	0.13	0.99	0.07
Greater Manchester	1.08	0.11	1.00	0.06
Merseyside	1.06	0.13	0.91	0.07
Lancashire	1.03	0.12	1.02	0.07
North Yorkshire	0.95	0.14	1.13	0.10
West Yorkshire	0.92	0.10	0.91	0.06
Cheshire	0.67*	0.10	0.81*	0.07
Tees Valley & Durham	1.27*	0.15	1.10	0.08
Northumberland	1.34**	0.15	1.03	0.07
East Yorkshire & North Lincolnshire	1.35*	0.17	1.03	0.09
Rest of UK	0.94	0.07	0.94	0.05
Years of schooling	0.97**	0.00	0.94**	0.00
Job tenure	0.99**	0.00	1.00**	0.00
Female (0=male)	1.61**	0.05	1.18**	0.02
Age	1.01**	0.00	0.99**	0.00
Year 2009/10 (0 =2007/8)	1.59**	0.05	1.47**	0.03

*Special License QLFS 2007-2010 pooled, employed (men 16-65yrs women 16-60yrs), unweighted. *= $p < 0.05$ **= $p < 0.01$.*

- 5.38 Northern NUTS 2 areas contributed six out of ten of the highest ranking areas in England for both overall and graduate (SOC(HE)) levels of over-education (Tables 8 and 9). The lowest levels in contrast were witnessed in Inner London. Four out of five of the areas with the highest levels of graduate level over-education were in Northern England (East Yorks and Lincs, Greater Manchester, Lancashire, and Merseyside).
- 5.40 Compared to patterns of involuntary part-time work and time related underemployment, change between 2007/8 and 2009/10 was less marked for overall levels of over-education. In fact for a large number of areas, a drop was witnessed. One potential explanation of this is that people who have a higher risk of over-education also have a higher risk of unemployment because they are more poorly matched to their jobs (for example see Rafferty and Dale, 2008), and are thus more likely to fall into unemployment than the better matched. Alternatively, it may be the case that whereas time-related underemployment is an early recession effect, patterns of skill-underutilisation do not manifest until later on as long-term employment increases and people reduce their labour market expectations or reservation wages to escape unemployment, or are pushed towards any type of work due to JSA eligibility criteria or means-testing after 6 months of claiming JSA.

Table 8. Over-education (modal measure) 2009/10

	% Over-educated	Rank (NUTS2 England)	% change (base =2007/8)	(n=)
East Yorkshire & North Lincolnshire	26.6	3	0.1	1,316
Cumbria	25.7	5	-8.3	736
Tees Valley & Durham	25.6	6	-5.3	1,611
Greater Manchester	25.3	7	-5.4	3,466
Northumberland	24.9	9	-3.6	2,097
Merseyside	24.7	10	-7.9	1,714
Cheshire	24.2	14	0.7	1,541
Lancashire	24.2	15	2.9	2,027
North Yorkshire	23.7	17	-6.9	1,117
South Yorkshire	23.6	18	-4.0	1,808
West Yorkshire	22.4	20	-12.0	3,221
Inner London	19.0	30	-6.2	2,800
Rest of England	23.0	-	0.8	44,820

Table 9. Percentage of Employed NVQ Level 4/5 holders working in SOC(HE) 'Non-Graduate' Occupations

	% in non-graduate occupation	Rank (NUTS2 England)	% change (base =2007/8)	(n=)
East Yorkshire & North Lincolnshire	30.5	2	14.8	399
Greater Manchester	28.1	3	5.0	1,231
Lancashire	28.0	4	19.0	718
Merseyside	27.8	5	3.9	583
Northumberland	27.1	7	5.1	657
Tees Valley & Durham	26.6	8	-1.6	494
Cumbria	24.7	16	-12.1	240
South Yorkshire	22.2	20	-9.7	538
Cheshire	21.2	23	-11.8	546
West Yorkshire	20.5	26	-19.5	1,085
North Yorkshire	20.0	29	-21.3	431
Inner London	17.8	30	-12.2	1,600
Rest of England	23.5	-	3.0	15,692

Special License QLFS 2009/10 pooled, employed (men 16-65yrs women 16-60yrs). Seasonally unadjusted, weighted to 2009 mid year population estimates. Rank is ordinal position in English NUTS2 areas (out of 30). Number of observation is unweighted base.

Northern futures

5.41 The most recent Working Futures 2007-2017 (UKCES, 2008) was produced at a time of great economic uncertainty and the underlying macroeconomic forecast was done in early 2008 and therefore underestimates the effects of the downturn It observations

on future trends in occupational structures, however, are likely to be more reliable even if the figures themselves underestimate the scale and impact of the recent recession.

Table 10. Logistic regression: Over-education

	Model I: Modal		Model II : SOC(HE)	
	Odds Ratio	Std. Err.	Odds Ratio	Std. Err.
NUTS 2 (0=Inner London)				
East Yorkshire & North Lincolnshire	1.43**	0.08	1.80**	0.17
Merseyside	1.39**	0.07	1.62**	0.14
Greater Manchester	1.38**	0.06	1.58**	0.11
Cumbria	1.51**	0.10	1.50**	0.18
North Yorkshire	1.28**	0.08	1.40**	0.14
Northumberland	1.38**	0.07	1.37**	0.11
Lancashire	1.27**	0.06	1.36**	0.11
Tees Valley & Durham	1.43**	0.08	1.32**	0.12
Cheshire	1.26**	0.07	1.28**	0.11
West Yorkshire	1.22**	0.05	1.20*	0.09
South Yorkshire	1.25**	0.07	1.18**	0.11
Rest of UK	1.18**	0.04	1.26**	0.06
Years of schooling	0.98**	0.00	0.88**	0.00
Job tenure	1.00**	0.00	1.00**	0.00
Female (0=male)	0.95**	0.01	0.93**	0.02
Age	0.98**	0.00	0.97**	0.00
Year 2009/10 (0 =2007/8)	0.99	0.01	1.04**	0.02
Part-time (0=full time)	1.62**	0.03	2.60**	0.07

*Special License QLFS 2007-2010 pooled, employed (men 16-65yrs women 16-60yrs), unweighted. *= $p < 0.05$
**= $p < 0.01$. Model I Employed, Model II: NVQ Level 4/5 Qualification holders.*

5.42 Trends in occupational employment structure are also dictated by long term economic change and the projections in the most recent Working Futures report (from recent LFS and other data) are in line with previous reports. The pace of change in occupational structure is slowing compared to the previous two decades, suggesting a process of adaption to global trends. According to Working Futures, the groups expected to grow the most are:

- Managers and senior officials (+872 thousand, 1.7 % per annum)
- Professional occupations (+643 thousand, 1.5 % per annum)
- Associate professional and technical (+654 thousand, 1.4 % per annum)

With most significant declines witnessed in:

- Skilled trades occupations (-226 thousand, -0.7 % per annum)
- Machine and transport operatives (-117 thousand, -0.5 % per annum)

- 5.43 These trends are well known but in very general terms there appears to be faster growth in the former, and more rapid declines in the latter, than identified in previous projections (Working Futures 2004-2014). Elementary occupations are now projected to see a much less rapid rate of job loss, as the service sector generate more of these jobs:
- 5.44 This polarisation of demand for skills, with growth at both top and bottom ends of the skills spectrum, appears to be an increasingly common feature across developed economies (UKCES, 2008, xviii).
- 5.45 In addition to the monitoring of individual economic and labour market indicators, a number of attempts have been made to construct multidimensional indices of the impact of the recession on local areas, placing various weightings to different local area statistics. The BBC commissioned Experian to produce an Index of Resilience, designed to assess the ability of an area to withstand and respond to shocks in the external environment. The BBC index ranks areas based on resilience across four themes:
- Business: How strong is the local business base? Is it dependent on sectors that have been hit by recession? Does it have a high number of firms proven to adapt to difficult economic conditions? Have many firms gone out of business? Are businesses dependent on only local markets, or do they export?
 - People: Is there a large working age population that can contribute to the economy? How many people have high skills levels? How many people work as managers and how many people work in elementary roles such as cleaners and refuse workers? How much do locals earn on average?
 - Community: How high is life expectancy? Do neighbours look out for each other? How many people claim benefits? Does the area suffer from deprivation? How many households are vulnerable to long-term unemployment? How many households are vulnerable to declines in disposable income?
 - Place: What are GCSE attainment rates like? Are house prices high? How high is the local crime rate? Is there a lot of green space for people to enjoy?
- 5.46 In particular, the BBC Resilience index highlights how industrial areas within the North East followed by the midlands are considered least resilient.
- 5.47 Towards the end of the long boom up to 2008, and especially as signs of crisis became increasingly apparent, there were warnings from some commentators about the fact that the North in particular had in some sense been 'dependent' on public sector jobs growth as part of a recent growth model that included increases in public

spending; and would therefore be particularly vulnerable to any shrinkage in employment resulting from public spending cuts to address the structural deficit. It follows that there will be impacts on the wider economy of the North and raised concerns about which places might be relatively vulnerable or resilient. An analysis by Wilks-Heeg (forthcoming) based on initial returns to Government on

- 5.48 Growth in the public sector was a key driver of overall jobs growth over the last decade, with the share of public sector employment and spending both expanding as a percentage of the economy as a whole. Two thirds (69%) of the 1.2 million net additional jobs created in cities in the UK between 1998 and 2007 were in public administration, education and health (Larkin, 2009).

Table 11. Public Sector Employment (self reported) by NUTS 2 Area, Jan-Mar 2010

	Private	Public	Rank
Northumberland	63.4	36.7	2
Merseyside	64.6	35.4	3
North Yorkshire	65.6	34.4	4
Lancashire	68.1	31.9	5
South Yorkshire	68.7	31.3	6
Greater Manchester	69.0	31.0	7
Tees Valley & Durham	69.8	30.3	10
West Yorkshire	73.2	26.8	19
East Yorkshire & North Lincolnshire	74.5	25.5	24
Cumbria	75.3	24.7	28
Cheshire	76.3	23.7	30
Inner London	74.7	25.3	27
Rest of England	72.4	27.6	

Excluding self-employed and students. Source: QLFS Microdata, Jan-March 2010, own calculations

- 5.49 From a northern perspective, as Dolphin (2009) notes, public spending as a share of GVA in 2007/8 was 52% in the North East, 47% in the North West and 44% in Yorkshire and the Humber, as against 38% for the UK as a whole.
- 5.50 Because public spending has been higher in the North, many northern places, particularly those characterised by high concentrations of deprivation, are being and will be disproportionately affected by public expenditure cuts. Table 12, reproduced from Government figures on levels of national government funding of local services, lists the local authority areas that are most and least affected by local spending cuts. It shows clearly that it is local authority areas in the North, along with the poorest inner London boroughs, who face the severest cuts. By contrast, the areas experiencing the lowest spending reductions, and one (Dorset) whose allocation is increasing, are, with only two exceptions (Warwickshire and Cheshire East) found in the south east. As Wilks-Heeg (forthcoming) has found, drawing upon redundancy

plans submitted to Government, the effect of cuts is to produce far heavier job losses in the North, and especially in the North West, than in southern regions. Because local authorities are important procurers of services, it must be expected that a similar, disproportionate pattern of job losses amongst private and voluntary sector providers of local goods and services will also occur.

Table 12. Revenue spending power* changes by local authority area, 2011-12: most and least affected areas

Local Authority	Change in estimated 'Revenue Spending Power' 2011-12	Change in estimated 'Revenue Spending Power' 2011-12	Transition grant	Change in estimated 'revenue spending power' 2011-12 - post transition grant
	£m	%	£m	%
Biggest % losers, ranked by £m spending reduction				
Liverpool	-72.2	-11.34%	15.550	-8.90%
Manchester	-68.9	-11.04%	13.332	-8.90%
Hackney	-38.7	-10.46%	5.776	-8.90%
Newham	-38.5	-10.46%	5.731	-8.90%
Tower Hamlets	-37.2	-9.90%	3.767	-8.90%
Doncaster	-29.2	-9.60%	2.118	-8.90%
Kingston upon Hull	-28.4	-9.72%	2.391	-8.90%
Knowsley	-23.4	-10.72%	3.968	-8.90%
Rochdale	-21.7	-8.91%	0.031	-8.90%
South Tyneside	-19.8	-10.49%	3.009	-8.90%
Blackburn with Darwen	-18.1	-10.54%	2.806	-8.90%
St Helens	-18.1	-9.39%	0.935	-8.90%
Middlesbrough	-15.4	-9.12%	0.364	-8.90%
North East Lincolnshire	-15.3	-9.14%	0.396	-8.90%
Halton	-12.6	-8.92%	0.026	-8.90%
Hartlepool	-12.0	-10.33%	1.661	-8.90%
Lowest % change, ranked by £m spending reduction				
Essex	-13.0	-1.31%	0.000	-1.31%
Hertfordshire	-12.5	-1.55%	0.000	-1.55%
Norfolk	-11.7	-1.67%	0.000	-1.67%
Hampshire	-7.8	-0.95%	0.000	-0.95%
East Sussex	-6.3	-1.54%	0.000	-1.54%
Warwickshire	-5.1	-1.32%	0.000	-1.32%
Cheshire East	-4.6	-1.63%	0.000	-1.63%
West Sussex	-3.7	-0.65%	0.000	-0.65%
Surrey	-2.5	-0.31%	0.000	-0.31%
Buckinghamshire	-2.0	-0.60%	0.000	-0.60%
Poole	-1.1	-0.97%	0.000	-0.97%
Windsor and Maidenhead	-1.1	-1.06%	0.000	-1.06%
Richmond upon Thames	-1.0	-0.61%	0.000	-0.61%
Wokingham	-0.7	-0.63%	0.000	-0.63%
Dorset	0.7	0.25%	0.000	0.25%

* includes local authority spending plus NHS spending on social care

5.51 The extent of public sector employment within areas will thus partly determine the labour market impacts of public sector cuts. Table 13 presents self-reported public sector employment in January March 2010 by NUTS 2 area. From this it can be seen that five of the top ten NUTS 2 areas for public sector employment are in the north of England (out of 30 total areas). Northumberland ranked second in England for the percentage of public sector employment, only second to Devon.

Table 13. Most and least resilient local authority areas in England by BBC region

1	Elmbridge	BBC London	305	Pendle	BBC North West
2	St Albans	BBC London	306	Bolsover	BBC East Midlands, BBC Yorkshire
3	Waverley	BBC South			
4	Richmond upon Thames	BBC London	307	Tameside	BBC North West
5	Mole Valley	BBC London	308	Sunderland	BBC North East & Cumbria
6	Hart	BBC South	309	Plymouth	BBC South West
7	Horsham	BBC South	310	Rotherham	BBC Yorkshire
8	Surrey Heath	BBC South	311	Barnsley	BBC Yorkshire
9	Chiltern	BBC London	312	North East Lincolnshire	BBC East Yorkshire & Lincolnshire
10	South Cambridgeshire	BBC East			
11	Hertsmere	BBC London	313	South Tyneside	BBC North East & Cumbria
12	Guildford	BBC South, BBC London	314	Burnley	BBC North West
			315	Walsall	BBC West Midlands
13	Vale of White Horse	BBC South	316	Hartlepool	BBC North East & Cumbria
14	Mid Sussex	BBC South, BBC South East	317	Ashfield	BBC East Midlands
			318	Barrow-in-Furness	BBC North West
15	Uttlesford	BBC East	319	Redcar and Cleveland	BBC North East & Cumbria
16	Harborough	BBC East Midlands			
17	Wokingham	BBC South	320	Kingston upon Hull, City of	BBC East Yorkshire & Lincolnshire
18	Epsom and Ewell	BBC London			
19	Sevenoaks	BBC South East	321	Sandwell	BBC West Midlands
20	West Berkshire	BBC South	322	Stoke-on-Trent	BBC West Midlands
			323	Mansfield	BBC East Midlands
			324	Middlesbrough	BBC North East & Cumbria

Source: Experian resilience analysis for BBC, 2010. See www.bbc.co.uk/news/business-11233799

5.52 Larkin (2009) makes the point that size alone is not the best indicator of vulnerability and that employment by function and professional status within areas needs to be considered, because it is fair to assume that cuts will impact differently on different groups of public workers. For example managers rather than 'front line' staff, and those employed in quangos might be more at risk. Taking assumptions about the actual profile of cuts into account, the typology of vulnerability to public sector job losses constructed by CfC is as follows:

- 5.53 It can be seen that northern cities tend to feature on the highly vulnerable category. Nevertheless the impact on the wider economy might be harder to gauge because of the uncertain impact of reduced consumption, due to linkages with the private sector, and the extent to which private sector jobs growth can compensate for job losses in the public sector. A further issue is the extent to which aspects of public provision will be contracted out or reorganised as private sector activity.
- 5.54 Looking at public sector share of jobs more closely at district level suggests that again, the North is particularly vulnerable with clusters of public sector concentration in Merseyside, coastal Lancashire and Cumbria, and throughout the North East and metropolitan Yorkshire and Humberside.
- 5.55 Going beyond job concentration the researchers also constructed a resilience measure purporting to show the resilience to recession and the capacity of places to recover, based on a composite of indicators including GVA growth, claimant count, average pay, house prices and enterprise levels (NWDA, 2010).
- 5.56 As the map shows, the majority of the most resilient local authority areas are in the South of the country and the least resilient are in the North. In the Northwest no areas are in the top 25% of resilient areas for England, whilst 22 are in the 25% least resilient, and there are strong geographical concentrations in Cumbria, Pennine Lancashire, North Manchester and Merseyside. Again however it is important to restate the caveat of strong residence based effects, particularly for tightly bounded employment centres.
- 5.57 Overall, the patterns described above point in the same direction, i.e. that urban areas that have been more reliant on public sector expansion in the last decade or so, and that exhibit higher proportions of public sector employment are more vulnerable to public spending cuts and because of their weak private sector base are not likely to be resilient to recession (albeit in a highly uncertain future). Nationally this is particularly true of the North in general and more so of the traditionally weaker, ex-industrial and marginal parts of the North. Nevertheless, it remains uncertain what the downstream impacts — on supply chains, consumer spending, and local economies — will be and hence on longer-term patterns of population and economy.

6 Policy Implications and Further Research Questions

- 6.1 It was never intended that this review, unlike those of sister projects within the wider N8 study, would generate direct implications for policies relating to older age groups. Rather, its purpose was to paint a picture of recent and potential future change in the spatial economic geography and labour markets of the North. There are some policy

issues arising out of this wider discussion, however, given that all the evidence we have considered suggests that trends towards the widening of disparities, between the North and the London super-region, between the functional economic areas of the North, and within the labour markets of those functional economic areas, are set to continue. The most important amongst these is the way in which policy aspirations for spatial rebalancing are likely to interact with others that look to introduce a 'presumption in favour of development', to reward local authorities financially for new commercial and residential development, and to promote a 'new localism' in which local resources are expected to play a more important role.

- 6.2 Even if recovery from the recent recession follows the pattern of previous, less severe downturns, it is likely to take until the end of the current Parliament for national output to return to pre-crisis levels and a further two to three years for employment levels to do the same. There will also be a spatial dimension to recovery whereby Northern output and employment growth will lag behind that of southern regions. Furthermore, irrespective of its geography, recovery is likely to drive further polarisation within the labour market, and in household incomes, as manufacturing becomes still less employment-intensive and private service sector employment continues to be characterised by strong income differentials between high and low value activity. In this context, it must be expected that policy initiatives that aim to remove barriers to new development and to place an onus on the mobilisation of local resources will reward those areas that are in the strongest position with respect to market development and are therefore likely to exacerbate the disparities, at various spatial scales, identified in this report.
- 6.3 This is not to argue that explicit policy initiatives that are being targeted upon northern and midland England — e.g. Enterprise Zones, Regional Growth Fund investments — are incapable of mitigating the impact of these trends to some degree. Spatial rebalancing between North and South is also facilitated, to some extent, by natural endowments, as is the case, for example, in relation to renewable energy investments. And it is also possible that the effect of enhancing community voices within planning decisions, along with the perennial difficulties associated with 'nimbyist' politics, will constrain rather than enable development in potential 'hot spots', especially in the South, despite the incentives that are being introduced to encourage local authorities to be development-friendly. As we have seen, though, the impact of changes in redistributive forms of implicit policy — especially expenditure cuts and their employment impacts — are working in the opposite direction and reinforcing disparities.
- 6.4 As noted in Section 2, it is not unusual for explicit and implicit spatial policies to counteract one another, so the policy challenges arising from aspirations to rebalance the economy, spatially, are by no means new. They are particularly acute, however, with respect to the emphasis increasingly being placed, within policy

debates, on the importance of agglomeration and the extent to which 'place blind' implicit policies are seen as relating to the increasing tendency of high level economic activities to group together in the larger, denser urban areas with the 'thickest' labour markets. At one level, a shift to a more localised approach to economic development appears consistent with the view that spatial economic policy should focus upon managing agglomeration forces more effectively and spreading its benefits in that it should result in choices that enable firms and households to locate in the places they wish to be. It appears inconsistent, however, with critical national investment decisions, for example in relation to major infrastructures, research and technology and mega-projects (principally the Olympic Games) that continue to be focused disproportionately in the South.

- 6.5 Current policy thinking on this issue is not entirely clear. The recent paper on 'understanding local growth' (BIS/CLG, 2010: 25), for example, accepts that 'harnessing.. the potential benefits of agglomeration means enabling the growth of England's economic centres, principally cities and major towns across the country' but qualifies this statement immediately by arguing that 'it does not mean that policy should focus on investing in agglomerations', even though it is clear that place-blind policies do.
- 6.6 This brief discussion highlights the continuing need for clear policy aims with respect to spatial development priorities and for consistency in the way they are aligned and supported across scales of government. But it also raises some key analytical and research issues which, ideally, need to be addressed in order to facilitate a better understanding of how this might be achieved. Three challenges, in particular, arise from the findings of our study.
- 6.7 First, better tools are needed for understanding the cumulative impacts of implicit spatial policy changes. This is not a trivial task, given that it can be difficult to assemble basic information on patterns of spending, or the impact of regulatory decisions, within particular policy areas. Without such an understanding, however, it is hard to give substance to claims that aspirations with respect to spatial development are fully supported through policy decisions.
- 6.8 Second, and related to this, there is a pressing need to better understand the preconditions that support more balanced economic growth in other national contexts in which spatial economic disparities have declined or at least not widened at the same rate as in the UK despite ostensibly similar global 'framework conditions'. And finally, there is a challenge to go beyond forecast-based models of potential futures and to employ complementary scenario techniques to assess potential spatial development patterns and the policy challenges that might arise from them.

Appendix A: Greater Manchester Case Study

The case of Greater Manchester is interesting because it is arguably the best example, within the North, of a functional economic area that has both adjusted most effectively to structural economic change over the last three decades but whose 'renaissance', at the same time, demonstrates the far-from-straightforward relationship between growth and disparities. An indication of these contrasting elements within the Manchester story was given in Section 5, which showed that GVA growth in Greater Manchester South, during the later 'boom years', was amongst the most impressive in the UK whilst Greater Manchester North was one of only seven NUTS 3 areas to actually lose GVA during the period. This contrast is reflected in employment change. Despite shedding 186,000 manufacturing jobs between 1981 and 2006, the Manchester city-region as a whole experienced a net gain of 187,000 jobs in the same period (an 11.3% increase), with particularly strong growth in the central employment core of the conurbation in financial and business services, ICT sectors, creative and media industries, life sciences, and public provision of health and education services (MIER, 2009). However all of that employment growth was accounted for by the southern half of the conurbation, which was characterised by higher productivity, and higher productivity growth, whilst job numbers in the north remained static.

Greater Manchester's pre-crisis renaissance was underpinned by three main factors. First, despite the city's industrial decline over the course of the 20th century it retained a concentration of key assets that underpinned its longstanding role as the most important service centre in the north of England. Particularly crucial to the pre-crash recovery were the city's municipally-owned international airport, the high level of connectivity it derives from its nodal status within key public and private transport infrastructure routes and the dense concentration of both public and private services in the city. Second, these advantages grew in importance as the long economic boom, along with the strong metropolitan locational preferences of key knowledge-based sectors, encouraged strong private service sector expansion. Third, the areas benefited from increased investment in public services, especially during the early years of the current century, which was especially favourable to a city that serves key, high level regional public service functions in health, education and public administration.

These three factors were important in sustaining a level of wealth creation and employment growth in Manchester and the broader city-region that bore comparison, during the boom years, with that experienced in London and the south east. In the 25 years that preceded the onset of the current economic crisis, continued decline in manufacturing within the city-region, in which employment more than halved, was more than offset by growth in private, white collar service employment, which doubled in size, significant expansion in public sector

⁴ This section draws heavily upon Harding, Harloe and Rees, 2010.

employment (up by a third) and job growth of more than 20% in transport and communications, distribution, hotels and restaurants (MIER, 2009). The Greater Manchester miracle, however was achieved with comparatively modest levels of productivity growth, partly due to its sectoral composition and partly to the fact that it lacks the highest level 'command and control' elements of the key sectors it contains. However it also reflects the uneven way in which the benefits of the boom years were distributed within the city and the wider metropolitan area, geographically and between different social and occupational groups.

On one hand this reflects the North-South differences referred to above. Southern Greater Manchester contains the commercial centre, higher level public service functions (including three major universities), the airport and the majority of high status residential areas that have the strongest labour market connections with the job-rich conurbation core. The north, by contrast, primarily comprises a collection of formerly independent townships that have increasingly been bound into the conurbation, physically, but on the whole — although with some exceptions — are less well connected economically and continue to struggle with the transition from a relatively low value manufacturing economy to one dominated by higher value, knowledge-based industries and the personal and consumer services that provide for their workforces. Here, decline in manufacturing was barely balanced by growth in lower status public and private services.

On the other hand, many Manchester residents derived relatively modest benefits from economic transformation. Despite the rapid proliferation of new, speculative city centre apartments and the existence of some high status suburbs, much of the city's public and private rented housing stock remains relatively unattractive, meaning that many of the fruits of economic success were (and are) consumed in suburban areas outside the city boundary. By contrast, much of the northern and eastern city of Manchester, along with other inner areas of the conurbation and the poorer quality residential areas of peripheral townships, continued to be characterised by high levels of deprivation and a concentration of household characteristics — poor physical and mental health, worklessness, low aspirations and poor educational attainment — on which even fifteen years of economic growth and urban renaissance had only a modest impact. Both of these socio-economic fault lines, within Greater Manchester and the city itself, influenced degrees of resilience to recession, whose impacts upon Greater Manchester followed a more general pattern whereby a crisis that began in the financial sector and led to severe constraints on investment quickly turned into a crisis of demand, with inevitable effects on global trade in manufactures in particular. Within Greater Manchester, this meant that the net impact on the private sector was felt immediately within the construction sector but quickly spread to manufacturing and subsequently, in a less acute form, to a variety of consumer services. The principal casualties, therefore, were the more vulnerable manufacturing industries whose products serve

consumer markets and the most vulnerable workers in insecure sectors (construction, consumer services). The effect was to widen the gap that had grown, in the boom period, between the northern and southern parts of Greater Manchester, on one hand, and areas occupied by those with least power in the labour market on the other.

According to the Greater Manchester forecasting model, the main trends in employment growth and productivity that have produced a 'two-speed' city-regional economy will endure through to the end of the current forecast periods (2010-19 and 2020-29). The forecasts, like those produced by all the major forecasting houses, are based on 'return to trend' assumptions once the shocks emanating from the recession and its aftermath have been absorbed. What forecasts do not reveal, of course, is the feasibility of economic change reverting to past trends, whether there will be capacity within the southern part of the conurbation to absorb the new employment that is predicted for it, and how the labour market and trading links between the core of the conurbation and outlying areas might change over that 20 year period. Forecasting models find it difficult to cope with the 'what if' scenarios that need to be examined if answers to these questions were to be attempted.

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Appendix B: SOC(HE)

Classification of Graduate and Non-graduate Jobs

The SOC (HE) classification of graduate and non-graduate jobs (Elias and Purcell, 2004) is comparable to a combination of 'realised match' and expert assessment (e.g. Rumberger, 1987) measures of over-education, combining statistical information regarding concentrations of graduates within occupations with job analysis data regarding job descriptions and qualification requirements. The SOC (HE) is derived from information compiled from nine quarterly Labour Force Surveys (Spring 2001 to Spring 2003), covering more than half a million occupations classified in the 2000 Standard Occupational Classification (SOC2000). These data were analysed by Elias and Purcell (2004) to show the percentage of those in employment holding a first degree within each of the 353 unit groups of SOC2000 for two age categories: those between 21 and 35 years and those aged 40-54 years. A file prepared by the UK Office for National Statistics from the Winter 1996/7 LFS containing dual coded occupational information (SOC2000 and SOC90), together with text descriptions of job titles, job descriptions and qualifications required for jobs for more than 65,000 employed people were used in combination with this information. Additionally, the construction of the SOC (HE) drew upon resources used in the construction of the Office for National Statistics National Statistics Socio-economic Classification (NSSEC). We have used a derivation of this classification system to provide an overall definition of graduate and non-graduate level occupations.



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