

Understanding Labour Markets, Skills and Talent



About the Review

The Manchester Independent Economic Review provides a detailed and rigorous assessment of the current state and future potential of Manchester's economy. It contains a rich seam of evidence to inform the actions of public and private sector decision-makers so that Manchester can achieve long-term sustainable economic growth and boost the performance of the national economy.

Completely independent of local and national government, the Review is led by a panel of five prominent economists and business leaders:

*Sir Tom McKillop:
Chairman, Manchester Independent Economic Review*

*Diane Coyle:
Managing Director, Enlightenment Economics*

*Ed Glaeser:
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*Jonathan Kestenbaum:
Chief Executive, NESTA*

*Jim O'Neill:
Chief Economist and Head of Global Economic Research,
Goldman Sachs*

The Review Panel commissioned seven world-class organisations to work on seven strands of analysis which provide a deep and cutting-edge analysis of the economics of the Manchester City Region: the way businesses and people interact in terms of trade and skills, the causes and impact of innovation, how investment comes about and the effect it has, and why, despite all this economic activity and growth, stubborn pockets of deprivation still persist.

An ambitious agenda-setting report pulls together the seven strands of analysis, output from the comprehensive economic baseline study, as well as incorporating the extensive intelligence gathered from a year long consultation across the public, private and voluntary sector, which will be the foundation of an ambitious economic strategy so that the world-class research the Review has produced is used to drive Manchester's aspirations forward.

The Review has been funded by the Manchester Innovation Investment Fund, which is supported by both the Northwest Regional Development Agency and the National Endowment for Science Technology and Arts, separately by the Northwest Regional Development Agency, by the Learning and Skills Council and by the North West Improvement Network. The Review is also funded, supported and underwritten by the Association of Greater Manchester Authorities.

FOREWORD

At a time when a deep recession is forcing employers around the country, including within MCR, to cut the size of their workforces, it is hard to feel much optimism about the employment outlook.

However, it is all the more important to be aware of strategic opportunities and challenges at a time of crisis, and to ensure that the actions taken out of short-term necessity are consistent with long-term aims.

This report on skills and employment in the city region, led by the University of Manchester, highlights some encouraging strengths in the availability of highly-skilled workers.

It also indicates some stiff challenges if MCR is to generate high value output, improving the real incomes of people working in the region, and to reach a critical mass which will start to close the skills and prosperity gap with London and the Southeast.

Meeting these challenges will be important for two reasons: first, because highly skilled, highly paid jobs will benefit MCR itself; and secondly because the development of an alternative dynamo to London will be an essential element in rebalancing the UK economy in such a way as to increase the national long-term sustainable growth rate.

The report finds that MCR compares favourably with other cities outside London, including Birmingham, Bristol, Glasgow and Leeds:

- MCR contains a higher concentration of jobs in key Knowledge Based Industries (KBIs) than any of the comparator city regions bar London, and has access to a larger highly-skilled residential population than the other provincial city regions;
- employment growth, particularly in the ICT and business services sectors, has been strong;
- although there are some examples of skills gaps in certain sectors and occupations in MCR, overall the city region's employers have been able to satisfy their skill requirements without much difficulty, even during the past period of sustained economic growth;
- MCR performs reasonably well, compared to the other provincial city regions, in its ability to attract young migrants at an early stage in their careers and workers in high status occupational groups. Young workers tend to gravitate to core areas of the conurbation, particularly in Manchester and Salford, whereas the latter tend to choose suburban locations, predominantly in the south of MCR;
- MCR also imports large numbers of students from the rest of the Northwest, the rest of the UK, and internationally; and
- MCR's ability to retain workers in high status occupations and amongst 25 to 44 year-olds (the age group that is most mobile in career terms) compares well with the other provincial city regions. A high proportion of both groups remain in the region. All of the provincial city regions, however, compare badly to London and its surrounding area in this respect.

This last point leads us directly to the employment and skills challenges faced by MCR:

- MCR loses a substantial proportion of its high skilled and mobile young workers to London and the Southeast. Although retention rates for graduates are higher in MCR than in the other provincial cities, London and the Southeast are the most popular first job destinations for Manchester graduates after MCR itself and the rest of the Northwest.
- The pattern of skilled employment within MCR is increasingly south-facing. High growth rates and concentrations of KBI employment are increasingly found mainly in southern Greater Manchester and North Cheshire, which also contain the residential areas that tend to be preferred by the most highly skilled workers. There is some evidence that skilled jobs are following the skilled workers to the south of the region.
- There is no sign that growth in highly skilled employment within MCR has reached a critical 'take-off point', beyond which the creation of skilled jobs and the supply of skilled workers would enter a self-reinforcing virtuous circle.
- Finally, and crucially, MCR's performance in terms of highly skilled jobs and people is not matched by its productivity performance, which is comparatively modest. This is related to the relatively high levels of people lacking qualifications within MCR's workforce as a whole, as the productivity of the most skilled workers depends on the skills and productivity of those around them.

What are the policy implications of these results?

In the short term, the recession is threatening the positive picture of growth in skilled employment, especially in finance and related services. It will be important to ensure that government assistance is appropriately directed to people unable to find work across the skills spectrum, but also that the opportunity is taken to enhance skills through high quality education and training schemes which are offered while demand for labour is weak. Longer term, the aim must be to continue to increase both the availability of highly skilled jobs and the supply of skills.

The former will depend on a range of policies to encourage a resumption of growth in KBIs, and to build niche strengths which do not confine MCR to being a subsidiary of London. Ensuring this growth will require innovation and investment, the subject of other reports in the MIER.

In order to grow the pool of skilled labour to which employers in MCR will seek access in future, a range of policies covering transport, housing, and social mobility will be required.

In transport, there needs to be a significant increase in the 'effective density' of the highly skilled labour pool, ensuring that an employer in one location has realistic access to as many potential employees as possible. This will require new public and private transport initiatives, given the stalled TIF bid.

In housing, there will need to be realism in planning policies about the desire of most highly skilled workers to live in certain areas in the centre and south of the city region.

Finally, it is essential to improve skills across the board. The upskilling of the whole labour force is needed to grow the productivity of the most highly skilled. Again, another MIER report focuses on which characteristics of neighbourhoods will promote occupational mobility and opportunity, and these lessons will be important for the quality of all jobs in MCR.

SKILLS

TRAINING

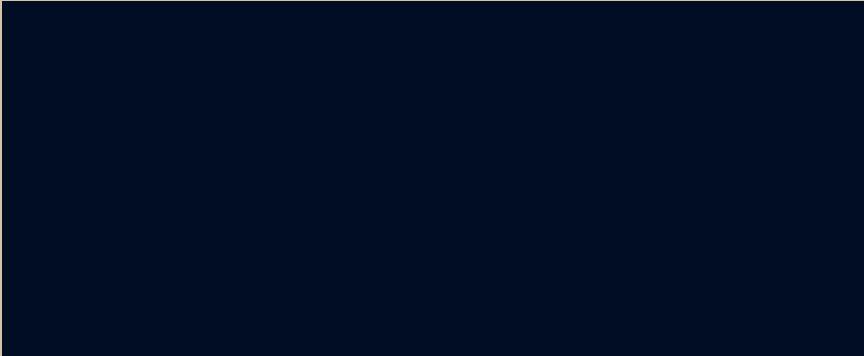
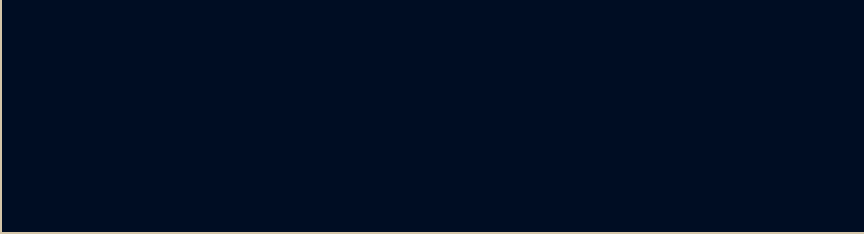
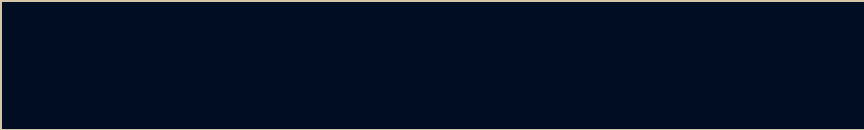
EDUCATION

In sum, this report points to a powerful and profound conclusion: given that MCR compares favourably with its peer group in the supply of skills, yet compares unfavourably in productivity and loses skilled people to the Southeast, the aim must be to enhance the demand for skilled labour in the region. The productivity of labour depends on much more than the skills of particular individuals, and 'labour market' policies will need to look far beyond the conventional levers of education and training.

It is an illusion to think that highly skilled niches can thrive for long in a sea of low skill and poverty. There is a substantial body of economic research which demonstrates that aptitudes for education and skills are set very early in life, many by the age of seven and all by the mid-teens. So while there is rightly a focus on MCR's ability to attract and create graduates to fill highly-skilled jobs, long-term success in building a high value, high-skill economy will also depend on pre-schooling, primary schooling and transport and housing policies in all the city region's neighbourhoods.

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EXECUTIVE SUMMARY

Understanding labour markets, skills and talent.

This report takes account of the growing volume of evidence which suggests that the ongoing transition to a knowledge-based economy has put a premium upon high level workforce skills, resulting in the larger, most economically diverse and best-connected cities and city regions of the developed world performing better than others within their domestic and international contexts. As a result, spatial patterns of economic change have increasingly been influenced by the choices that the most skilled elements of the workforce make about where they prefer to work and live.

Using a methodology based upon employment, labour market, migration and econometric analysis, the report assesses how MCR and its component parts have performed. It looks at MCR relative to counterparts centred upon Birmingham, Bristol, Glasgow, Leeds and London, in developing and attracting high skilled people and jobs and in supporting improved economic performance within and beyond the immediate city region. Even though these comparators have been the best performing large metropolitan areas of the UK in recent years, MCR's performance is found to compare well.

MCR is shown to contain a higher concentration of jobs in key knowledge-based industries (KBIs) than any of the comparator areas bar London. It also has access to a larger, high skilled residential population than the other provincial city regions. Whilst there is no evidence to suggest that growth in high skilled employment within MCR has reached or passed a critical 'take-off point', its recent performance in terms of KBI employment growth, particularly in ICT and business services sectors, has been strong.

Recent patterns of change in MCR's high performance sectors have, however, produced a profoundly south-facing city region. The traditional core employment area in the centre-south of MCR, contained within the districts of Manchester, Salford and Trafford, remains dominant in terms of the concentration of KBI sectors and has experienced some of the biggest increases in high skilled employment.

High growth rates and substantial concentrations of KBI employment elsewhere in MCR tend to be found mainly in the southern part of Greater Manchester and North Cheshire. These areas also contain the residential areas that tend to be preferred by MCR's highest skilled workers. Indeed there is some evidence of the decentralisation of high skilled employment to southern fringes of the city region as jobs follow skilled people. However, this trend is less well established than is the case for London and its surrounding area.

MCR is found to perform reasonably well, compared to the other provincial city regions, in its ability to attract young migrants at an early stage in their careers and workers in high status occupational groups. The former tend to gravitate to core areas of the conurbation, particularly in Manchester and Salford, whereas the latter tend to choose suburban locations, predominantly in the south of the city region. It also imports large numbers of students from the rest of the Northwest and other areas, domestically and internationally.

MCR's ability to retain workers in high status occupations and 25 to 44 year-olds, the age group that is likely to be most mobile in career terms, also compares well with the other provincial city regions. MCR's key regional role, in particular, is highlighted by the fact that a high proportion of both groups remain in the region. All of the provincial city regions, however, compare badly to London and its surrounding area in this respect.

MCR loses a substantial proportion of its high skilled and mobile young workers to London and the Southeast. Retention rates for graduates are higher in MCR than the other provincial city regions but substantially lower than the capital. London and the Southeast are also the most popular first job destinations for Manchester graduates after MCR itself and the Northwest region.

MCR's performance in terms of high skilled jobs and people is not matched by its productivity, which is comparatively modest. Partly this is due to the substantial gap in productivity (GVA per employee) between southern and northern Greater Manchester, but it is also correlated to the relatively high levels of people lacking qualifications within the whole MCR workforce. The high level of productivity in the area centred upon Bristol, relative to the other city regions, appears to be related to its more extensive labour market inter-actions with London and the Southeast.

Whilst there are some examples of skills gaps in certain sectors and occupations in MCR, it appears that, overall, the city region's employers have been able to satisfy their skill requirements without major difficulty, even during a period of sustained, national economic growth. Differences in productivity, therefore, are more likely to be related to the quality of high skilled jobs available in MCR, relative to the greater south of England in particular, than to difficulties in attracting people with the right sorts and levels of skill.

The robustness of the relatively positive picture painted by the report is clearly threatened by the current recession which is likely to have profound, if uneven, impacts upon MCR's performance in developing high skilled employment for some time to come. The prospects for financial and related services employment, at least in the short term, are particularly uncertain and the fiscal stimulus produced in response to the sudden downturn is likely to generate pressure on public service employment in the medium term, once a measure of stability has been achieved. The long term necessity of continuing to prioritise the growth of high skilled employment, and the attraction and development of high skilled people within MCR, will nonetheless remain.

Because the research underpinning the report concentrated upon high level findings about economic change rather than the impact of particular policy initiatives, it is not possible to draw fine-grained policy conclusions. The concentration, instead, is on identifying a number of strategic dilemmas which need to be faced by future city regional economic strategies. These can roughly be divided into demand side and supply side considerations.

On the demand side, the priority is to increase the density and level of high skills needed by MCR firms and organisations. The major strategic consideration, here, is the relationship between MCR and England's greater-south and the extent to which future strategy sees MCR effectively as a subsidiary to the capital, performing relatively similar functions at a lower level, or seeks to build upon independent, niche strengths that are less connected to the fortunes of London and its surrounding area. Policy choices, here, make a substantial difference to sectoral development priorities.

The other key demand side issue is how to encourage existing or future MCR firms to move up the value chain. The way in which the city region capitalises upon its research and development strengths is particularly important here.

On the supply side, the priorities are to maximize the pool of high quality labour to which MCR firms and organisations have access and ensure that this pool, so far as possible, can be found within MCR. This raises issues for education / skills, transport and housing policies.

The education and skills issues are the most intractable, but it is important that MIER lessons about the characteristics that enable neighbourhoods to promote rather than prevent social and occupational mobility are learned effectively.

Within the transport field, the key to enhancing the 'effective density' of MCR's high skilled labour market is to deliver on the promise of the stalled TIF bid and improve access to key employment centres through public and private transport infrastructures.

In the housing field, the critical issues concern realism about where higher skilled workers will most likely want to live in an increasingly south-facing city regional economy and building upon successes in the north of MCR in attracting high status households.





1.0 STUDY RATIONALE AND KEY QUESTIONS

The aims of this project are to assess the relative vitality and future potential of the MCR and its component parts in developing, attracting and retaining highly skilled workers.

1.1 Overview

It examines the contribution that a range of city regional assets do and can make to its performance in this respect.

Underlying this overall aim, was a series of objectives which were to:

- Compare and contrast MCR's success in growing and attracting highly skilled labour, with that enjoyed by other key city regions in the UK, and assess the productivity benefits that are associated with its performance in this respect;
- identify the key assets and attributes that underpin MCR's current status and future potential as a 'talent magnet' relative to comparator city regions;
- assess the degree to which MCR, relative to other city regions, appears to have achieved sufficient critical mass in knowledge-rich sectors of economic activity to experience high levels of employment growth and wealth creation in the future;
- identify supply side barriers that might prevent the city region from realising its full potential in this respect;
- assess the potential gains that MCR could realise from improvements in the skills base

and the challenges that remain in bringing this about, particularly in relation to the creation of demand for further high skilled labour; and

- outline how public policy contributes to the factors found to be important in explaining MCR's standing as a 'talent magnet' and what changes might feasibly be introduced to enhance its capacity in this respect.

The critical role played by high level skills in the growth and productivity of urban economies has received increasing attention from academics and policy-makers, in recent years, as the importance of 'agglomeration' has been rediscovered.

This report is an executive summary which concentrates upon providing answers to the key questions that were set out in the team's original proposal, rather than rehearsing the methodological and data challenges that had to be overcome.

Further detail on these aspects of the study along with more detailed findings can be found in three companion working papers (appendices), dealing with employment and skills, migration, and productivity which, along with the team's initial literature review, are each available to download at:

www.manchester-review.org.uk

1.2 Agglomeration and skills

Agglomeration – meaning, literally, the gathering together of activities in a mass - is not a new concept. It has long been used, within academic circles, in attempts to explain the morphology of particular urban areas and the development of dispersed, multi-polar urban systems comprising cities and towns of different status and size. Neither is agglomeration a clear and unambiguous notion.

There are two distinct traditions within agglomeration analysis. One stresses the specific advantages that firms derive from co-locating within particular places ('localisation economies'). The other focuses on the broader influence on the locational preferences and productivity of workers and households, as well as firms, of differences in city size, heterogeneity and density ('urbanisation economies').

The continued influence of these alternative traditions in agglomeration analysis can be seen in the recent development of two very different and popular 'takes' on the sources of competitive advantage enjoyed by particular places, be they cities, regions or other geographical units.

One concerns the importance of tacit knowledge, untraded inter-dependencies and inter-firm networking in the development of industrial and commercial 'clusters'. The other the importance of key features of urban environments (e.g. diversity, tolerance, residential amenity and cultural 'buzz') in attracting the talented people who drive business innovation and competitiveness.

The approach taken within this study is broadly sympathetic to the idea that the emergence of the innovative 'milieux', that have helped drive improvements in urban productivity in recent years, are bound up with the generalised and variable attractiveness of cities to talented people. An area's functionality for firms, in a narrow sense, is not the only issue.

This is consistent with growing evidence that it is the larger, more economically diverse and best connected cities and city regions in the developed world that have prospered most in the transition to a knowledge-based economy.

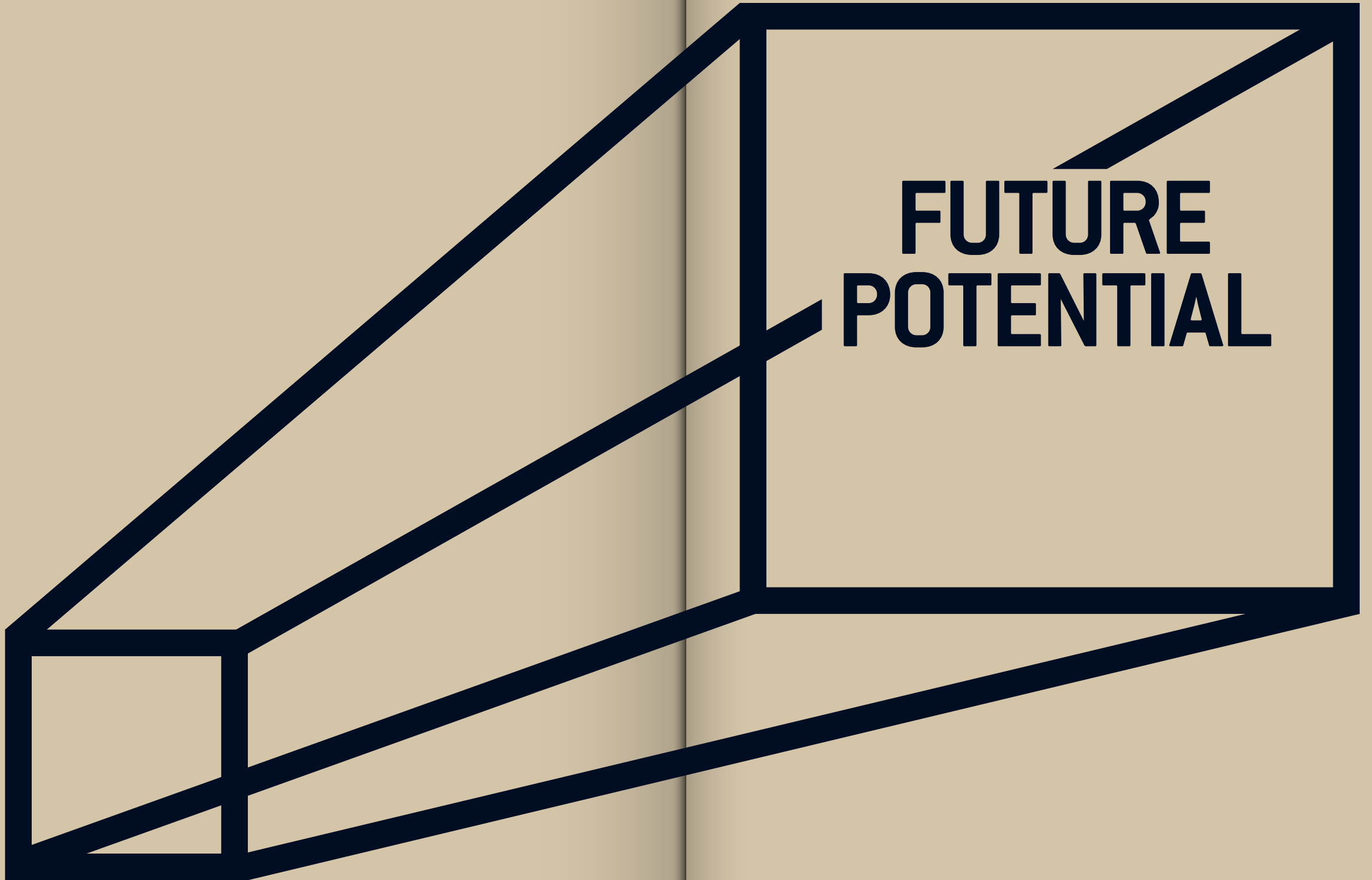
However, the study takes issue with the view that the attractiveness of key features of the urban environment to the most talented people has become so critical, that the geography of economic innovation is now driven primarily by the quality of life preferences of the highest skilled members of the labour force.

The problem with this understanding, as we see it, is not that it is wrong to suggest that the most productive places are those where the most talented people usually want to be. Rather, we suggest, the locational preferences of the highest skilled workers are shaped, first and foremost, by career development opportunities.

In practical terms this means the density and availability of high level employment that can be accessed by, in many cases, dual income households.

Seen in this light, the relationship between career development choices and quality of life / environment preferences is not a straightforward one.

On one hand, these two facets of a households' location decisions inevitably have to be traded off against one another. Highly skilled and aspirational workers must decide whether the career development advantages of key urban 'hot spots', which tend to be characterised by higher property prices, longer commutes, overcrowded infrastructures, strong competition for schools and so on, outweigh the benefits to be enjoyed in cheaper, less congested and less competitive labour market areas.



**FUTURE
POTENTIAL**

On the other, the demand created by dense concentrations of highly skilled, affluent and discerning workers and households, generates the supply of particular services and facilities that make this trade-off more comfortable and tolerable. Dense concentrations of high level skills tend to produce high quality amenities and urban 'buzz', not vice versa.

It is possible to go further than this and suggest that the differential agglomeration effects, which influence household migration decisions, also drive productive public spending decisions in relation to a variety of urban assets. This is particularly true of the current policy agenda which has been strongly shaped by the argument that the most appropriate role for the public sector, in the face of divergence in spatial economic performance, is to address the diseconomies produced by 'the new agglomeration'.

This is indisputably the case, for example, in the fields of transport, housing / planning and skills where policy priorities have been shaped, respectively, by the Eddington, Barker and Leitch reviews.

All of these argue, essentially, that national economic efficiency is best served by addressing the inter-related pressures triggered by high demand for transport, services and housing; and the skills shortages induced by high property prices, especially in southern England.

There is also a life-cycle element to the way high skilled workers balance career development and quality of life choices. A trade-off which may seem appropriate for a young, single, professional worker in his or her first job becomes markedly less attractive when he or she is older and has a partner and children of secondary school age.

One of the problems with the argument that the most talented people increasingly choose their locations on the basis of lifestyle advantages, rather than 'trade them off' against career development opportunities, is that it too easily gives rise to simplistic policy debates and prescriptions.

In attempting to avoid this pitfall, this study turns to the less celebrated notion that cities and city regions perform differently depending upon the degree to which they act as 'escalators' and 'fountains' with respect to high skilled, aspirational workers.

In essence, this approach suggests two things: Firstly, that variation in the attractiveness of cities to such workers is based on the range and depth of opportunities they offer for career progression (the 'escalator' effect). Secondly, that having benefited from riding the escalator, highly skilled workers, at a certain stage in their life cycle, often choose to relocate.

This could be to step off the escalator entirely (e.g. to retire or 'get out of the rat race') or to base themselves where it is possible to remain part of the urban labour market, through longer range commuting, or to use the skills they've developed to found or join companies which still often rely upon urban business opportunities.

The geographical patterns produced by these relocation decisions together, describe the 'fountain' effect whereby more peripheral areas benefit from the decentralisation of urban talent and wealth. The latter is particularly important to some important debates about the 'spill-over effects' of urban employment growth and productivity, on areas within and beyond the host city region.

Described in this terminology, the empirical work of the study was designed to assess the attractiveness and power of MCR and its component parts as an 'escalator' and to assess the impact of its 'fountain' effect, relative to other areas within the UK.

In preparing this report, we found it useful to break the study objectives down further into a series of more sharply defined questions that, once put into logical order, provide the overall framework for the study's results. They are as follows:

- How does MCR compare with other key UK city regions in terms of absolute numbers of, and recent growth in, highly skilled jobs and residents?
- Where does MCR's highly skilled workforce predominantly live and how does MCR compare with other city regions, in terms of the supply of highly skilled workers on which it can draw?
- Have certain threshold levels been reached in MCR and other city regions, at particular points in time, after which there was a clear acceleration in the growth of highly skilled employment, either overall or in specific sectors?
- Where are the main concentrations of high skilled employment, and the sectors that contribute the most to them, located within MCR?

- Has the geography of high skilled employment changed in the period covered by the study? If so, has there been a process of decentralisation or (re)concentration of knowledge-intensive sectors within MCR? What might explain such changes?
- Compared to other city regions, how effective is MCR in attracting young, aspirational and highly skilled people? Where, within MCR, do they typically gravitate to?
- How does MCR compare with other city regions in its ability to retain highly skilled employees and which areas benefit most from the migration of such workers away from MCR?
- To what extent does the density of skills within MCR help explain its level of productivity relative to other city regions?
- How does MCR stand, comparatively, in relation to the key assets that are argued to help attract and grow highly skilled employment and improve urban productivity?
- What skills are known to be in short supply in MCR, and do current and recent skill shortages suggest that there are specific, persistent difficulties in attracting highly skilled staff, either generally or within particular occupations and sectors?
- Is there evidence to suggest that particular barriers or constraints exist in MCR that limit its relative attractiveness to highly skilled staff and knowledge-intensive businesses?
- How is the demand for skills likely to change in future?
- How does public policy contribute to the factors found to be important in explaining MCR's standing as a 'talent magnet'? What changes might feasibly be introduced to enhance its capacity in this respect?

1. STUDY RATIONALE AND KEY QUESTIONS

This document works through these questions in turn, grouping them together where appropriate, and outlines the key evidence produced by the study team in attempting to answer them.

It is organised into nine further sections dealing broadly with the following:

- MCR's relative standing as a centre for high skilled employment (Sections 2 to 4);
- the distribution of high skilled employment within MCR (Section 5);
- MCR's performance as an attractor and exporter of high potential and high skilled workers (Section 6);
- the relationship between high level skills and productivity (Section 7);
- the importance of skills relative to other key attributes and endowments of MCR (Section 8); and
- the recent and likely future relationship between demand for and supply of high skilled labour and the contribution that public policy does, and could, make to supporting and enhancing MCR's highly skilled employment base (Sections 9 and 10).

2.0 URBAN SKILLS: HOW MCR COMPARES

How does MCR compare with other key UK city regions in terms of absolute numbers of, and recent growth in, highly skilled jobs and residents?

2.1 Comparing MCR's performance

The relative power of the 'escalator effect' produced by a particular urban labour market depends upon the range, depth and intensity of high skilled jobs it offers. Therefore the first question the study addresses is how MCR compares to other key city regions in terms of the concentration of high skilled employment and the extent to which this has changed over time.

Three main datasets are useful when examining the demand for and supply of high level skills in urban labour markets: a firm-based measure of employment in key Knowledge Based Industries (KBIs), which demand high skill levels from their workforces, and people-based measures of the numbers of residents (a) within higher occupational groups and (b) possessing high level qualifications.

Recent economic history suggests a clear trend towards higher skilled employment in advanced economies, driven by a structural shift towards the service sector and a pronounced job loss in manufacturing. This is brought by greater capital intensity, increased global competition, and the outsourcing of production to lower cost economies, which has also led to the raising of overall skill levels within manufacturing sectors.

The familiar contours of recent structural change are summarised in Tables 1 and 2. Table 1 shows that changes in employment within broad sectors across MCR, as a whole between 1981 and 2006, were relatively similar to those at the regional and national levels. The decline in manufacturing (-54%) was offset by growth in services, especially in banking, finance and insurance (+120%).

Treating MCR as a single unit, however, masks significant differences between both the northern and southern parts of the city region, as well as within districts. These are revealed in Table 2 which shows that the northern MCR districts (Bolton, Bury, Oldham, Rochdale and Wigan), although suffering heavy job losses in manufacturing during the period, still remain very reliant on manufacturing sectors.

The southern districts (Congleton, Macclesfield, Manchester, Salford, Stockport, Tameside, Trafford, Vale Royal and Warrington) have benefited more from growth in services. In particular, those service sectors that typically demand higher skills and qualification levels.

Indeed, the net job gains achieved across MCR as a whole, during the last 25 years, are due entirely to growth in the south of the city region, which also contains its regional centre. Within this overall picture, employment in KBIs has been a key driver of recent improvements in urban economic performance in MCR, as elsewhere.

Table 1: Employment change by broad industrial sector, 1981 to 2006

	MCR			NW			UK		
	1981	2006	81-06 Percent change	1981	2006	81-06 Percent change	1981	2006	81-06 Percent change
Employment ='000s									
Manufacturing	407	186	-54.3%	851	408	-52.1%	6,106	3,245	-46.9%
Construction	106	118	11.3%	213	224	5.2%	1,842	2,129	15.6%
Distribution, hotels & restaurants	310	379	22.3%	649	796	22.7%	5,340	6,993	31.0%
Transport & communications	89	113	27.0%	194	212	9.3%	1,666	1,861	11.7%
Financial & other business services	164	361	120.1%	328	636	93.9%	3,071	6,398	108.3%
Public admin, education & health	287	379	32.1%	629	873	38.8%	5,431	7,766	43.0%
Other services	63	94	49.2%	141	202	43.3%	1,205	1,991	65.2%
Total	1,476	1,643	11.3%	3,116	3,391	8.8%	25,908	30,987	19.6%

Source: Greater Manchester Forecasting Model.
Primary industries not shown in sector breakdown, but included in total.

As Table 3 shows, MCR has significantly higher volumes of KBI employment than other provincial city regions and a higher percentage of jobs in KBIs than its main northern and midland comparators (focused upon Leeds and Birmingham, respectively). However it trails London, unsurprisingly, in terms of KBI job numbers and also trails London and the Bristol city region in terms of the percentage of jobs accounted for by KBIs.

Within the comparator group, only London and the Bristol city region have a greater proportion of KBI employment than the national average. This underlines the extent to which high level skills are concentrated in the south of the country, even compared to the best-performing provincial cities.

The more disaggregated data, summarised in Table 4, shows that the size and composition of KBI employment found in the comparator areas varies significantly from sector to sector. MCR, like all provincial city regions, lags well behind the capital in the volume of employment in all the KBIs, except for high-value manufacturing.

However, when MCR is compared to other provincial city regions, it is shown to have significantly higher volumes of KBI employment, especially in business services and ICT.



Table 2: Employment change by broad industrial sector in the north and south parts of MCR, 1981 to 2006

Employment ='000s	MCR NORTH			MCR SOUTH		
	2006	Change 1981 to 2006		2006	Change 1981 to 2006	
Manufacturing	97.2	-123.9	-56.0%	89.0	-96.8	-52.1%
Construction	52.5	8.9	20.4%	65.3	2.9	4.6%
Distribution, hotels & restaurants	149.7	23.6	18.7%	228.2	44.1	24.0%
Transport & communications	35.6	6.6	22.6%	78.3	18.1	30.0%
Financial & other business services	80.5	40.4	100.7%	280.7	156.5	125.9%
Public administration	24.6	-6.4	-20.6%	43.4	-13.2	-23.4%
Education & health	122.6	44.8	57.5%	187.5	66.3	54.8%
Other services	36.3	11.0	43.5%	58.5	21.0	56.1%
Total	602.6	-10.6	-1.7%	1040.8	178.5	20.7%

Source: Greater Manchester Forecasting Model.
Primary industries not shown in sector breakdown,
but included in total.

Table 3: Total employees in KBIs; percentage of total employment; and location quotients compared to the average for Great Britain, 2006

	KBI EMPLOYEES ABSOLUTE NUMBERS IN 2006	KBI AS % OF TOTAL EMPLOYMENT	LOCATION QUOTIENT vs GREAT BRITAIN (GB=1.00)
Employment			
MCR	623,000	42.6%	0.98
Northwest	1,265,000	42.2%	0.97
Birmingham	503,000	39.8%	0.91
Bristol	247,000	48.3%	1.11
Glasgow	413,000	43.4%	0.99
Leeds	465,000	42.2%	0.97
London	2,102,000	52.6%	1.20

Source: Annual Business Inquiry, DNS
(from Nomis: www.nomisweb.co.uk).
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Table 4: Summary of comparative concentrations of employment in KBIs within MCR, 2006

SECTOR	TOTAL NUMBER EMPLOYED IN 2006	TOTAL MCR EMPLOYMENT AS % OF EMPLOYMENT IN LONDON	TOTAL MCR EMPLOYMENT AS % OF EMPLOYMENT IN NEXT BEST PERFORMING CITY REGION OUTSIDE LONDON	SUMMARY OF EMPLOYMENT AND OCCUPATIONAL STRENGTHS	KEY LOCATIONS
ICT	45,400	31%	160%	Twice number of Leeds and Bristol city regions, and clear strengths in higher skilled software professionals and ICT managers. Software development and consultancy emerge as sectoral strengths.	Concentrations in south Manchester and Warrington.
BUSINESS SERVICES	169,100	26%	137%	Comparative strength of city region, ahead of Leeds, Bristol and Birmingham. Strong growth in legal employment, both professional and associate professionals. Also growth in business & statistics professionals, along with functional managers.	Different components of the sector concentrated in different locations (eg. legal, accounting etc. in Manchester, engineering consultancy in Warrington).
FINANCIAL SERVICES	56,400	18%	100%	Not a strength of MCR, with financial intermediation (banking related activity) the main component of the sector, principally in insurance and pensions sub-sectors. Administrative and customer service occupations predominant.	Concentrated in the City of Manchester, with smaller concentrations in urban centres. Some employment dispersed in business parks.
CREATIVE MEDIA (SUB-SECTORS: TV, FILM, RADIO, PUBLISHING AND NEWS)	26,500 (8,700)	14% (8%)	92% (60%)	Does not stand out as a current strength of the city region, with the bulk of employment in libraries, museums and related activity. Some television, radio and printed media employment (but this contracted between 2001 to 2006). Biggest recent growth in functional managers and production managers.	Manchester is the key employment centre for the sector, but Salford Quays will be significant node for future jobs with arrival of BBC and related activity.
KNOWLEDGE INTENSIVE MANUFACTURING	19,600	144%	124%	Sector dominated by pharmaceuticals industry. Occupational growth driven by functional and production managers. Some concentrations of aerospace and other advanced engineering.	AstraZeneca ensures Macclesfield stands out, but other concentrations in Oldham, Tameside and Stockport.
PUBLIC SECTOR	302,800	39%	108%	High volume of employment driven by public service needs of population centres (e.g. hospitals). Higher skilled employment risen in health and higher education, but difficult to distinguish 'knowledge intensive employment' from that which requires degree level qualifications for job entry.	Widely distributed across the city region, with concentrations in major centres which house administrative functions, the universities etc.

MCR v

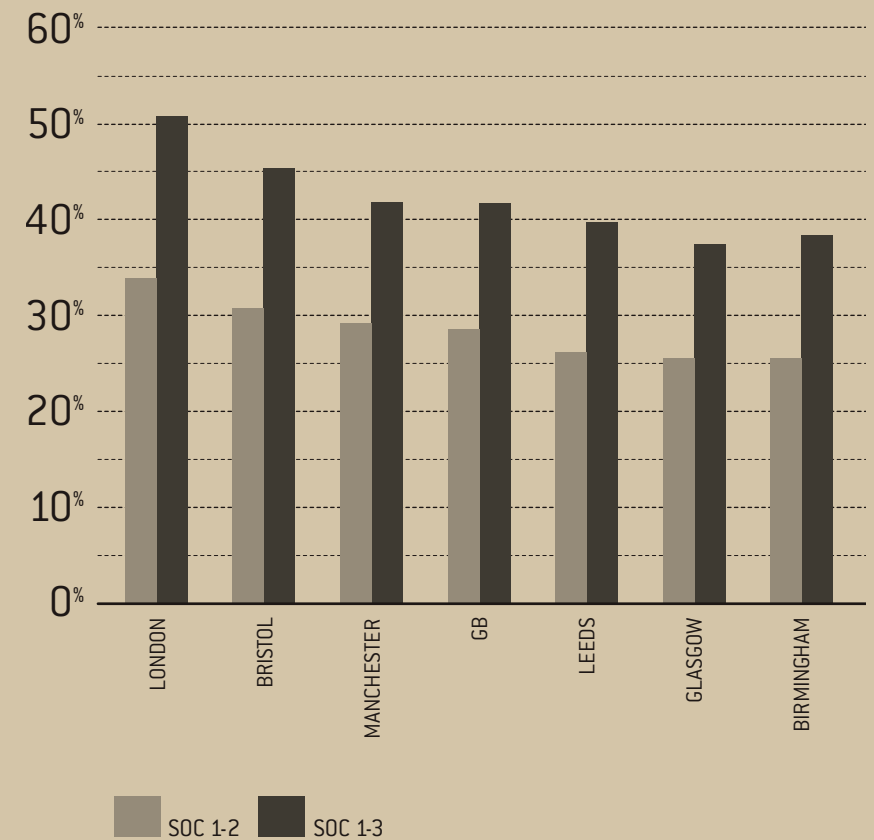
Yet, although MCR does appear to have specialisms within these KBIs, relative to the other provincial city regions, the general spread across KBIs in all cases is broadly similar. None have the depth of specialisation found in London or in parts of the super-region that surrounds it, for example - the ICT specialisms found within the Thames Valley and around Heathrow airport.

A similar comparative picture emerges in relation to the pattern of high skilled occupations. Here, the focus of the study was upon the two highest skilled occupational groups; managers and senior officials and professionals (Standard Occupational Classification, SOC categories 1 & 2).

However, it also includes associate professionals (SOC 3), since this category accounts for many highly skilled jobs which are prominent in KBIs, such as creative and media and financial services occupations.

Figure 1 shows these two groupings of occupations (SOC 1, 2 and 3) as a percentage of total employment in MCR compared to that in London and the other provincial city regions. MCR is shown to have a total of 425,000 people working in occupations covered by SOC 1 and 2 and 640,000 in SOC 1 to 3, equivalent to 28.2% and 42.7% of total employment, respectively.

Figure 1: Employment in higher level occupations, comparator areas, 2006

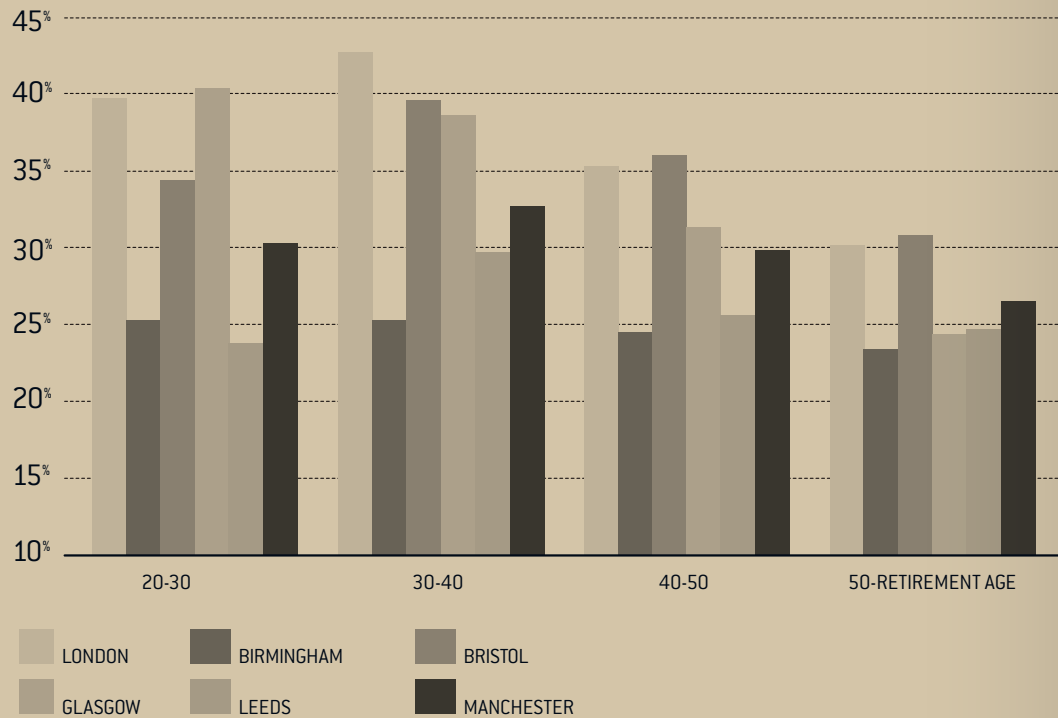


Source: Annual Population Survey, ONS (from Nomis: www.nomisweb.co.uk). © Crown Copyright.

This places MCR ahead of the national average and the Leeds and Birmingham city regions, but behind Bristol and some way short of London.

Figure 2 demonstrates that there is a similar picture with respect to the proportion of the resident population who have high level qualifications. It shows that MCR has a higher proportion of residents qualified to NVQ Level 4 (and above) than either the Birmingham or Leeds city regions, but a lower percentage than the Glasgow and Bristol city regions and significantly lower than London.

Figure 2: Percentage of resident population with NVQ Level 4 (and above) by age group, MCR and comparator areas, 2006



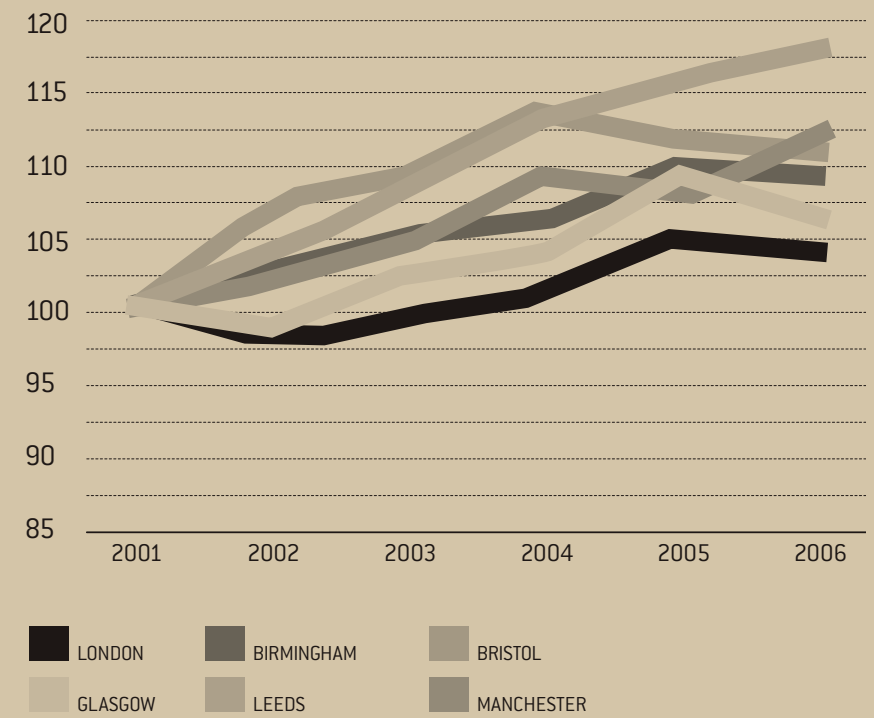
Source: Annual Population Survey, ONS [from Nomis: www.nomisweb.co.uk]. © Crown Copyright.

2.2 Recent performance

As is the case across the UK, MCR has seen its base of higher skilled employment in KBIs expand significantly in the last decade, particularly since 2001. Figure 3 and Table 5 together show that between 2001 and 2006, an improving trajectory in MCR (+64,100 jobs) kept pace with Birmingham and by 2006 was on a par with Bristol. In 2006, total KBI employment in MCR stood at around 623,000.

MCR did not, however, achieve the rate of expansion seen in Leeds over the same period. It should be recognised though, as noted above, expansion of KBI employment in MCR was from a higher base than in the other provincial city regions. Like London, the MCR is characterised by the creation of high volumes of KBI jobs, even though the percentage increases were comparatively modest.

Figure 3: Index of employment in KBIs (index: 2001=100), MCR and comparator areas, 2001 to 2006



Source: Annual Business Inquiry, ONS [from Nomis: www.nomisweb.co.uk]. © Crown Copyright.

In terms of workforce qualifications, MCR saw a 4.9% increase in the number of residents qualified to NVQ Level 4 or above over the same period. This lags behind London (13.5%) but exceeds that in Birmingham (4.2%), Bristol (3.6%) and Leeds (1.9%).

Overall then, in the period since 2001, the increase in the highly skilled population in MCR has seen a positive shift in terms of its ability to supply KBIs with the higher skilled staff they require. This has, in turn, increased the 'density' of its higher skilled labour markets.

This improving position in the number of degree-educated residents is borne out by data on occupational change between 2001 and 2006. Here, as Figure 4 shows, MCR experienced a significant increase in the number of people in the highest grouping (managers and senior officials) which exceeded the UK average. However the rate of change for both professionals and associate professionals was much lower, over the same period.

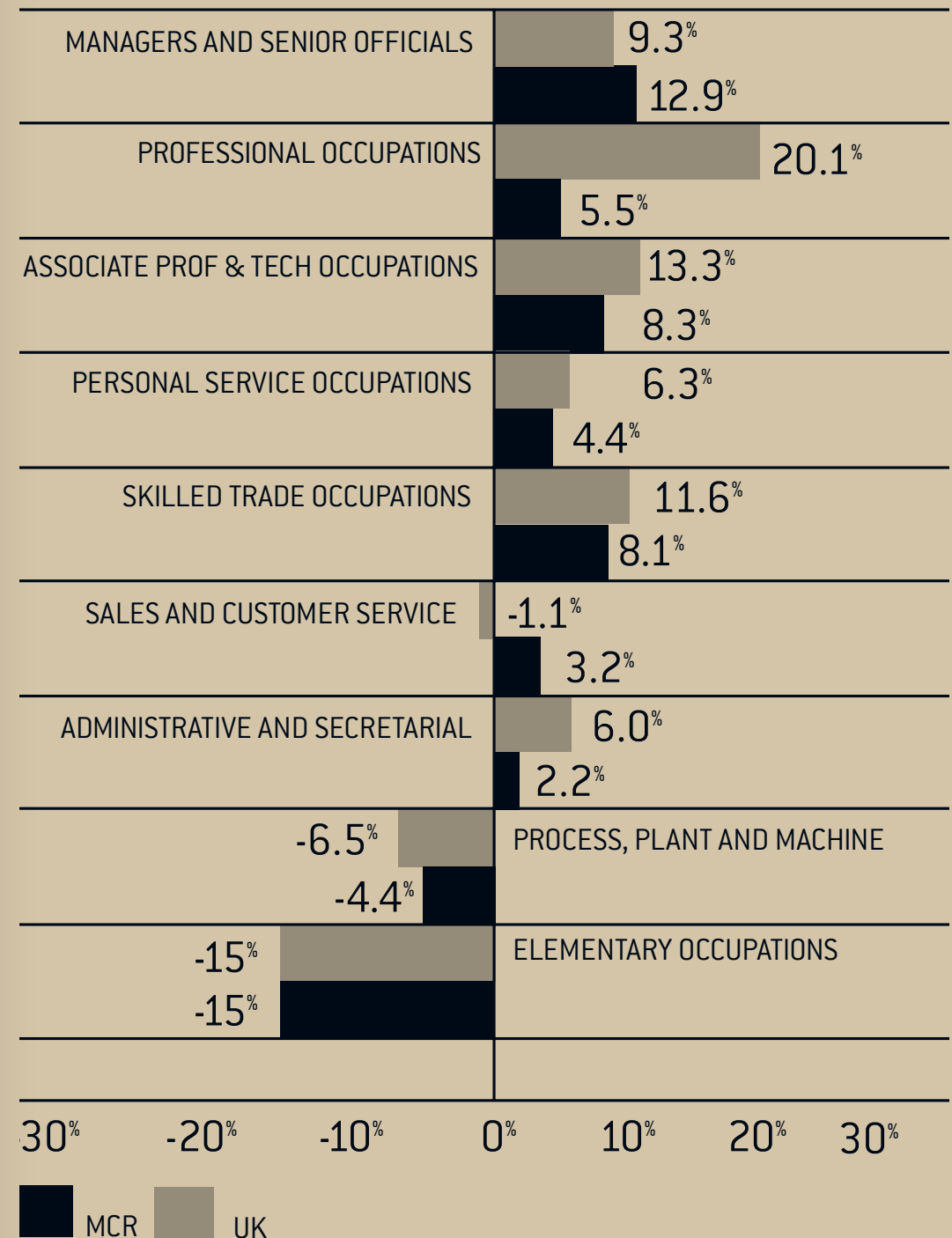
Across the KBI sectors considered, MCR has seen robust levels of demand from multiple employers for people with higher level skills. As noted below, however, there is little to suggest that this pattern of change has resulted in the growth of output or productivity, over and above that which should be expected during a period in which the UK economy (particularly service industries) experienced unprecedented and consistent expansion.

Table 5: Change in KBI employment, 2001 to 2006

	MCR CHANGE 2001 TO 2006		LONDON CHANGE 2001 TO 2006		CHANGE IN THE NEXT HIGHEST COMPARATOR CITY REGION 2001 TO 2006		
	NUMBER	PERCENT	NUMBER	PERCENT	LOCATION	NUMBER	PERCENT
ICT	8,700	23.8	-23,300	-13.5	Bristol	-200	-0.9
Business Services	39,000	29.9	46,600	7.6	Leeds	34,300	47.5
Financial Services	2,300	4.3	-30,500	-8.9	Leeds	8,200	17.0
Creative Media	1,000	4.0	-21,500	11.4	Leeds	4,950	20.7
Knowledge Intensive Manufacturing	-4,900	-20.0	-8,500	-38.5	Bristol	-2,600	-16.9
Public Sector	16,200	5.7	117,500	18.0	Birm'ham	34,200	14.0
Total in KBIs	64,100	11	93,200	4	Leeds	71,900	18

Source: Annual Business Inquiry, ONS
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Figure 4: Change in occupational groups in the workforce, MCR and UK, 2001 to 2006



Source: Annual Population Survey, ONS
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3.0 THE RELATIVE DRAWING POWER OF MCR'S EMPLOYMENT CORE

Where does MCR's highly skilled workforce predominantly live? How does MCR compare with other city regions in terms of the supply of highly skilled workers on which it can draw?

3.1 Areas of influence

All major cities contain more jobs than economically active residents and the most successful attract growing numbers of commuters from ever-increasing distances. An analysis of these travel-to-work areas helps establish the size of a major employment centre's 'footprint'. Comparisons between the different city regions can establish one aspect of their drawing power.

The key focus here needs to be on the 'core area' of the city region that contains the densest concentration of jobs. As Figure 5 shows, if the three local authority districts of Manchester, Salford and Trafford are defined as the core employment area of MCR, the geography of the higher skilled component of the city regional labour market, at the time of the last census, was extensive. It reached well into Lancashire, Derbyshire, and Merseyside, as well as much of Cheshire.

The key role that MCR plays, especially since 2001, as an employment location in the Northwest region and beyond, is underlined by the fact that the core employment area is effectively competing with other, smaller employment centres, including Liverpool, Preston and Chester, for higher skilled labour.

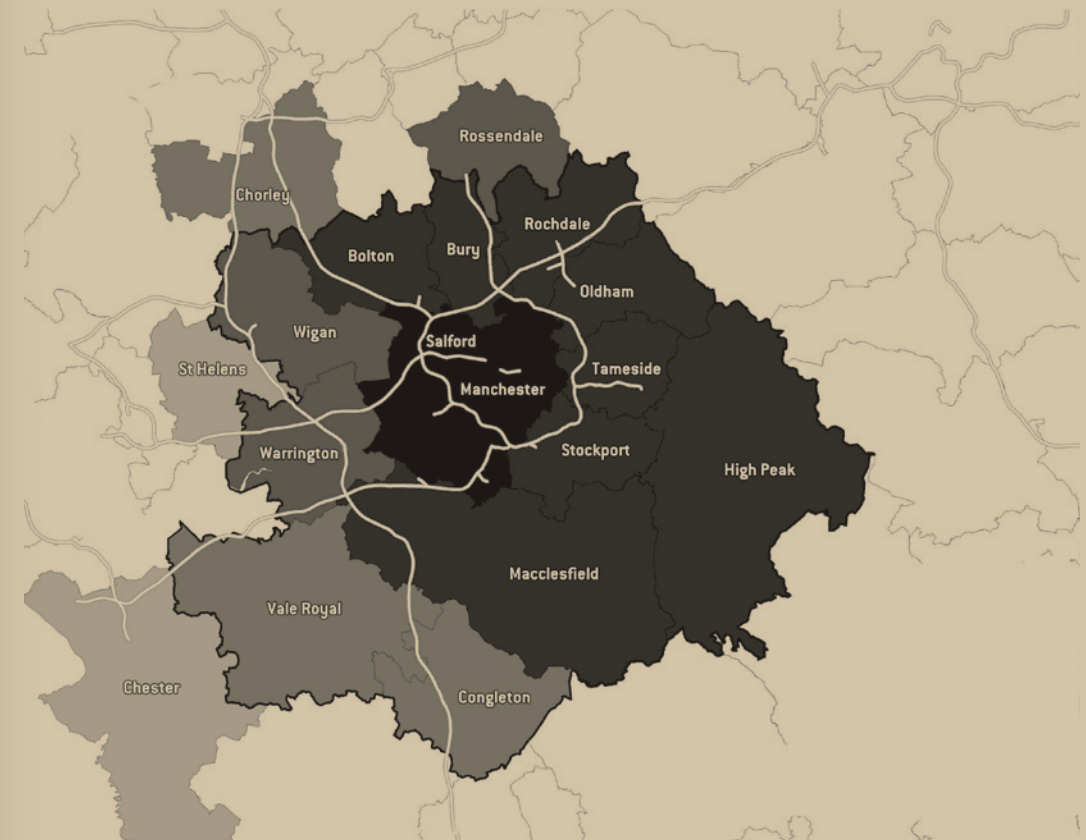
The three local authority districts within which MCR core employment area falls (especially Trafford) contain some of the high status residential areas favoured by highly skilled, well-rewarded workers.

For the higher level occupational groups who reside outside these 'core districts', flows from districts surrounding Manchester and High Peak were markedly higher than those from districts to the west of the city region.

Stockport, Bury and Tameside were the three highest ranking districts in terms of the proportion of higher skilled workers who commute to Manchester, Salford or Trafford. Together, they sent close to 14,000 higher managerial and professional people to work in these districts each day.

Part of the explanation for the lower inflows from Wigan, Warrington and Vale Royal are due to their stronger travel-to-work links with Liverpool and Chester. Warrington, as an important secondary location for higher skilled employment in its own right, also drew strongly on the MCR labour market. Clearly, access to motorway, trunk road and public transport networks around MCR is an important factor in travel-to-work patterns.

Figure 5: Percentage of higher managerial and professional employees in neighbouring districts working in Manchester, Salford and Trafford



Source: Census, 2001.
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Percentage of Class 1 workers in Manchester, Trafford & Salford

- Urban Core
- 20 to 50%
- 15 to 20%
- 10 to 15%
- 5 to 10%
- less than 5%
- MCR Boundary
- Motorway

The ring of districts located around the M60 benefit from easy access to all parts of the core employment area, while the M56, M62, M61, M6 and M66 motorways provide good links from the rest of the Northwest and neighbouring regions.

The geography of highly skilled commuters is not just a function of the transport system, however. The tendency for areas south and east of the core employment area to provide a greater proportion of the higher skilled labour, also reflects the operation of the housing market, illustrating the residential preferences of skilled and qualified workers and their households.

These findings also emerged clearly from the work of the MCR 'Making Housing Count' study¹ which showed:

(a) relatively weak interaction between housing markets in the northern and southern parts of the city region;

(b) a pattern of commuting from high status residential areas in the north of the city region to be focused upon the townships within the north; and

(c) a pronounced tendency (reflected in house price gradients) for the most affluent commuters to the core employment area to prefer residential locations in the southern parts of MCR and Cheshire.

There is no reason to assume that these patterns have done anything but intensify in the period since the census.

Table 6 shows MCR to have been positioned favourably in terms of the potential size of the Higher Managerial and Professional (HMP) workforce on which it could draw at the time of the last census.

Setting the travel-to-work threshold at the 15% level,² MCR emerged as second only to London amongst the comparator areas, for the number of higher skilled managerial and professional people that can be considered as part of its extended travel-to-work area.

Only if Leeds and Bradford are defined as a single employment core, did the figure for any of the other provincial city regions come close to that for MCR. When this is set against the potential 900,000+ HMP population resident in London, however, the imbalance between the capital and the rest is clear.

An interesting finding from the travel-to-work analysis is the variation in what might be described as HMP 'penetration levels', i.e. the percentage of the potential HMP workforce that is actually captured by the core employment area. MCR is one of the lower ranked city regions on this measure, along with Bristol.

This is explained to some extent by the number of alternative employment locations in the extended travel-to-work area in both cases, both outside the core but within the city region (e.g. Warrington in the MCR case) and beyond the city region altogether (e.g. Chester, Liverpool and parts of the M56 corridor in the MCR case).

¹ Association of Greater Manchester Authorities (2007): 'Making Housing Count in the Manchester City Region'.

² Travel-to-work thresholds are calculated as a percentage of total resident HMP of the source district.

Table 6: Potential size of higher managerial and professional labour markets and penetration rates within UK city regions, 2001 (15% travel to work area threshold)

LAD = LOCAL AUTHORITY DISTRICT NUTS2 = SUB-REGION	HIGHER MANAGERIAL AND PROFESSIONAL RESIDENTS ALSO WORKING IN THE CORE	POTENTIAL HMP LABOUR MARKET WITHIN A 15% TTWA THRESHOLD	ACTUAL VOLUME THAT TRAVEL TO WORK IN THE 'CORE' AREA ³	'ACTUAL' AS A PERCENTAGE OF 'POTENTIAL' (PENETRATION)
Manchester (Manchester LAD core)	18,100	112,200	33,250	29.5%
Manchester (Manchester / Salford / Trafford core)	41,800	149,200	58,900	39.5%
Birmingham (Birmingham LAD core)	40,100	104,600	45,000	43%
Bristol (Bristol LAD core)	24,700	63,900	25,300	39.5%
Glasgow	26,745	95,300	40,850	43%
Leeds (Leeds / Bradford core)	43,000	113,300	61,100	54%
Leeds (Leeds LAD core)	38,900	101,100	42,150	41.5%
London (Inner London NUTS 2 Area)	266,100	912,500	458,650	50.5%

Source: Census 2001, ONS
(from Nomis: www.nomisweb.co.uk).
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³ Actual travel to work to the core, including core residents also working in core.

**4.0
HAS MCR
REACHED
OR PASSED
A 'TAKE-OFF
POINT'?**

Have certain threshold levels been reached in MCR and other city regions, at particular points in time, after which there was a clear acceleration in the growth of highly skilled employment, either overall or in specific sectors?

4.1 Evidence of take-off

Evidence from the study suggests that, whilst there are significant internal variations, MCR as a whole has negotiated the change to a knowledge-rich economy broadly successfully. It has shifted from a place characterised by a high level of employment in manufacturing to one in which service industries have become a pillar of the economy. Detailed assessment of changes in the business base, employment, skill levels and occupations, however, suggest a mixed picture across the KBIs.

Employment growth since 2000 within the software (ICT) industry and in business services has been particularly marked. This has raised demand for workers in higher occupational categories substantially. In other high profile sectors (e.g. media), however, MCR's profile is much lower, especially relative to London.

Finer grained analysis of KBIs, shows that the strengths of MCR appear to lie in some sub-sectors more than others. Software development and consultancy stand out in the ICT industry, while there is evidence that the city region has seen significant increases in the density of high level employment in the legal profession and accountancy (finance and statistics professionals).

Pharmaceuticals and life sciences also stand out, although the presence of AstraZeneca in Macclesfield accounts for much of MCR's density of high skilled employment within these sectors.

In none of these cases, however, is there evidence that a 'tipping point' was passed, after which the expansion of employment accelerated. This is apparent from a comparison of MCR's recent record of creating KBI employment and the concentrations it has achieved, with that of other city regions.



As Table 7 shows, the overall pattern of KBI growth suggests that MCR compares favourably to the Leeds and Birmingham city regions in terms of its recent dynamism, but again lags behind London and the Bristol city region. This does not hold for all sectors, but the prevailing gap in performance between northern and midland England and the greater south is clearly apparent.

The study also failed to find much evidence to suggest that MCR is competing more effectively in attracting higher value functions, for example Research & Design centres and Headquarter functions.

Indeed, whilst not a central concern for the research, there is considerable evidence to show that there has been a steady drift southward of such functions as independent companies across the north of England have expanded their markets, or more often merged into or been taken over by national or international concerns, that tend to locate their headquarters and other top-level functions in, or near London.

The location quotient (LQ) data in the fourth column of Table 7 shows how the concentration of employment in each KBI changed, relative to the national average, between 2001 and 2006. It demonstrates that:

- within ICT, LQ scores rose from a level denoting a concentration of activity significantly below the British average in 2001, to one well above it in 2006, indicating both rapid growth and a developing specialisation;
- within business services, whilst the LQ increase was not so pronounced, MCR's relative specialisation within this sector continued to grow; and
- in each of the other KBIs, with the exception of public services, concentrations of activity in MCR have converged towards the national level, but in no case is it any more specialised in the relevant activity than the country as a whole.

Table 7: Change in KBI employment numbers and relative density, 2001 to 2006

	NUMBERS EMPLOYED IN 2006	CHANGE 2001 TO 2006		LOCATION QUOTIENTS MCR VS GB=1		CHANGE IN WORKFORCE QUALIFIED TO LEVEL 4+ 2001 TO 2006
		NUMBER	PERCENT	2001	2006	
ICT	45,400	8,700	23.8%	0.87	1.12	—
Business Services	169,100	39,000	29.9%	1.03	1.10	—
Financial Services	56,400	2,300	4.3%	0.87	0.98	—
Creative & Media	26,500	1,000	4.0%	0.77	0.78	—
Knowledge Intensive Manufacturing	19,600	-4,900	-20.0%	0.84	1.03	—
Public Sector	302,800	16,200	5.7%	0.99	0.92	—
Total MCR	623,000	64,100	11%	—	0.98	4.9%
Birmingham	503,000	44,600	9%	—	0.91	4.2%
Bristol	247,000	29,700	13%	—	1.11	3.6%
Leeds	465,000	71,900	18%	—	0.97	1.9%
London	2,102,000	93,200	4%	—	1.20	13.5%

Source: Annual Business Inquiry, ONS (from Nomis: www.nomisweb.co.uk). © Crown Copyright

**5.0
THE
GEOGRAPHY
OF HIGH
SKILLED
EMPLOYMENT
WITHIN
MCR**

Where are the main concentrations of high skilled employment, and the sectors that contribute the most to them, located within MCR? Has the geography of high skilled employment changed in the period covered by the study? If so, has there been a process of decentralisation or (re)concentration of knowledge-intensive sectors within MCR? What might explain such changes?

5.1 Concentrations of high skilled jobs

The distinction made in Section 3 between the core employment area and the city region as a whole suggests we should expect there to be variation in the geography of employment. This is certainly true of KBI employment within MCR.

Broadly speaking, the core employment area of Manchester, Salford and Trafford local authority districts accommodates the bulk of KBI employment and has been the key location for recent growth.

The longstanding status of this area as the key commercial and trading hub of the conurbation and the main location for major public sector employers (universities, hospitals, government functions) helps explain the core area's traditional dominance in service sector activity, both public and private.

The one clear exception among the KBIs is knowledge intensive manufacturing, where the concentration of pharmaceuticals in Macclesfield and established strengths in Stockport, Tameside and Oldham results in a different pattern.

However, the recent expansion of employment in knowledge intensive services has also been a feature of Warrington, Stockport and large areas of Cheshire, once again denoting the increasingly south-facing nature of the city regional economy.

The parts of Warrington adjacent to the M62 and M6 motorways have a thriving office economy, while the M56 corridor together with settlements across Cheshire have also become important locations for key services. In addition, these areas have become important locations in their own right for ICT and business and financial services. Growing residential populations have also helped to drive up public sector employment.

The picture in the north of the city region is somewhat different. Each of the key population centres have smaller concentrations of KBIs linked to their town centre functions but, in general, the north has not seen KBI employment expand to the same extent as central, southern and western areas.

The development of a range of business parks has helped to sustain and increase employment in business services, ICT and financial services, while the established position of major settlements as service centres also helps to maintain an office economy. The picture for each of the individual KBI sectors is described and mapped below.

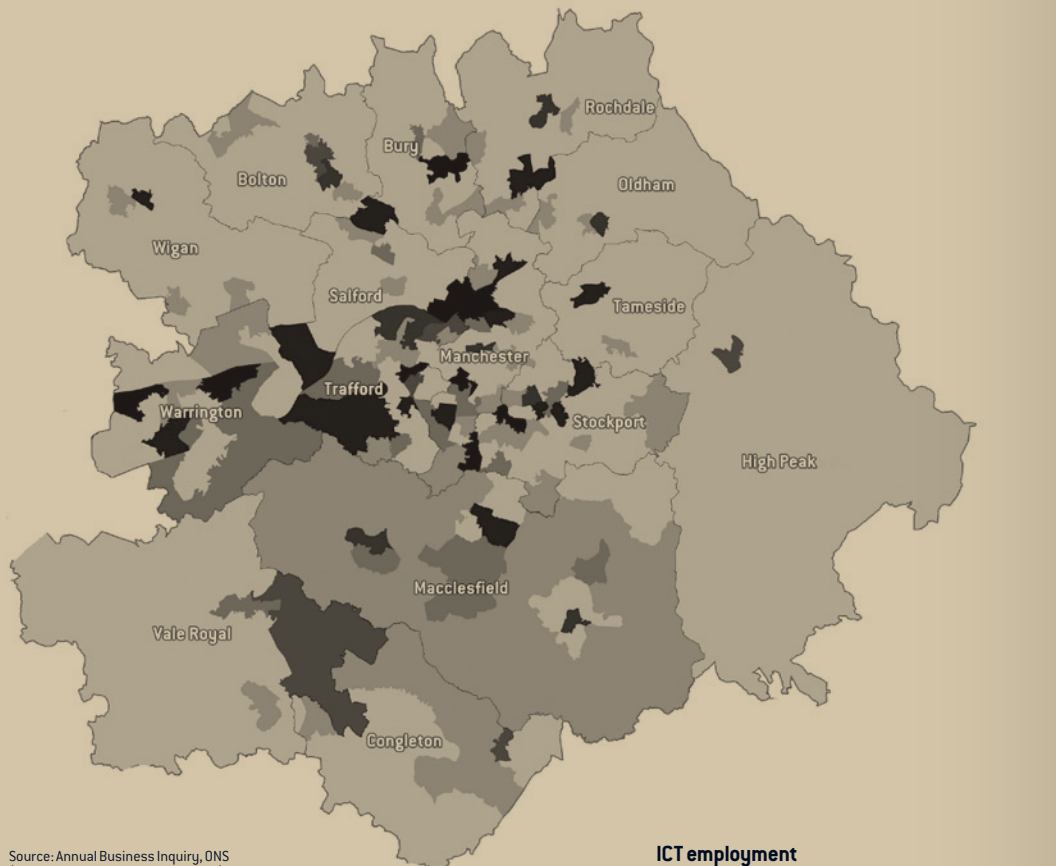
5.2 Information Communication Technology employment

Figure 6 shows that concentrations of ICT employment are located in and around the core employment area, along the M56 and M62 corridors and in a small number of specific locations in the north of the city region. The highest volumes of employment in this sector are located in the Manchester,

Salford and Trafford core area, in Stockport, in business parks located in Warrington and at points along the M56.

A wide range of factors explain this pattern, with the case study of this sector having highlighted residential and environmental quality in Cheshire, the desire for high spec business premises and proximity to the central residential area as important.

Figure 6: Mapping of ICT employment, 2006



Source: Annual Business Inquiry, ONS [from Nomis: www.nomisweb.co.uk]. © Crown Copyright.

ICT employment

- 5,000 and above
- 1,000 to 5,000
- 500 to 1,000
- 400 to 500
- 300 to 400
- 200 to 300
- 100 to 200
- 0 to 100

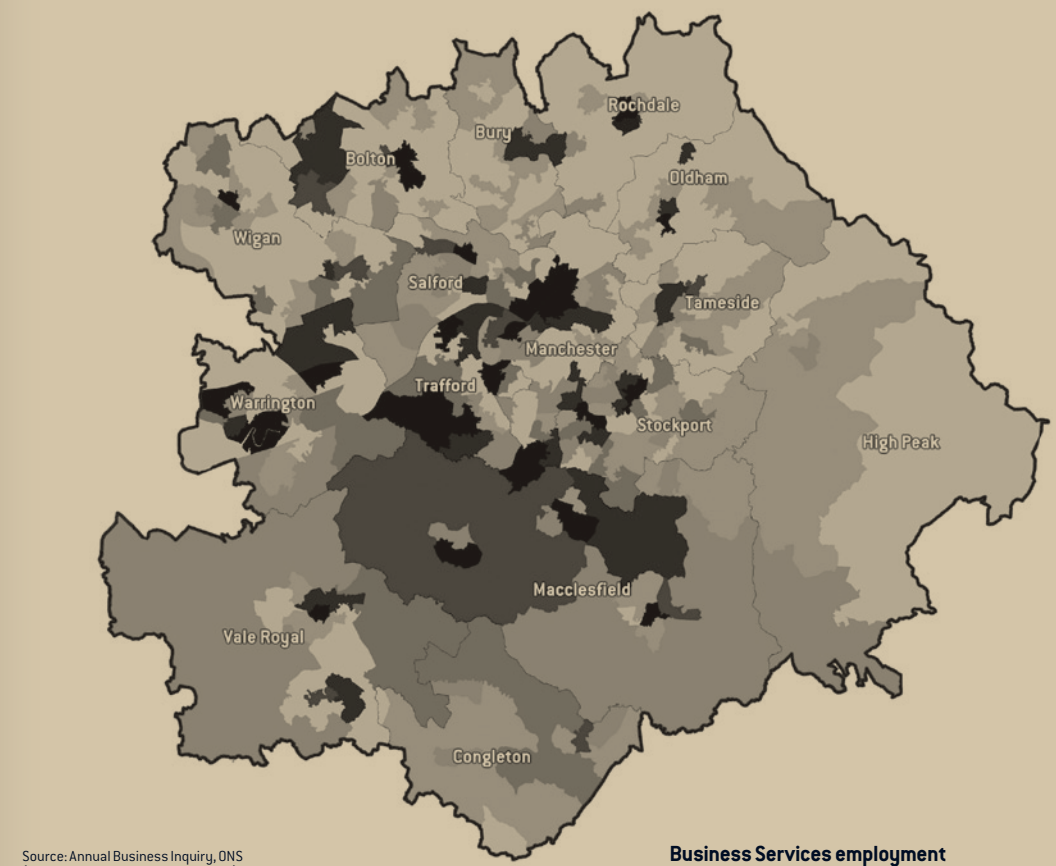
5.3 Business Services employment

Broadly speaking, business services employment shows a similar pattern to that of the ICT sector. Manchester, Salford and Trafford are all important centres, while Warrington's edge of town business parks have become key locations for office based employment. Stockport

and parts of north and mid- Cheshire also have concentrations in this sector – as shown in Figure 7.

To the north, the development of business parks and long standing functions as service centres gives towns including Bolton, Bury, Rochdale, Oldham and Wigan a role as smaller employment centres for business services.

Figure 7: Mapping of Business Services employment, 2006



Source: Annual Business Inquiry, ONS [from Nomis: www.nomisweb.co.uk]. © Crown Copyright.

Business Services employment

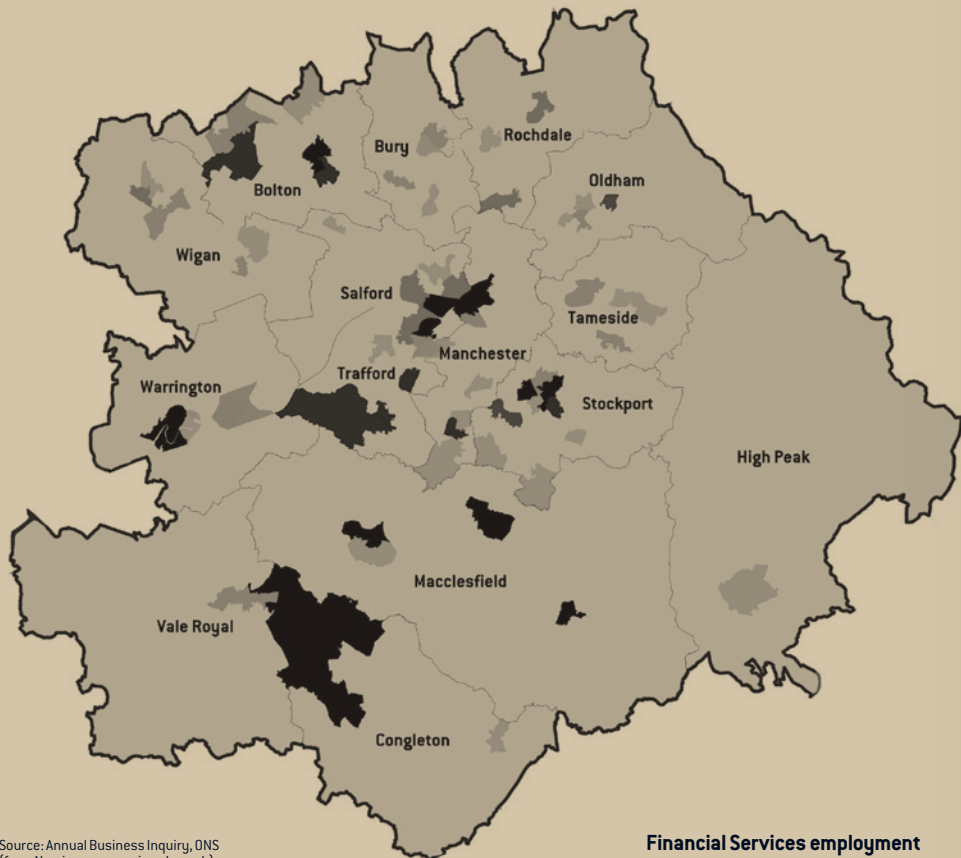
- 5,000 and above
- 1,000 to 5,000
- 500 to 1,000
- 400 to 500
- 300 to 400
- 200 to 300
- 100 to 200
- 0 to 100

5.4 Financial Services employment

Figure 8 shows that the pattern of employment locations in financial services is distinctly different to those of business services and ICT. There are fewer significant concentrations of employment, reflecting in part the more modest level of employment in this sector.

Employment concentrations in the core employment area centre on the Manchester local authority district, although Salford and Trafford, together with Stockport, also stand out as employment locations. Warrington's office provision and the business parks in Vale Royal are clearly indicated on the map. To the north, Bolton also has a modest concentration of employment in the sector.

Figure 8: Mapping of Financial Services employment, 2006



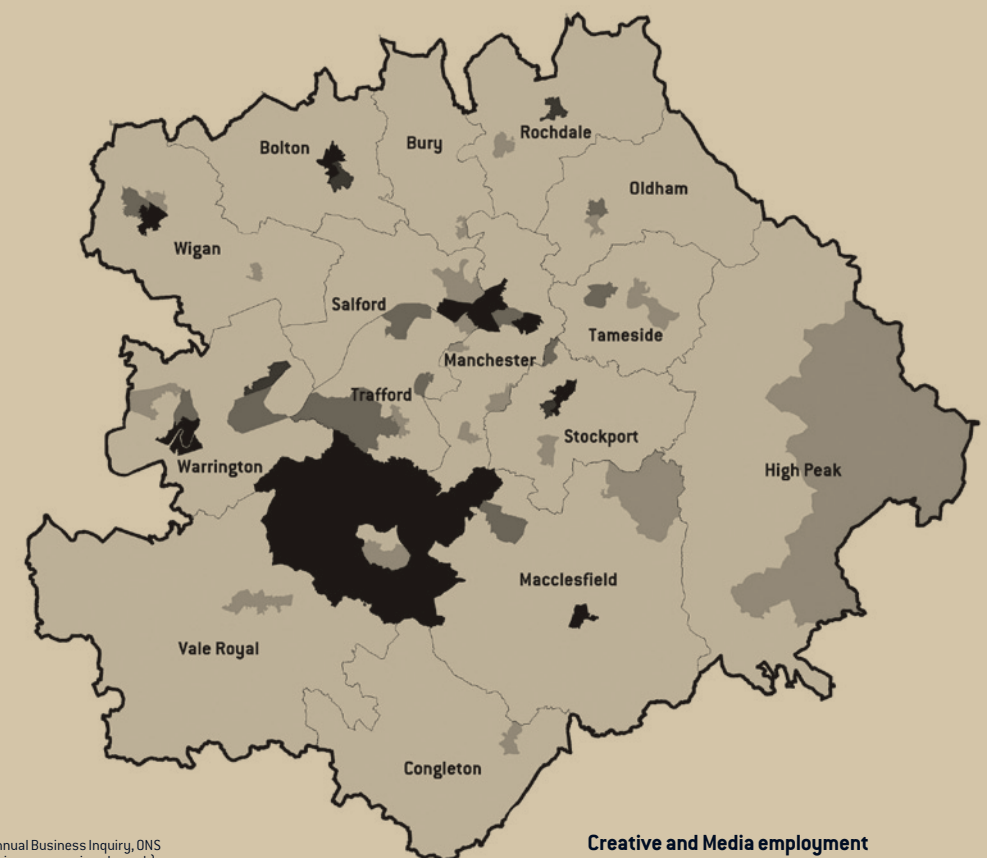
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5.5 Creative and Media employment

Figure 9 shows how the relatively lower levels of 'KBI employment' in creative and media industries in MCR are also reflected in distinct geographical concentrations of employment. Manchester clearly stands out as the main location for the sector in the city region, although there are pockets of employment in Wigan and Bolton, along with parts of Macclesfield.

What is striking about the mapping of this sector is the sparsity of employment in other locations in the city region. One common assumption about patterns of change in business location is that creative industries are increasingly found within out-of-town locations, as entrepreneurs establish lifestyle businesses. This may well be happening in MCR, but not on a scale which stands out in the analysis here.

Figure 9: Mapping of Creative and Media employment, 2006



Source: Annual Business Inquiry, ONS (from Nomis: www.nomisweb.co.uk). © Crown Copyright.

5.6 Knowledge Intensive Manufacturing employment

Consistent with the dominant presence of AstraZeneca in Macclesfield, Figure 10 shows that knowledge intensive manufacturing employment is highly concentrated in a small number of locations.

Alongside the high volume of employment based at Alderley Edge, the historical importance of locations in Tameside, Oldham and Stockport is shown in the mapping. These areas continue to be the key centres for manufacturing in the city region.

5.7 Public Sector employment

It is difficult to tell a clear story about the spatial location of higher skilled public sector employment in the city region. The overall picture is one of very high concentrations in the major urban centres, with significant employment distributed across every constituent area, shown in Figure 11.

The range of public sector employment which falls under the KBI definition is considerable, covering government administrative functions, hospitals, universities and other components of public services.

The fact that all but the higher order public services tend to be dispersed so as to be accessible to all population centres means that this pattern is a general one and by no means unique to MCR.

The detailed data that underpins the above maps is set out in Tables 8 to 12. These show gross employment numbers in 2006 and employment change between 2001 and 2006 in each KBI in all of MCR's component districts and in MCR as a whole relative to comparator areas.⁴

⁴ With the exception of creative and media - where job numbers in most districts are very small.

Figure 10: Mapping of Knowledge Intensive Manufacturing employment, 2006

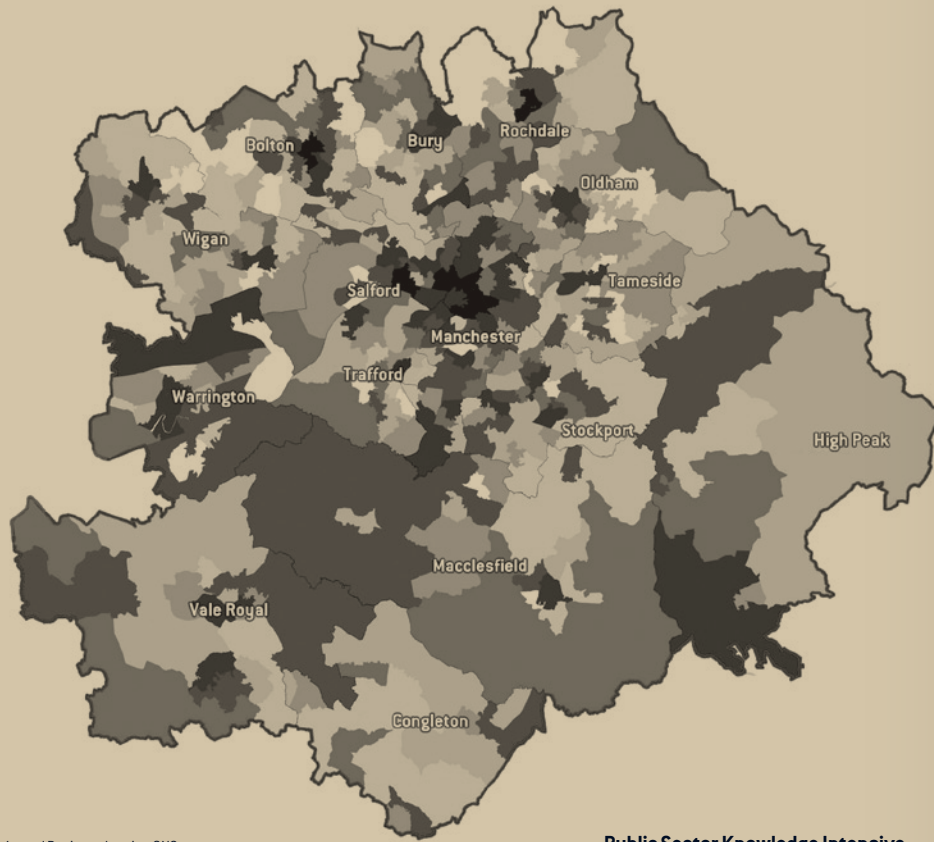


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Manufacturing employment

- 5,000 and above
- 1,000 to 5,000
- 500 to 1,000
- 400 to 500
- 300 to 400
- 200 to 300
- 100 to 200
- 0 to 100

Figure 11: Mapping of Public Sector KBI employment, 2006



Source: Annual Business Inquiry, ONS
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Public Sector Knowledge Intensive

- 5,000 and above
- 1,000 to 5,000
- 500 to 1,000
- 400 to 500
- 300 to 400
- 200 to 300
- 100 to 200
- 0 to 100

Table 8: ICT employment (2006) and change over time (2001 to 2006) in MCR and comparator areas

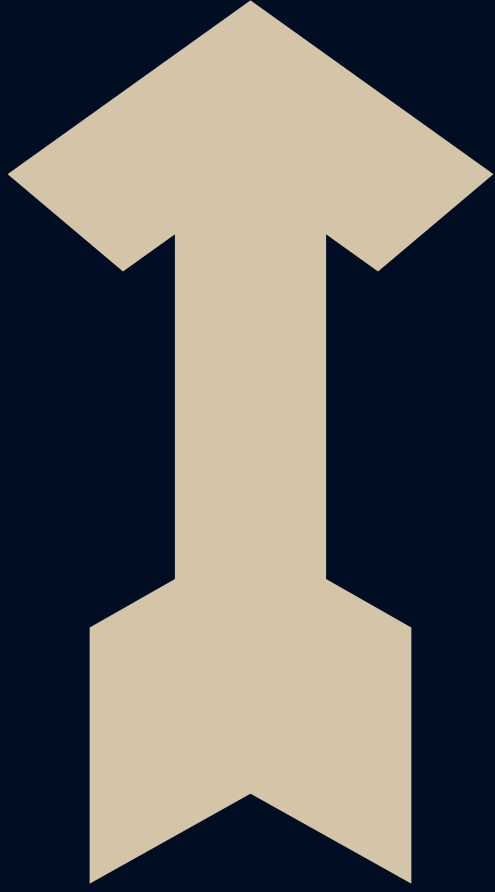
	ICT 2006	CHANGE 2001 TO 2006		% OF TOTAL EMPLOYMENT IN EACH AREA IN 2006	LOCATION QUOTIENT (GB=1.00)
		NUMBER	PERCENT		
Manchester	10,900	3,200	41.2%	3.6%	1.29
Trafford	6,700	600	10.2%	5.4%	1.95
Warrington	6,100	500	8.0%	5.3%	1.92
Stockport	4,600	600	15.0%	3.8%	1.37
Salford	3,000	-100	-3.9%	2.6%	0.96
Bury	2,800	1,200	75.9%	4.5%	1.62
Macclesfield	2,800	500	23.7%	3.5%	1.26
Rochdale	1,400	700	120.1%	1.8%	0.64
Wigan	1,400	300	24.0%	1.3%	0.49
Bolton	1,200	200	15.9%	1.2%	0.43
Tameside	1,100	100	14.6%	1.5%	0.53
Congleton	1,000	300	49.0%	3.1%	1.13
Oldham	1,000	200	20.0%	1.3%	0.46
Vale Royal	1,000	300	34.2%	2.2%	0.78
High Peak	500	200	65.3%	1.8%	0.67
Total MCR	45,400	8,700	23.8%	3.1%	1.12
Birmingham	28,200	-2,300	-7.5%	2.2%	0.81
Bristol	17,200	-200	-0.9%	3.4%	1.21
Glasgow	17,800	-3,300	-15.7%	1.9%	0.68
Leeds	18,600	-4,800	-20.6%	1.7%	0.61
London	148,800	-23,300	-13.5%	3.7%	1.35

Source: Annual Business Inquiry, ONS
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NORTH

WEST

EAST



SOUTH

Table 9: Business Services employment (2006) and change over time (2001 to 2006) in MCR and comparator areas

	BUSINESS SERVICES 2006	CHANGE 2001 TO 2006		% OF TOTAL EMPLOYMENT IN EACH AREA IN 2006	LOCATION QUOTIENT (GB=1.00)
		NUMBER	PERCENT		
Manchester	51,000	11,200	28.1%	16.7%	1.59
Warrington	21,700	5,200	31.5%	18.8%	1.80
Trafford	17,100	1,500	9.4%	13.8%	1.32
Stockport	14,300	4,000	39.0%	11.7%	1.12
Salford	11,400	2,500	28.4%	10.0%	0.95
Macclesfield	9,500	1,900	24.6%	11.9%	1.14
Bolton	9,000	2,800	45.2%	8.6%	0.82
Wigan	7,500	2,200	42.6%	7.4%	0.71
Vale Royal	5,300	1,000	23.8%	11.1%	1.06
Rochdale	4,900	1,300	38.2%	6.4%	0.61
Oldham	4,700	1,800	61.9%	6.1%	0.58
Tameside	4,600	1,700	61.4%	6.4%	0.61
Bury	3,700	600	20.2%	6.0%	0.57
Congleton	2,600	700	39.5%	8.1%	0.78
High Peak	1,800	400	27.6%	6.0%	0.58
Total MCR	169,100	39,000	29.9%	11.5%	1.10
Birmingham	123,000	24,500	24.9%	9.7%	0.93
Bristol	54,700	10,600	24.1%	10.7%	1.02
Glasgow	80,700	20,900	34.9%	8.5%	0.81
Leeds	106,000	34,300	47.5%	9.7%	0.92
London	657,700	46,600	7.6%	16.5%	1.57

Source: Annual Business Inquiry, ONS
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Table 10: Financial Services employment (2006) and change over time (2001 to 2006) in MCR and comparator areas

	FINANCIAL SERVICES 2006	CHANGE 2001 TO 2006		% OF TOTAL EMPLOYMENT IN EACH AREA IN 2006	LOCATION QUOTIENT (GB=1.00)
		NUMBER	PERCENT		
Manchester	21,900	-1,800	-7.6%	7.2%	1.82
Salford	5,400	2,200	71.4%	4.7%	1.20
Stockport	5,400	700	15.6%	4.5%	1.14
Macclesfield	5,100	-600	-10.8%	6.4%	1.64
Trafford	4,600	1,400	44.7%	3.7%	0.94
Bolton	3,200	300	9.6%	3.1%	0.79
Warrington	2,200	200	9.2%	1.9%	0.49
Vale Royal	1,800	600	54.8%	3.7%	0.93
Wigan	1,800	0	-1.1%	1.7%	0.44
Oldham	1,200	-100	-6.1%	1.6%	0.40
Bury	1,100	-100	-7.4%	1.8%	0.46
Tameside	1,000	-500	-33.0%	1.3%	0.34
Rochdale	1,000	-100	-6.7%	1.3%	0.33
Congleton	400	100	23.3%	1.3%	0.32
High Peak	300	-100	-19.1%	1.0%	0.26
Total MCR	56,400	2,300	4.3%	3.9%	0.98
Birmingham	42,000	-9,400	-18.3%	3.3%	0.84
Bristol	29,100	-2,700	-8.6%	5.7%	1.44
Glasgow	39,500	-5,200	-11.7%	4.2%	1.06
Leeds	56,000	8,200	17.0%	5.1%	1.30
London	310,700	-30,500	-8.9%	7.8%	1.98

Source: Annual Business Inquiry, ONS
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Table 11: Knowledge Intensive Manufacturing employment (2006) and change over time (2001 to 2006) in MCR and comparator areas

	MANU-FACTURING 2006	CHANGE 2001 TO 2006		% OF TOTAL EMPLOYMENT IN EACH AREA IN 2006	LOCATION QUOTIENT (GB=1.00)
		NUMBER	PERCENT		
Macclesfield	7,100	200	2.9	9.0%	6.91
Stockport	2,700	-1,500	-36.1	2.2%	1.73
Oldham	1,800	-2,400	-56.6	2.4%	1.81
Tameside	1,200	500	69.1	1.7%	1.29
Manchester	1,100	-400	-26.4	0.4%	0.27
Wigan	800	-100	-10.3	0.8%	0.64
Salford	800	0	0.0	0.7%	0.51
Trafford	800	-700	-47.1	0.6%	0.49
Congleton	700	0	0.0	2.1%	1.59
Rochdale	600	100	20.5	0.8%	0.64
Bolton	600	-400	-37.3	0.6%	0.47
Vale Royal	500	-100	-16.6	1.1%	0.84
Warrington	400	-100	-20.8	0.3%	0.24
High Peak	200	0	0.0	0.7%	0.54
Bury	200	0	0.0	0.4%	0.31
Total MCR	19,600	-4,900	-20.0	1.3%	1.03
Birmingham	9,900	-7,700	-43.6	0.8%	0.61
Bristol	12,800	-2,600	-16.9	2.5%	1.94
Glasgow	15,800	-7,100	-31.1	1.7%	0.90
Leeds	8,000	-3,300	-30.1	0.7%	0.54
London	13,300	-8,500	-38.5	0.3%	0.26

Source: Annual Business Inquiry, ONS
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Table 12: Public Sector employment (2006) and change over time (2001 and 2006) in MCR and comparator areas

	PUBLIC SECTOR 2006	CHANGE 2001 TO 2006		% OF TOTAL EMPLOYMENT IN EACH AREA IN 2006	LOCATION QUOTIENT (GB=1.00)
		NUMBER	PERCENT		
Manchester	76,900	4,000	5.5%	25.1%	1.12
Salford	30,000	3,300	12.5%	26.3%	1.17
Stockport	24,300	1,500	6.6%	20.0%	0.89
Bolton	23,500	500	2.2%	22.6%	1.00
Wigan	18,200	-2,400	-11.9%	17.9%	0.80
Warrington	18,000	2,400	15.4%	15.6%	0.70
Oldham	17,500	2,200	14.6%	22.7%	1.01
Bury	15,900	2,400	17.9%	25.7%	1.14
Tameside	15,800	2,400	18.1%	22.0%	0.98
Rochdale	14,800	400	2.9%	19.4%	0.86
Trafford	15,300	-700	-4.6%	12.4%	0.55
Macclesfield	11,400	-400	-3.8%	14.3%	0.63
Vale Royal	9,500	600	7.1%	19.8%	0.88
High Peak	6,100	-900	-13.3%	20.4%	0.91
Congleton	5,500	900	19.6%	17.2%	0.76
Total MCR	302,800	16,200	5.7%	20.7%	0.92
Birmingham	278,900	34,200	14.0%	22.1%	0.99
Bristol	122,200	17,900	17.1%	23.9%	1.06
Glasgow	238,500	21,200	9.8%	25.0%	1.12
Leeds	246,000	28,300	13.0%	22.3%	0.99
London	770,700	117,700	18.0%	19.3%	0.86

Source: Annual Business Inquiry, ONS
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Some distinct patterns of change in the location of KBI employment emerge from this analysis. Growth in some sectors has been concentrated in the urban core. For others it has been more dispersed, reflecting the nature of the markets, access to labour and hence locational preferences of businesses.

Whilst there are pockets of KBI employment to be found across MCR, the evidence points to the following pattern:

- **ICT:** growth has centred on the core employment area of the city region, along with locations along the M56 and M62, with Warrington having seen significant growth in employment over the period.
- **Business Services:** employment growth has been particularly strong in the core employment areas of Manchester, Salford (particularly Salford Quays) and Trafford, along with Warrington and Stockport. The development of out of centre business parks has also underpinned growth in this sector.
- **Financial Services:** employment has expanded most strongly in Salford, Trafford and Vale Royal. The latter reflects the development of business premises in the Northwich area, which now house a small number of financial operations.

- **Creative and Media:** remains concentrated in the core employment area (particularly Manchester and Salford), and is set to see significant expansion through the development of Media City UK at Salford Quays.

- **Knowledge Intensive Manufacturing:** employment has followed the pattern across the UK in that it has contracted over the period between 2001 and 2006. As well as concentrations in Macclesfield, centred on AstraZeneca's operation, Tameside, Oldham and Stockport also stand out as being important locations.

- **Public Sector:** employment for the most part has expanded in locations across the city region, reflecting the sustained period of investment in public services during the 2000s. The increases in this sector are strongly associated with both population growth and higher levels of expenditure on public services nationally.

Overall, the broad pattern of KBI location and growth in MCR appears to reflect two sets of characteristics. The first, primarily historical, is a combination of the concentration of higher order functions in the centre of the conurbation and the more dispersed pattern of lower functions across the smaller population centres.

SKILLED EMPLOYMENT

The former have benefited most from the growth brought about by a long period of service-driven economic growth and the recent sustained investment in public services.

The latter, which shows up to some degree in the pattern of recent growth in ICT and business services, is a more contemporary form of partial job de-centralisation and de-concentration to more peripheral areas of the city region.

Two observations can be made about this tendency. On one hand, the process has clearly benefited the south of MCR more than the north. This links to the residential preferences of the higher skilled members of the city regional labour force and suggests a tendency for higher level jobs to follow (skilled) people over the long term (though not at the core's expense).

On the other, the scale of the change is comparatively muted. It does not appear to reflect a sharp intensification of agglomeration economies whereby increased competition for space in the core displaces less productive activities to more peripheral, 'next best' locations.

Both of these observations have implications for the pattern of benefits that areas within and beyond MCR are likely to experience if the broad pattern of recent growth resumes, following the current downturn.

**6.0
MCR
AS AN
IMPORTER
AND
EXPORTER
OF
TALENT**

Compared to other city regions, how effective is MCR in attracting young, aspirational and highly skilled people? Where, within MCR, do they typically gravitate to? How does MCR compare with other city regions in its ability to retain highly skilled employees and which areas benefit most from the migration of such workers away from MCR?

6.1 Attracting the highly skilled

From the analysis so far, we would expect MCR (or at least key areas within it) to be attractive to high potential workers wishing to take advantage of the 'escalator' effect that it offers relative to comparator city regions, particularly outside southern England.

To test whether this was the case, the project examined the relative attractiveness of MCR and its comparators, especially their core employment areas, to two key groups - young migrants (who might be expected to be more than usually aspirational in employment terms) and people in high status occupational groups. This was on the assumption that the migration patterns of these groups would denote something important, in terms of employment opportunities, about the nature of the areas to which they choose to move.

The 'fountain' effect was then tested by looking at the pattern of out-migration movements on the part of the high occupational status groups and older age groups. People still economically active and 'moving up' in their careers having taken advantage of the escalator effect.

Both elements of the analysis pose challenges given the reliance upon the 10 yearly census and the fact that it is not possible to link data on occupations and age together and track migration by age cohorts with particular occupational characteristics. The team's analysis nonetheless used the best cross-sectional data and methods available to compare city regions in these respects.

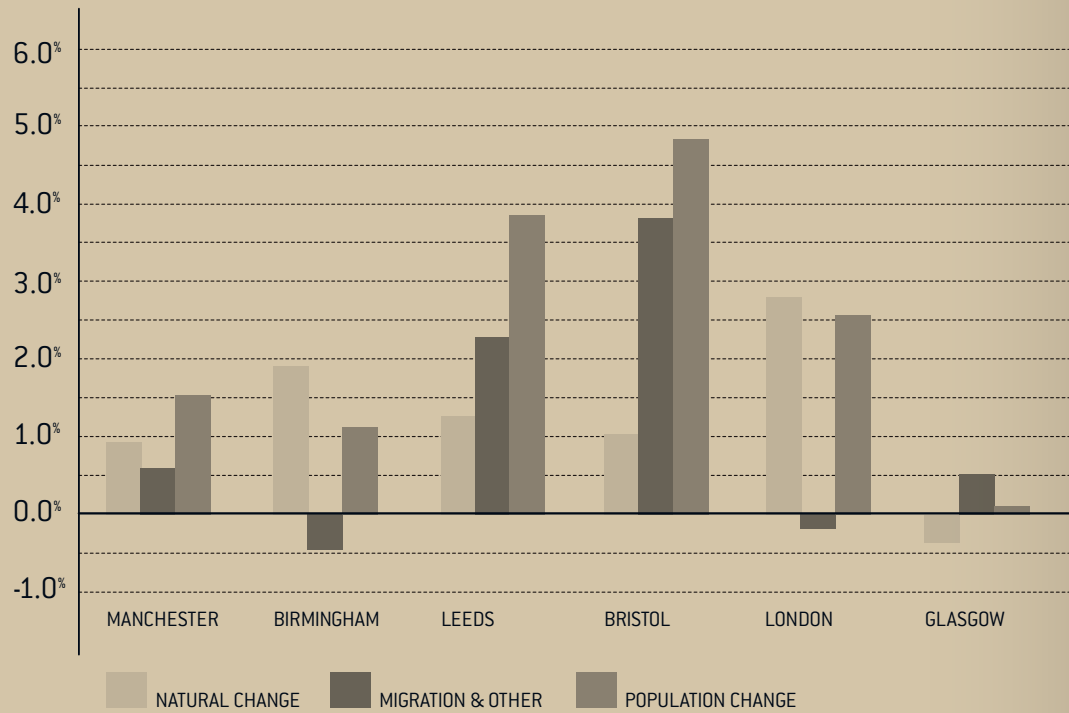
When looking at migration patterns into and out of cities and city regions it is important to remember that, until relatively recently, the larger urban areas of the UK were generally experiencing counter-urbanisation.

Amongst the comparator city regions examined here, for example, Manchester and Birmingham continued to lose population between 1991 and 2001. It was only after the last census that population growth became widespread and even then, as Figure 12 shows for the 2001 to 2006 period, growth rates varied considerably between city regions, as did the component of change.

It should also be noted that the net in-migration figures include a significant volume of international migrants. Only Bristol experienced consistently positive net in-migration from the rest of the UK.

Consistent with the evidence on economic and employment change, figure 12 shows MCR to be in the middle of the pack in terms of population growth and attractiveness to migrants.

Figure 12: Components of population change in comparator areas, 2001 to 2006



Source: Calculated from the components of change data from ONS and GROS.

Table 13 describes the in-migration rates from the rest of the country experienced by each of the city regions, by age group, between 2000 and 2001. As would be expected of areas that attract aspirational people in their early career years, each of the city regions had higher rates of in-movement for people in the age groups 16 to 29 years old.

Even if 16 to 19 year-olds (an age group dominated by moves with parents or to university rather than job-seeking) are discounted, MCR was still on a par with most of the English city regions bar Bristol. Movements of older groups, in all cases, were appreciably lower.

As Figure 13 shows, 20 to 24 year-olds and 25 to 29 year-olds were the two age groups for which MCR experienced positive net in-migration rates during the period. This compared favourably to all the other city regions bar London and Bristol.

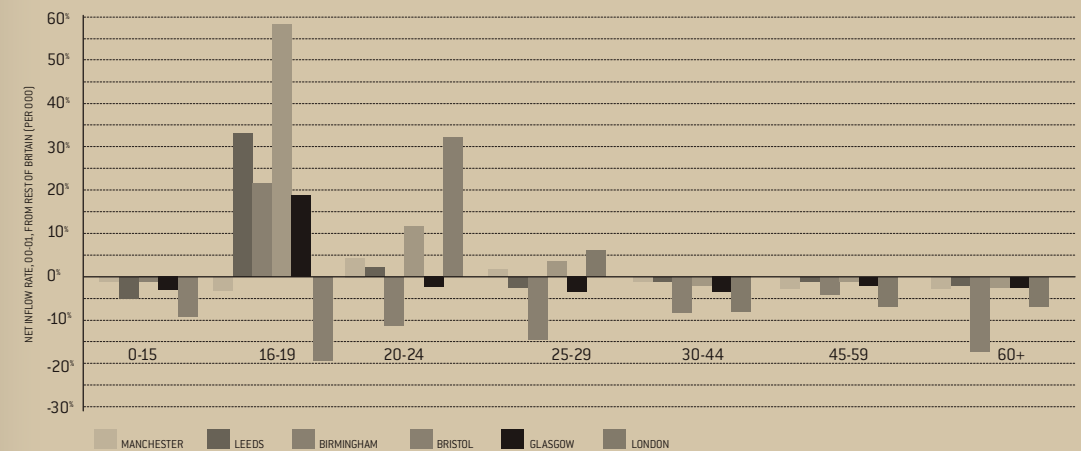
MCR's rate of loss of older age groups was also low comparative to the others, and especially London and Birmingham. The latter is the only comparator not to experience net migration gain in any age group during the period. Figure 12 suggests this trend may have continued in Birmingham, whose population growth, since 2001, has been entirely driven by indigenous expansion. The equivalent figures for occupational groups tell a similar story about MCR's comparative performance.

Table 13: In-migration (per thousand in each group in 2001) from the rest of Britain to comparator city regions, 2000 to 2001

AGE IN 2001	MANCHESTER	BIRMINGHAM	BRISTOL	GLASGOW	LEEDS	LONDON
0 to 15 yrs	11.2	9.5	16.8	8.9	12.4	7.0
16 to 19 yrs	45.5	62.3	109.8	41.4	78.8	26.2
20 to 24 yrs	75.8	73.5	129.3	42.6	82.9	80.1
25 to 29 yrs	43.3	37.9	72.9	34.2	42.9	38.6
30 to 44 yrs	16.9	15.1	27.9	12.8	17.3	12.5
45 to 59 yrs	6.2	5.6	11.6	4.9	7.3	5.0
60+ yrs	4.4	11.8	6.8	3.0	4.9	3.8
All age groups	17.9	20.8	32.4	13.5	21.1	15.6

Source: Calculated from the 2001 Census Special Migration Statistics, Level 1, Table 1.

Figure 13: Rates of net inflow (per thousand population) from the rest of Britain, to the comparator city regions, 2000 to 2001



Source: Calculated from the 2001 Census Special Migration Statistics, Level 1, Table 1.

Table 14 shows in-migration rates from the rest of Britain to each of the city regions by the standard occupational groups in 2000 to 2001.

It shows total in-movement of the highest skilled groups – Higher and Lower Managerial and Professional workers (HMP and LMP)⁵ – to be on a par once more with the English comparators, bar Bristol.

London’s gains amongst these two groups may seem surprisingly small but the groups involved can be of any age, including older workers, and their households are more likely to be contributing to the fountain effect of urban labour markets by decentralising to more peripheral areas.

Figure 14, showing the net gains and losses of occupational groups by each of the comparators in 2000-2001, clarifies this point. Despite the fact that the in-movement of HMP and LMP groups to London was modest during the period, it still emerged as the only city region to experience net gain, obviously because the loss of these groups from London was much lower.

MCR was the next best performing comparator for overall HMP and LMP change, suggesting that it was better able to retain workers in these categories than the other city regions.

⁵ The National Statistics Socio-Economic Classification (NSEC).

Table 14: In-migration (per thousand in each group in 2001) from rest of Britain to the comparator city regions, by socio-economic classification (NS-SEC), 2000 to 2001 (excluding students)

SOCIAL GROUP	MANCHESTER	BIRMINGHAM	BRISTOL	GLASGOW	LEEDS	LONDON
Higher Managerial and Professional	33.4	33.2	49.9	29.5	34.5	28.5
Lower Managerial and Professional	20.8	21.2	31.3	15.4	22.1	21.2
Intermediate	13.0	13.2	21.3	9.9	13.5	13.3
Low	8.9	8.6	15.0	7.7	9.9	9.5
Other group	7.0	6.6	9.5	4.9	8.1	5.5
All groups	14.5	14.8	26.2	11.4	18.5	15.2

Source: Calculated from the 2001 Census Special Migration Statistics, Level 1, Table 9.

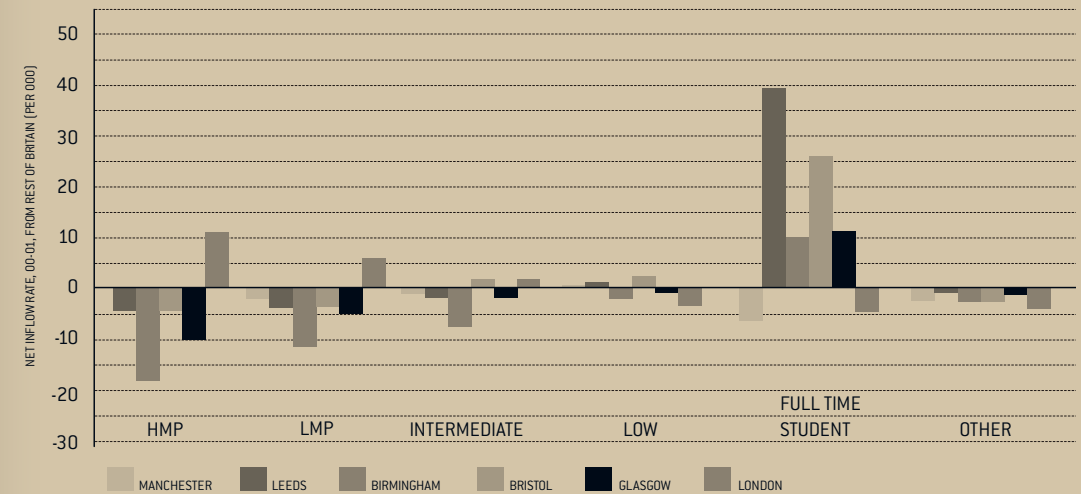
In the Manchester case, the project team looked at where young in-migrants and those from the higher occupational groups tended to move to within the city region. Figures 15 and 16 show the central districts of the conurbation, especially Manchester and Salford, to have been favoured destinations for the young. Whereas higher occupational groups tended to favour suburban locations in the south, especially in Trafford and Macclesfield, or Manchester itself.

Inflows amongst this group to the conurbation core, especially to Manchester, are likely to have grown substantially, post-census, given the rapid growth in central apartment developments after 2001.

In terms of the origins of migrants, there was a clear distance decay effect, with the region in which a particular city region sat, (regions in the case of London), being more likely to supply migrants to it, followed by the next nearest and so on. London was the exception, exporting high numbers of migrants to all regions.

To test the ‘fountain effect’ of the various city regional labour markets, the study looked at a residential core, comprising the areas that younger migrants typically migrate to, and then constructed a nominal ‘fountain band’ around it.

Figure 14: Rates of net inflow (per thousand population), for the comparator city regions, by socio-economic classification (NS-SEC), 2000 to 2001



Source: Calculated from the 2001 Census Special Migration Statistics, Level 1, Table 9.

Figure 15: Age distribution of inflows to districts within MCR from the rest of Britain, 2000 to 2001

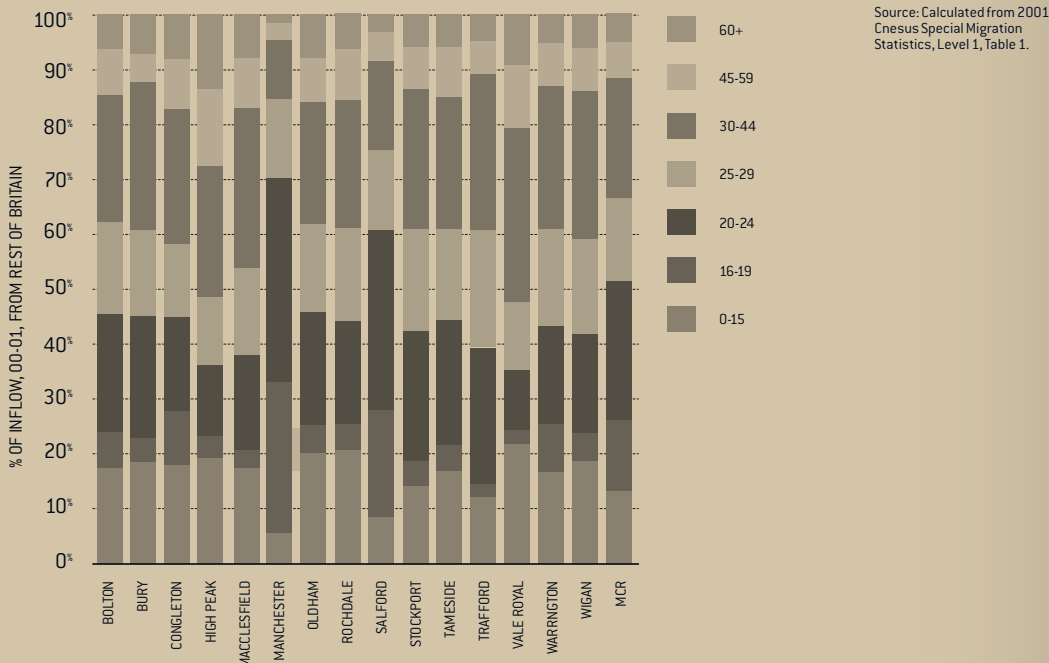
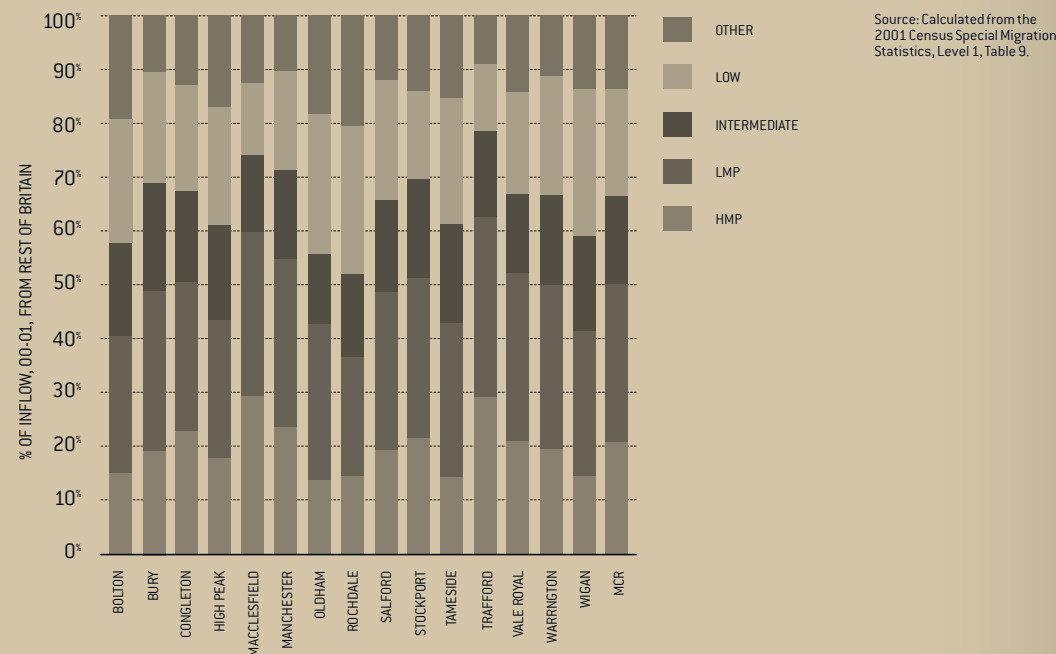


Figure 16: Distribution of inflows by social classification, to districts within MCR from the rest of Britain, (excluding full time students), 2000 to 2001



This was defined by a travel-to-work area in which at least 15 percent of workers in neighbouring districts commuted into the core area. This cut off figure was chosen so that the fountain band broadly matched the city region boundaries.

The most striking feature of the table, however, is the high percentage of 25 to 29 year-olds in the core areas of the provincial city regions who migrate to SE England, comprising London, the Southeast and East of England regions.

The data on migration by age group and occupation level were then analysed to determine the proportion of people who remained within the fountain band and how many migrated further afield. The results are summarised in a series of tables, below.

Between a quarter (in the case of Manchester, Birmingham and Leeds) and a third (Bristol) of all migrants in this group gravitate to SE England, suggesting the ‘super region’ around the capital is not only difficult to abandon, but is also the most attractive to the most mobile workers.

Table 15 looks at out-migration by residents of core areas within each city region in three age groups: 25 to 29 years, 30 to 44 years and 45 to 59 years, in the period 2000 to 2001. It shows that the 25 to 29 year-olds have the greatest propensity to move and, apart from the London cohort, are least likely to remain within ‘their’ city region.

The strong interaction with the Bristol city region is particularly interesting given earlier findings that suggest it out-performs northern and midland city regions. Given that Bristol was more attractive to 20 to 29 year-olds than all the comparators bar London, this suggests that one of the attractions of the Bristol city region’s opportunities is that they provide a stepping stone for London.

London is also exceptional in that the youngest migrants are marginally more likely to stay close to London, whereas the oldest group is least likely to stay.

Table 16 repeats this analysis for HMP and LMP occupational groups. The London city region again stands out for its ability to retain the higher status occupational groups who move from the core residential areas of the capital.

All three however are far more likely to remain close to London’s residential core than are any of their equivalents elsewhere. The barriers to exit from the London labour market, it seems, are considerably more difficult to overcome than those in other city regions.

Outside London, the Birmingham city region again has the next best retention rate, followed by MCR, Bristol and Leeds. The pulling power of SE England is very evident again. Between 28% and 40% of HMP and LMP migrants from the comparator areas are attracted there, with Bristol, followed by Manchester, being most likely to lose its highest (HMP) status workers to this area.

Outside London, migrants from the core residential areas centred upon Birmingham are most likely to remain in the Birmingham city region. Retention rates are next highest in MCR, followed by the city regions focused upon Bristol and then Leeds.

Table 15: Out migration of 25 to 60 year olds from the residential cores of city regions, 2000 to 2001

CITY REGION (CORE AREA)	AGE	RATE OF OUT- MIGRATION (PER 000 RESIDENTS) FROM THE CORE TO:				SHARE OF OUT-MIGRANTS FROM THE CORE			
		FOUNTAIN BAND	REST OF UK	TOTAL	OF WHICH TO SE ENGLAND	FOUNTAIN BAND	REST OF UK	SE ENGLAND	OTHER UK
MANCHESTER	25-29	44.0	52.5	96.5	23.6	45.6	54.4	24.4	29.9
	30-44	25.5	19.4	45.0	6.9	56.8	43.2	15.4	27.8
	45-59	11.0	8.0	19.0	1.4	57.6	42.4	7.5	34.9
BIRMINGHAM	25-29	35.4	42.1	77.5	19.4	45.7	54.3	25.0	29.3
	30-44	22.1	15.8	37.9	5.3	58.3	41.7	14.0	27.7
	45-59	9.9	7.2	17.1	1.9	57.9	42.1	11.1	31.0
BRISTOL	25-29	40.1	68.7	108.8	36.0	36.8	63.2	33.1	30.1
	30-44	26.3	27.3	53.6	11.7	49.1	50.9	21.8	29.1
	45-59	12.5	10.1	22.6	3.1	55.2	44.8	13.9	30.9
LEEDS	25-29	29.7	52.8	82.6	21.9	36.0	64.0	26.6	37.4
	30-44	16.3	16.4	32.6	4.9	49.8	50.2	15.0	35.2
	45-59	7.8	7.3	15.1	1.4	51.8	48.2	9.1	39.1
LONDON	25-29	72.1	20.0	92.1	N.A.	78.3	21.7	N.A.	21.7
	30-44	46.7	14.0	60.7	N.A.	76.9	23.1	N.A.	23.1
	45-59	20.9	8.8	29.7	N.A.	70.3	29.7	N.A.	29.7

Source: Calculated from the 2001 Census Special Migration Statistics, Level 1, Table 1. Population is for 2001. SE England is the 3 GORs: London, Southeast and East of England.



Table 16: Out migration of managers and professionals from the residential cores of city regions, 2000 to 2001

CITY REGION (CORE AREA)	NS-SEC	RATE OF OUT- MIGRATION (PER 000 RESIDENTS) FROM THE CORE TO:				SHARE OF OUT-MIGRANTS FROM THE CORE			
		FOUNTAIN BAND	REST OF UK	TOTAL	OF WHICH TO SE ENGLAND	FOUNTAIN BAND	REST OF UK	SE ENGLAND	OTHER UK
MANCHESTER	HMP	26.3	51.5	77.8	28.1	33.8	66.2	36.1	30.1
	LMP	22.6	32.8	55.4	15.5	40.8	59.2	28.0	31.1
BIRMINGHAM	HMP	27.3	48.8	76.1	24.5	35.9	64.1	32.2	31.9
	LMP	22.3	29.2	51.5	15.3	43.3	56.7	29.7	27.0
BRISTOL	HMP	24.8	65.8	90.6	36.4	27.4	72.6	40.2	32.4
	LMP	24.9	39.8	64.7	22.6	38.5	61.5	34.9	26.6
LEEDS	HMP	20.3	47.5	67.7	21.5	29.9	70.1	31.7	38.4
	LMP	16.0	32.2	48.2	15.0	33.2	66.8	31.2	35.5
LONDON	HMP	43.9	14.5	58.3	N.A.	75.2	24.8	N.A.	24.8
	LMP	42.0	13.0	55.0	N.A.	76.4	23.6	N.A.	23.6

Source: Calculated from the 2001 Census Special Migration Statistics, Level 1, Table 9. Population refers only to people aged 16 to 74 years old. Population is for 2001. SE England is the 3 GORs: London, Southeast and East of England.



Table 17 provides greater detail about the regional destinations of 25 to 44 year old migrants from the core areas of the comparator city regions for 2000 to 2001. In broad terms, there is a distance decay effect whereby migrants are most likely to remain in the same region and least likely to move to the region that is least accessible to it.

The number of 25 to 44 year-olds who moved out of the core of MCR but remained in the Northwest was over four times higher than those moving elsewhere. This suggests that the Northwest derives significantly greater benefit from MCR's escalator effect than other regions. At the other end of the spectrum, Northern Ireland attracted fewer migrants from each of the comparator areas than any other region.

There are, however, three exceptions to the distance decay rule.

The first and most predictable is that London and the Southeast proved far more attractive to migrants than distance alone would predict. London was the second most popular destination for migrants in the 25 to 44 year old age group, from every provincial city region, and the Southeast also ranked highly as a location.

The second is the performance of the Northwest in attracting migrants in this age group from the comparator areas. That the Northwest was the third most popular destination for migrants from the Leeds city region is less surprising than the fact that it ranked fifth amongst the twelve regions in terms of its ability to attract 25 to 44 year olds from London, behind the southern regions but ahead of the geographically closer midland regions.

The third, slightly surprising exception, is that 25 to 44 year olds leaving London were more likely to relocate to the Southwest than to the Southeast and the Eastern region, both of which are geographically closer.

This 'Southwest effect' disappears, however, when the migration movements of high status occupational groups are examined, suggesting that the Southwest (with the probable exception of the Bristol city region) attracts proportionally more early-to-mid-career London migrants who value amenity and quality of life advantages over career development prospects.

Table 17: Outflow of 25 to 44 year olds from the city region cores, 2000 to 2001

REGIONAL DESTINATION	MANCHESTER		BIRMINGHAM		BRISTOL		LEEDS		LONDON	
	NUMBER	RANK	NUMBER	RANK	NUMBER	RANK	NUMBER	RANK	NUMBER	RANK
Northwest	7,380	1	622	7	261	7	824	3	1,884	5
London	1,567	2	1,180	2	1,058	2	1,021	2	37,126	1
Southeast	773	3	823	5	781	3	487	4	2,376	4
Yorks & Humber	765	4	428	8	148	9	4,783	1	1,634	9
East Midlands	624	5	819	6	209	8	531	7	1,778	6
West Midlands	564	6	7,373	1	326	5	286	8	1,662	8
East	359	7	431	3	311	6	376	6	7,253	3
Southwest	357	8	830	4	4,409	1	220	10	18,484	2
Scotland	338	9	193	10	131	10	278	9	1,775	7
Wales	323	10	272	9	349	4	105	11	836	10
Northeast	163	11	147	11	48	11	379	5	609	11
Northern Ireland	73	12	92	12	30	12	39	12	331	12

Source: Calculated from the 2001 Census Special Migration Statistics, Level 1, Table 1.

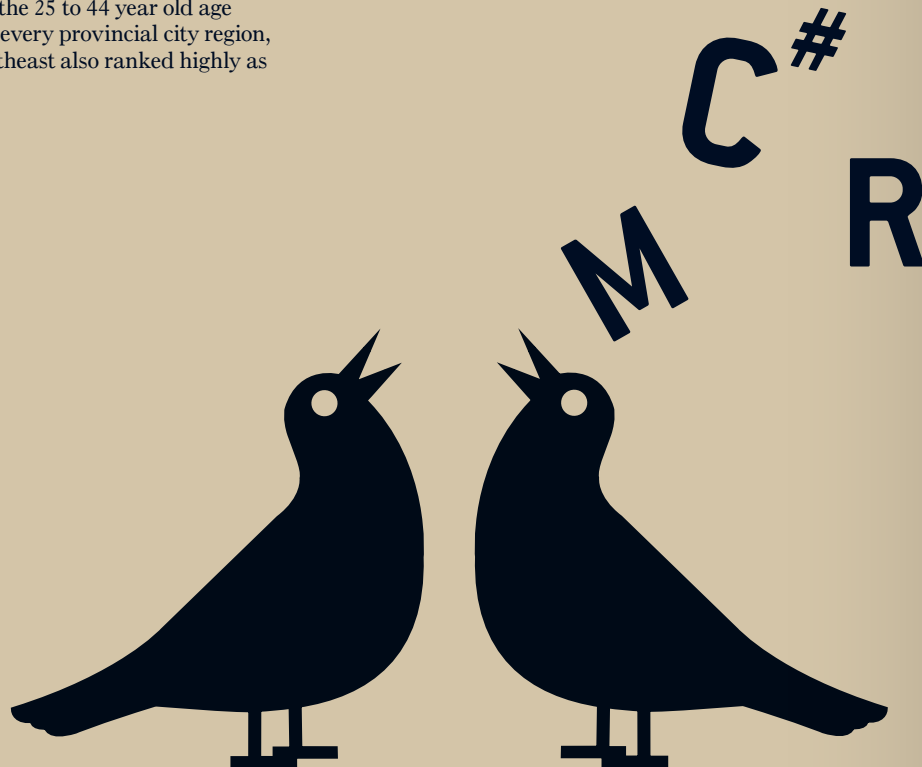


Table 18 repeats this analysis for managerial and professional migrants from the comparator areas. The results are very similar. Again, the overall distance decay effect was 'bucked' most firmly by London, followed by the Southeast, both of which were highly attractive to migrants from all the comparator areas.

Once more the Northwest was attractive not just to managers and professionals leaving Leeds but was also the most favoured, after the other southern regions, for those leaving London.

6.2 The attraction and retention of students

Care was taken, in tracking the migration patterns of different age groups, not to focus too much attention upon the age cohort into which most full time students fall, given that the entry of young people into higher education represents a very particular and unrepresentative form of migration.

Nonetheless the attraction of universities and the capacity of city regional labour markets to absorb and retain graduates, provide important demonstration's of escalator and fountain effects in their own right. They are increasingly seen as key to the attraction and development of economic activities that require high level skills.

The project therefore undertook a separate, bespoke analysis of the movement of students by interrogating Higher Education Statistical Agency (HESA) data on student origins and first job destination for 2006/07, the most recent recorded year, and 2002/03, the earliest year for which comparable data is available.

The analysis is summarised in Tables 19 and 20 which draws upon data for all the main higher education institutions based in one or other of the comparator city regions (for example, in MCR's case, the universities of Manchester, Salford, Bolton and Manchester Metropolitan).

Table 19 shows the origin of students who began their studies at one of the relevant collection of city regional universities as at 2002/03 and 2006/07. Overall, it suggests a broad distance decay pattern. Young people who were based in the same city region prior to taking up their studies form the largest single group within the new intake, followed by those from elsewhere within the same region, others from the next-nearest region and so on.

'Home loyalty' is particularly pronounced in the case of Glasgow where around 90% of new entrants in both years came from the Glasgow city region or other areas of Scotland. But the same applies to some degree elsewhere, too.

Around 60% of entrants to MCR institutions in both years, for example, came from the Northwest, with roughly two thirds of the regional intake coming from areas within MCR.

Around three quarters of the intake of Greater London institutions were either from the capital or neighbouring regions (Southeast and East) whilst over 50% of those joining Birmingham institutions were from the city region itself or elsewhere in the West Midlands.

The same pattern held for Bristol city regional institutions but the proportions were smaller, and a substantial and growing proportion of the new student intake came from the Southeast. The intake to Leeds city regional institutions followed a similar pattern only the proportion of new entrants from the Northwest was higher, in both years, than that coming from Yorkshire and the Humber.

When it comes to the first job destinations of graduates, there are some similarities but also some important differences. Table 20 shows that graduate retention within MCR is proportionally higher than in each of the comparator areas bar London and that the proportion of graduates remaining within the city region has grown in the last five years, as it has in all bar the Bristol city region.

If the proportion of graduates remaining in the wider region is added to those staying in the city region, we find that 53% of MCR graduates remained in the Northwest in 2006/07, compared to the 39% of their Leeds counterparts who stayed in Yorkshire and the Humber.

The parallel figures for the other comparator areas are 42% for Birmingham and the West Midlands, 43% for Bristol and the Southwest, 65% for London if the Southeast and Eastern regions are assumed to be part of London's extended super-region, and 66% for Glasgow and Scotland.

Table 18: Outflow of managers and professionals from the comparator city region cores, 2000 to 2001

REGIONAL DESTINATION	MANCHESTER		BIRMINGHAM		BRISTOL		LEEDS		LONDON	
	NUMBER	RANK	NUMBER	RANK	NUMBER	RANK	NUMBER	RANK	NUMBER	RANK
Northwest	3,831	1	398	7	168	8	795	3	1,154	5
London	1,658	2	1,389	2	1,198	2	1,332	2	20,472	1
Southeast	763	3	780	3	698	3	584	4	10,455	2
Yorks & Humber	564	4	305	8	119	9	2,779	1	886	9
West Midlands	409	5	3,682	1	247	4	297	7	970	8
East Midlands	375	6	525	5	177	7	394	5	995	7
East	340	7	436	6	245	5	359	6	3,942	3
Southwest	294	8	540	4	2,561	1	177	10	2,245	4
Scotland	233	9	132	10	92	10	195	9	1,154	5
Wales	190	10	164	9	226	6	69	11	546	10
Northeast	124	11	92	11	21	11	228	8	290	11
Northern Ireland	46	12	48	12	15	12	30	12	142	12

Source: Calculated from the 2001 Census Special Migration Statistics, Level 1, Table 9.

Table 19: Home origins of students attending city regional universities, 2002/03 and 2006/07

ORIGIN	INSTITUTIONS' HOST CITY REGION 2002/03 (%)						2006/07 (%)					
	MCR	GLASG	LOND	BRIST	BIRM	LEEDS	MCR	GLASG	LOND	BRIST	BIRM	LEEDS
Same city region	38.5	16.6	53.7	24.2	37.6	25.5	41.1	19.0	56.2	17.1	38.0	26.4
Northwest	19.7	1.5	1.9	2.7	4.7	16.1	18.6	1.1	1.4	2.4	3.9	13.9
West Midlands	6.4	0.4	2.2	4.4	15.0	5.6	5.9	0.3	1.7	6.2	14.3	5.4
Yorks & Humber	6.2	0.6	1.2	1.7	3.1	11.7	5.9	0.6	1.0	1.6	2.9	11.5
East Midlands	4.7	0.5	2.0	2.6	7.9	9.4	4.9	0.4	1.6	2.6	7.6	8.8
Greater London	4.6	0.7	N/A	6.5	5.0	6.1	4.0	0.5	N/A	8.1	6.2	6.3
Southeast	4.4	0.8	15.7	13.7	8.4	6.6	3.9	0.7	14.5	16.6	8.5	7.0
East of England	2.9	0.5	8.3	4.5	5.3	6.0	2.7	0.3	7.5	5.4	5.5	6.1
Wales	2.7	0.2	1.0	4.8	2.2	1.4	2.3	0.1	0.8	6.7	1.9	1.4
Southwest	2.4	0.3	3.8	21.8	6.1	2.9	2.1	0.3	3.0	27.0	5.9	2.7
Northeast	2.1	0.7	0.5	0.5	1.0	4.6	1.7	0.6	0.4	0.7	0.8	5.5
Northern Ireland	1.2	2.8	0.4	0.2	0.3	0.6	1.1	2.8	0.4	0.6	0.3	0.4
Scotland	1.1	72.2	0.6	0.8	0.6	0.9	0.9	70.5	0.6	0.9	0.6	0.8
UK Unknown county	0.4	1.4	1.0	8.7	1.2	1.2	1.5	0.6	0.8	0.6	0.2	1.3
Abroad	2.6	0.8	7.6	2.9	1.6	1.3	3.2	2.3	10.2	3.4	3.5	2.5

Source: Higher Education Statistics Agency.

Table 20: First employment destinations of city regional graduates, 2002/03 and 2006/07

DESTINATION	INSTITUTIONS' HOST CITY REGION 2002/03 (%)						2006/07 (%)					
	MCR	GLASG	LOND	BRIST	BIRM	LEEDS	MCR	GLASG	LOND	BRIST	BIRM	LEEDS
Same city region	37.8	33.2	45.9	14.5	17.3	31.2	41.6	31.5	51.9	10.7	34.3	31.9
Northwest	13.1	1.1	0.8	1.3	2.1	7.7	11.5	0.8	0.6	1.1	2.2	6.0
Greater London	4.3	1.4	N/A	10.4	4.5	7.0	5.6	1.8	N/A	11.1	7.8	8.4
West Midlands	3.9	0.4	1.0	2.6	4.6	2.3	3.0	0.3	0.8	2.8	7.9	2.1
Yorks & Humber	3.3	0.5	0.6	0.7	1.1	7.6	3.6	0.4	0.4	0.8	1.7	6.9
East Midlands	2.2	0.3	0.8	1.4	2.5	3.4	2.1	0.3	0.6	1.1	4.2	3.0
Southeast	1.9	0.9	9.6	7.4	3.7	2.9	2.1	0.7	9.4	7.0	5.1	2.9
East of England	1.3	0.5	4.6	2.4	1.9	2.2	1.1	0.4	4.3	2.1	2.6	2.3
Southwest	1.1	0.6	1.7	26.6	2.4	1.4	1.1	0.3	1.5	32.2	2.9	1.1
Wales	1.1	0.2	0.3	2.7	0.7	0.3	0.9	0.2	0.2	3.2	0.9	0.5
Northeast	0.9	0.6	0.2	0.2	0.3	2.1	0.7	0.4	0.2	0.3	0.6	2.2
Scotland	0.5	31.6	0.2	0.3	0.3	0.5	0.5	34.2	0.3	0.3	0.7	0.6
Northern Ireland	0.3	0.8	0.1	0.0	0.0	0.1	0.4	0.7	0.1	0.2	0.1	0.1
UK Unknown county	1.6	2.9	4.8	2.0	3.2	0.2	0.3	4.3	2.0	0.3	2.0	1.1
Abroad	2.2	2.3	4.1	3.6	1.8	2.6	2.7	2.5	4.6	3.5	3.1	3.4
Unknown or not applicable	24.6	22.5	25.4	23.8	23.6	28.6	22.9	21.3	23.0	23.2	23.9	27.6

Source: Higher Education Statistics Agency.

The distance decay effect is again apparent in that the number of graduates taking up their first jobs in a particular region tends to be roughly proportionate to its distance from the city region in which students complete their studies.

There are two exceptions to this rule, however, one denoting the primacy of the high skilled labour market in MCR and the Northwest relative to the Leeds city region and Yorkshire and the Humber, the other demonstrating the primacy of London and the Southeast as a magnet for young, high skilled and aspirational labour.

On the first of these, not only do MCR institutions attract more university entrants from Yorkshire and the Humber than do Leeds city region institutions from the Northwest, but 6% of Leeds city regional graduates took their first job in the Northwest in 2006/07, almost as many as remained in the rest of Yorkshire and the Humber.

Only 3.6% of MCR graduates took up their first posts in Yorkshire and the Humber. This underlines the earlier observation that although KBI employment has grown more quickly in the Leeds city region in recent years than it has in MCR, the latter retains an edge in terms of the total volume of opportunities available.

On the second, it is clear that only London and, to a lesser extent, the Southeast, are sufficiently attractive to graduate labour to overcome the distance decay effect, at least within England. By comparison, the highly self-contained nature of the Scottish graduate labour market means that very few graduates from Glasgow city regional institutions venture to any of the English regions for employment, post-graduation.

As Table 18 demonstrates, as at 2006/07, around 8% of MCR graduates gravitated to London and the Southeast for their first job, with three quarters of these (6%) going to the capital. The parallel figures for Leeds city regional graduates are 11% (8% to London), 13% (8%) for their Birmingham counterparts and 18% (11%) for Bristol. Remarkably, more Bristol city regional graduates moved to London than stayed in the place they graduated in 2006/07.

A comparison with the 2002/03 figures shows that London and the Southeast have become more attractive to graduates from all of the provincial city regions in recent years. That there is little in the way of a reciprocal relationship is demonstrated by the fact that less than 1% of graduates from Greater London universities, as at 2006/07, took their first jobs in any of the regions outside the south of England.

When set alongside the earlier findings on migration movements for 25 to 44 year olds and managerial and professional workers, the fact that the proportion of London graduates moving to the Southwest was marginally higher, reinforces the observation that there is stronger interaction with respect to highly skilled and qualified labour between London / Southeast and the Bristol city region than there is with any of the provincial city regions. This may partly help to explain the superior performance of the latter relative to northern and midland city regions.

7.0 TALENT AND PRODUCTIVITY

To what extent does the density of skills within MCR help explain its level of productivity relative to other city regions?

7.1 Skills and productivity

As might be expected, the picture that emerges from comparisons between MCR and other city regions based upon the proportion of the workforce employed in sectors demanding high skills and the percentages of workers (in these and other sectors) educated to NVQ4 level, is broadly repeated when the focus shifts to productivity.

The indicator of productivity used by the study team (recently released ONS data on Gross Value Added (GVA) per filled job) is not available for exactly the same city regional 'units' that were used for the employment and migration analysis.

The nearest proxy in the case of GVA data are 'NUTS 2'⁶ areas which cover territories once overseen by county or metropolitan county councils. In Manchester's case this is the ten Greater Manchester districts⁷.

In broad terms, these marginally understate the area of influence around Manchester and Birmingham but somewhat overestimate the 'reach' of places like Bristol and Leeds.

Data are also available at a finer-grained NUTS 3 scale, which enables comparisons to be made between components of NUTS 2 areas – in MCR's case between the North part of Greater Manchester⁸ and Greater Manchester South.⁹

The team's analysis of productivity differences confirms that Greater Manchester, as a whole, is roughly on a par with the relevant NUTS 2 comparator areas outside the Southeast but lags well behind London and, to a lesser extent, behind the area focused upon Bristol. It also provides evidence about the gap in performance when looking at the north and south parts of Greater Manchester.

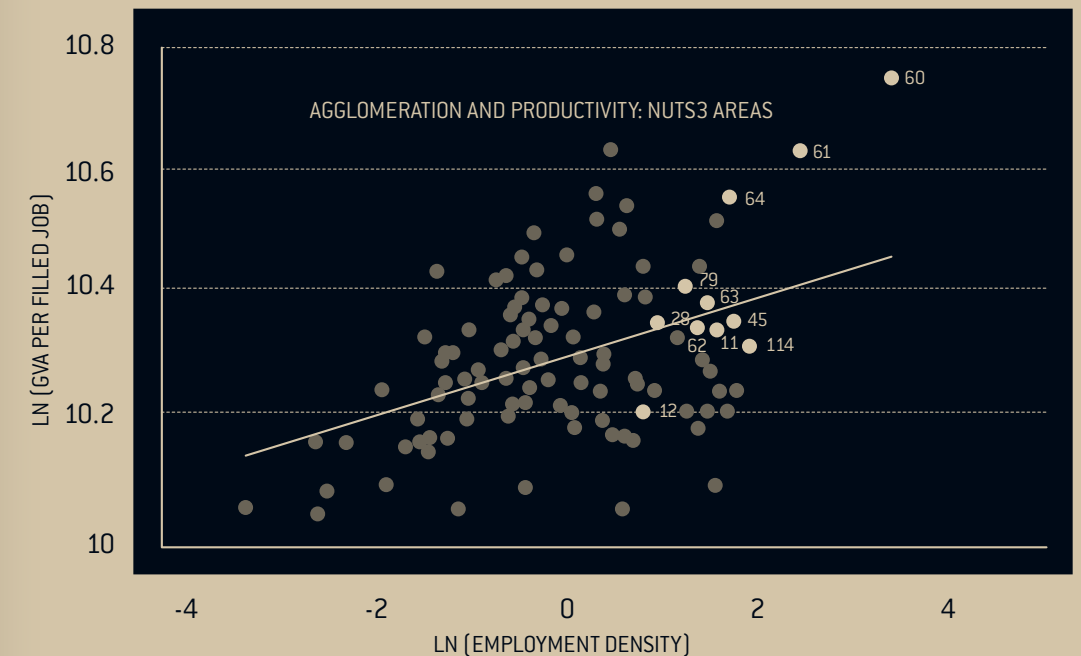
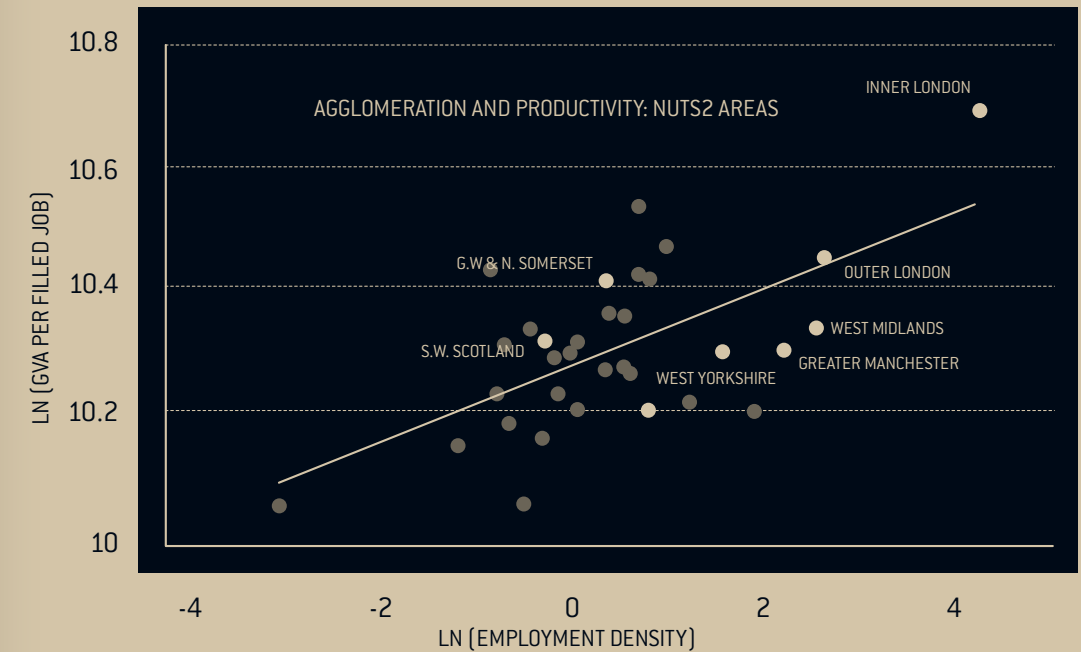
These observations are exemplified in Figure 17 which identifies the relationship between agglomeration (as captured on the x axis by employment density) and productivity (as captured on the y axis by GVA per job filled, averaged over the 2001 to 2005 period) for NUTS 2 and NUTS 3 areas.

Both parts of the figure confirm that as employment densities rise, so does productivity. This correlation is indicated by the rising slope of the line that bisects the dots representing particular NUTS 2 and NUTS 3 areas.

This line can therefore be interpreted as an indicator of whether areas do better or worse than might be expected in terms of productivity given their density of employment¹⁰. The places that lie above the line perform better whilst those lying below perform worse.

- 6 NUTS: Statistical reference areas based upon the European classification of regions and sub-regions.
- 7 Bolton, Bury, Manchester, Oldham, Rochdale, Salford, Stockport, Tameside, Trafford, Wigan.
- 8 GM North: Bolton, Bury, Oldham, Rochdale and Wigan.
- 9 GM South: Manchester, Salford, Stockport, Tameside and Trafford.
- 10 It should be noted that employment density figures are based upon all jobs within the areas concerned. It is not possible to isolate high skilled employment levels using GVA data.

Figure 17: The relationship between productivity and employment density for selected NUTS 2 and NUTS 3 areas.



Note: 11 is Greater Manchester South; 12 is Greater Manchester North; 28 Leeds; 45 Birmingham; 60 Inner London-West; 61 Inner London-East; 62 Outer London-East & North East; 63 Outer London-South; 64 Outer London West and North-West; 79 Bristol; and 114 Glasgow.

Employment density is the number of jobs filled for each hectare of land covered by the respective NUTS areas.

The first part of the figure, dealing with NUTS 2 areas, shows that the density of employment within Greater Manchester is high relative to each of its comparators bar London and the area focused upon Birmingham. However, its performance in terms of productivity is marginally behind the areas focused upon Leeds, Glasgow and Birmingham and significantly below London and the area surrounding Bristol.

The net result is that Greater Manchester is further 'below the line' than the other NUTS 2 comparators whose productivity is worse than might be expected, such as Birmingham and Leeds, and trails those areas that perform better than might be expected, that is Inner and Outer London and the areas focused upon Glasgow and Bristol.

The second part of the figure, dealing with NUTS 3 areas, puts the performance of Greater Manchester as a whole into a slightly different perspective. It shows that Greater Manchester South is one of a group of NUTS 3 areas outside London in which employment density is highest. Greater Manchester North is one of the group of NUTS 3 areas where employment density is moderately high.

More germane to this analysis, Greater Manchester South emerges as one of the NUTS 3 areas where productivity is relatively high, especially in comparison to others outside the south of England, whereas productivity in Greater Manchester North is relatively low. The net effect in this case is that Greater Manchester North is placed 'below the line' within a group of NUTS 3 areas in which productivity is substantially lower than might be expected.

Greater Manchester South, by contrast, lies very close to the line. Its performance in terms of productivity is roughly what would be expected given its high employment density, which puts it in the leading group of NUTS 3 areas outside London. Bristol is the area beyond London where performance in this respect is appreciably better than Greater Manchester South.

Taken together, the evidence on the density and growth of high level skills in MCR relative to other city regions and on productivity within Greater Manchester relative to other comparator NUTS 2 areas, suggests that the area as a whole performs strongly within the northern England context and credibly with respect to comparator areas outside the south of England.

However, it trails substantially behind London and also behind the smaller area focused upon Bristol. Part of the reason it has not done better is accounted for by differences in economic performance between the northern and southern areas of the city region.

As Table 21 shows, the diversity of performance found within Greater Manchester is higher than in all of the other NUTS 2 areas apart from London, strikingly so in the cases of the areas focused upon Glasgow and Leeds.

However, partly it also appears to be due to the fact that even the better performing southern area of MCR lacks the density of highest status employment within key knowledge-based sectors that have supported the highest levels of urban economic growth and productivity in southern England.

Table 21: Diversity of productivity performance within each NUTS2 area¹¹

COMPARATOR AREA	PRODUCTIVITY DIVERSITY WITHIN AREA MAX VS. MIN	GREATER MANCHESTER =100
Outer London	3,360	165.4
Inner London	2,502	123.3
Greater Manchester	2,032	100.0
Bristol	1,774	87.3
Birmingham	1,418	69.8
Glasgow	795	39.1
Leeds	935	46.0

Source: Calculated from ONS GVA statistics.

¹¹ Calculation of this index is based on averaged productivity over the period 2001 to 2005.



8.0 CITY REGIONAL ASSETS AND ENDOWMENTS

How does MCR stand, comparatively, in relation to the key assets that are argued to help attract and grow highly skilled employment and improve urban productivity?

8.1 Urban assets

As noted in Section 1, the study did not attempt a comprehensive evaluation of the importance of a wide range of assets that might be argued to attract and facilitate the development of high skilled labour. Rather, it proceeded on the basis that a high density and broad range of high skilled employment, in and of itself, is a driving force in the development of urban assets.

This does not mean, however, that the importance of these assets for cities and city regions in explaining high skilled employment growth and productivity was ignored. It assessed these characteristics in two principle ways.

Firstly, through some sector-specific case study work based on a series of interviews which aimed, in part, to test the importance of contextual, locational factors within MCR to the growth and attraction of high skilled employment. Secondly, through a comparative econometric analysis of the factors associated with variations in city regional productivity.

On the first of these, taking the ICT sector as the key example, the case study evidence indicates that the availability of a skilled workforce has been important in establishing MCR as a leading location for ICT businesses and investors.

While there is a view among employers that there remains a need for more specialist ICT skills, it is recognised that Manchester has a large pool of labour on which the industry can draw. Integral to its skills base is the output of graduates with ICT skills, with around 6,000 students per annum graduating from the city region's four key institutions with relevant skills and qualifications.

This is perceived to be helping to underpin MCR's emerging strength in the sector, although employers point to continued difficulties in retaining high skilled workers in the face of competition from London and the Southeast, which exert a strong pull as people climb the career ladder.

If the skills base has emerged as a key factor in explaining the recent performance of MCR in this area, though, the case study evidence also underlines the complex array of forces involved in developing key sectoral strengths. Key drivers of the ICT sector were said to include:

- Manchester's history of enterprise in computing and digital development, and the strong platform of companies and workers which resulted from it;
- availability of a wide range of business premises in the types of high quality locations (e.g. North Cheshire) that the industry typically favours, within and beyond the urban employment core;
- limited evidence that the benefits of clustering are at least part of the thinking of those involved in the industry. Universities are reported to be responding to this through designing course provision to service the needs of particular sub-sectors of the industry;
- presence of key technical infrastructure, with the Manchester Network Access Point (MaNAP) singled out as a major asset; and
- the value of the Manchester 'brand', which is now regarded by the city's investment specialists as an important general asset in attracting new firms.

The econometric work that compared the factors associated with variations in productivity in the selected NUTS 2 areas involved the identification of some key indicators of 'comparative endowments', based on HM Treasury's 'drivers of productivity' analysis, and an attempt to specify their relative importance. The results are summarised in Figures 18 and 19.

Figure 18 compares the relative importance of a small number of key variables in explaining productivity in Greater Manchester as compared to the national picture. It shows relatively minor differences in the 'weight' of the variables in accounting for productivity as between the city regional and national scales; only in the case of employment density, which as might be expected is seen to play a comparatively greater role in MCR than nationally, is there more than a marginal difference.

More significantly, in presenting a ranking of the variables relative to one another, the figure demonstrates that variations in human capital (using a composite indicator which takes into account high qualification levels, high occupational status and the absence of qualifications) is a more powerful explanatory factor than those based on strengths with respect to advanced manufacturing, entrepreneurship, the generation of patents and high tech services.

In short, the supply of higher order skills, in general, is a better predictor of productivity than the particular uses to which those skills are put.

Figure 19 provides a comparison between the relevant NUTS 2 areas across a wider group of 'endowments' by showing the importance of each of them, within each area, relative to the national average. The differences here are more striking. Three main messages emerge, all of them consistent with the preceding analysis.

First, and least surprisingly, London (especially inner London) is found to be better endowed, relative to the national average and the other comparators, across most of the positive indicators.

Figure 18: Contributions of key variables to explaining productivity [according to generalized method of moments estimations of specification]

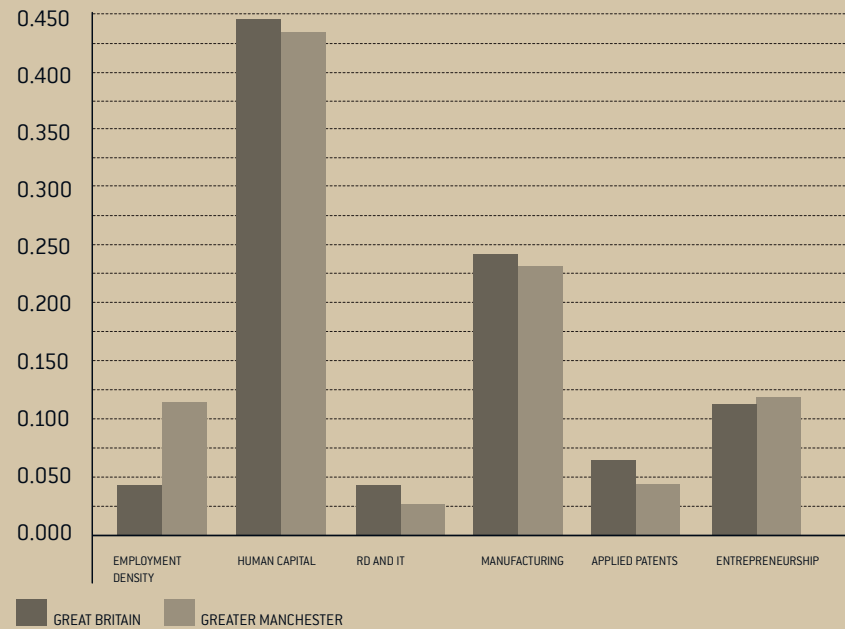
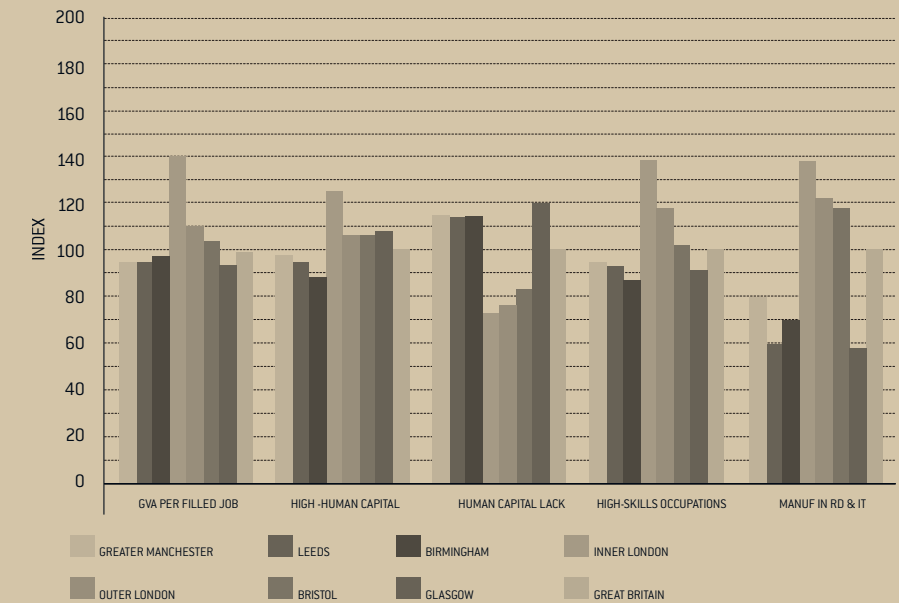
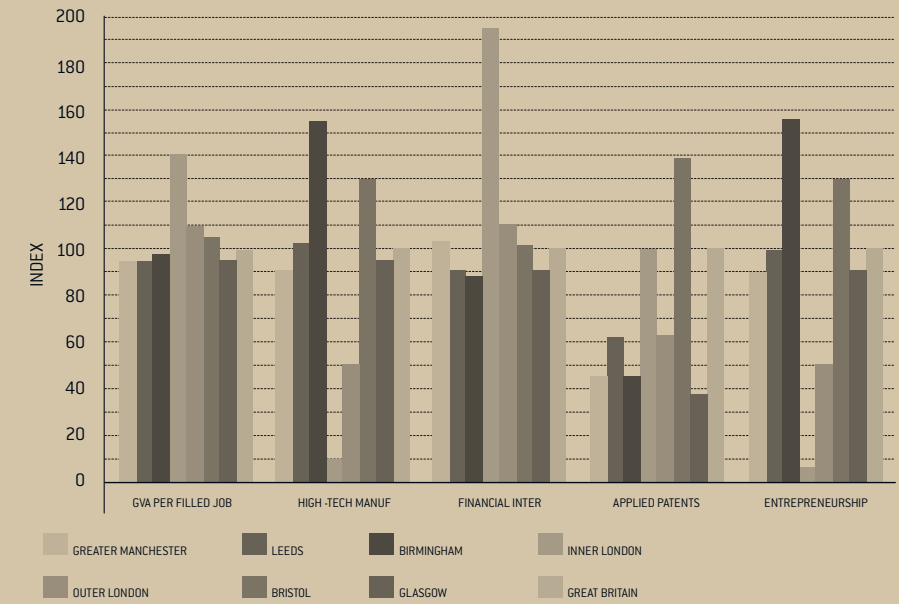


Figure 19: Endowments of MCR and comparator NUTS 2 areas (GB=100)



Second, Greater Manchester, along with Leeds, Birmingham and Glasgow, are the NUTS 2 areas that are least well endowed, relative to the national average and southern English comparators.

All four areas exceed the national average on the one negative indicator – the lack of human capital, based on the proportion of their resident populations that lack educational qualifications.

And third, again confirming broad north-south differences, the one area outside London that consistently performs better than the national average across each of the indicators, is Gloucester, Wiltshire and North Somerset, the broad area centred upon Bristol.



9.0 SKILL CONSTRAINTS AND BARRIERS

What skills are known to be in short supply in MCR, and do current and recent skill shortages suggest that there are specific, persistent difficulties in attracting highly skilled staff, either generally or within particular occupations/sectors? Is there evidence to suggest that particular barriers or constraints exist in MCR that limit its relative attractiveness to highly skilled staff and knowledge-intensive businesses?



MAX HEADROOM

9.1 Skill issues

In general, the evidence from this study suggests that MCR is providing employers in KBIs with the skilled workforce they require. Growth in KBI employment has been accompanied by sustained increases in the number of higher skilled people available in the city region's labour market.

MCR appears to be holding its own among the northern and midland city regions in its ability to attract and retain high skilled workers and create high skilled employment.

MCR also appears to be better placed than the UK as a whole in terms of skills shortage vacancies, but broadly on a par with the other major provincial city regions. During a period of strong employment growth, the city region has been able to attract the skilled workers it requires, although skills shortages are less of an issue as employment growth has changed between 2006 and 2007. The labour market has been able to remain broadly in equilibrium over the past three to four years.

The picture inevitably varies across different sectors, with skills shortages being more of a problem in manufacturing and the public sector than in private service sectors. Higher levels of replacement demand in the manufacturing and public sector workforce go some way to explaining this pattern.

For those sectors where data on skills gaps and shortages is available, the key messages are as follows:

- **ICT:** Data on skills shortages and vacancies suggest that in the last 2 years Greater Manchester has seen a considerable improvement in both the ability of employers to find appropriately skilled people in the labour market, and ensure that those in work have the required proficiency. Where there are shortages and gaps, this is likely to be attributable to strong expansion demand in the sector.
- **Creative and Media:** Analysis of the skills shortages data suggests that the labour market for this sector tightened between 2005 and 2007, with more employers reporting difficulties recruiting. However, skills gaps among employed staff appear to have fallen slightly, pointing to improvement in workforce quality.
- **Financial Services:** The evidence here suggests that skills shortages are a more significant challenge than skills gaps. However, the sector does not stand out in the analysis, possibly as a result of the more modest volume of employment in the sector and its lower skilled profile in comparison to other sectors.
- **Knowledge Intensive Manufacturing:** Data on skills gaps in the pharmaceuticals industry suggests that employers are having difficulties recruiting in the Manchester labour market, with around a quarter of vacancies linked to a lack of appropriately skilled workers. The picture looks a little better on the skills of those in existing jobs, although 17% of employers still report skills gaps.
- **Public Services:** Data on skills shortages in the public sector suggest that the position for Greater Manchester has worsened over the last 2 to 3 years, with over a quarter of all vacancies now seen as attributable to a lack of suitably qualified staff. There has also been an increase in the number of reported skills gaps.

The case studies of the ICT and the broadcast & printed media sectors highlighted comparatively few current issues in the ability of businesses to attract and retain workers. This is consistent with the broader finding that the capacity of the city region to offer the higher skilled workers needed by KBIs has generally kept pace with demand.

Nevertheless, the study has highlighted a number of issues which are widely acknowledged to be faced in the two sectors:

- Employers in both ICT and broadcast & printed media report difficulties in accessing people with the appropriate, specialist skills. In some cases, this is seen as an over supply of generalists, with employers needing to consider investing in additional training to acquire these skills;
- The ICT industry reports that the dominant position of London and the Southeast in the UK economy continues to present a challenge to the city region's ability to retain its high skilled workforce. This finding points to a potential shortage of opportunities to advance up the career escalator in the city region, either because there are a lack of opportunities, or because the volume of employment available in the greater Southeast speeds up career advancement;
- There is some evidence in the broadcast and printed media sector that the dominant position of London continues to make it difficult to recruit and, for those in employment, to move up the career ladder in MCR.

10.0 LOOKING FORWARD: IMPLICATIONS FOR STRATEGIC POLICY

How is demand for skills likely to change in future? How does public policy contribute to the factors found to be important in explaining MCR's standing as a 'talent magnet'? What changes might feasibly be introduced to enhance its capacity in this respect?

10.1 Looking backward and forward

The preceding sections have set out a detailed picture of the comparative performance of MCR and its component parts in attracting, developing and retaining high skilled and high potential labour. They have indicated what this has meant for city regional productivity and what benefits the city region and other areas have derived from the way in which areas within MCR act as a 'talent magnet'.

The comparators against which MCR has been measured cover the principal metropolitan areas of the UK in which economic performance during the recent period of sustained, national economic growth was particularly strong.

MCR emerges from the analysis as the strongest performer in northern Britain, characterised by a volume of high skilled jobs and a pool of high skilled labour, exceeded only by London, with strong growth and emerging specialisms within key knowledge based industries.

It also has a comparatively good record both in retaining high skilled and graduate labour and acting as a training ground for workers taking up high level employment opportunities elsewhere in the Northwest region.

However MCR, in common with all provincial UK city regions, is not remotely comparable to London in these respects, particularly in terms of the concentration of private and public sector 'command and control' activities, and its performance relative to national averages on a number of indicators appears modest partly because 'the London effect' inflates and skews national benchmarks.

MCR's performance also fails to match that of the smaller Bristol city region, whose relative proximity to London and the Southeast appears to result in stronger labour market interaction and the recycling of highly skilled and highly qualified workers across the south of England.

By comparison MCR's relationship with London and the Southeast, like that of England's other provincial city regions, is characterised by a substantial and growing net loss of high skilled and graduate labour, which is attracted by the higher density and quality of employment options available in the greater south.

The productivity of MCR as a whole is also constrained by significant differences in economic performance between the northern and southern areas of the city region and a deepening polarisation between the high skilled elements of the city regional workforce and residents lacking formal qualifications.

Had the economic boom conditions that underpinned the city regional development patterns identified in earlier sections been sustained, the likelihood is that the trends described would have intensified. Long range forecasts of change in demand for different levels of skills that were founded upon assumptions of modest national economic growth suggested that expansion would take place mainly in highly skilled managerial, professional and associated occupations and in personal, sales and customer services sectors characterised by lower level skills.

By contrast, elementary occupations were expected to decline substantially and falling levels of demand were also predicted for machine and transport operatives, skilled trades, and administrative, clerical and secretarial roles.

In the case of the Northwest, as Figure 20 illustrates, the expectation was that, by 2014, over 40% of the workforce would be employed in managerial and professional occupations with growth predicted to occur predominantly in the fields of health, teaching, and science and technology.

With the abrupt end to the boom years and the rapid onset of recession, however, the context in which ongoing occupational change is set to occur will be characterised by a period of low or negative employment growth. This is likely to affect MCR's KBIs in different ways.

Financial and related services, in particular, are set for a period of profound restructuring and retrenchment. And whilst investment in public services (a key contributor to MCR's recent success) may be protected by fiscal stimulus in the short term, the current surge in public borrowing looks likely to produce greater future austerity and strong pressures for a reduction in public sector employment. The prospects of MCR's other KBIs, meanwhile, will depend on the level of demand that can be sustained in the turbulent period that lies ahead.

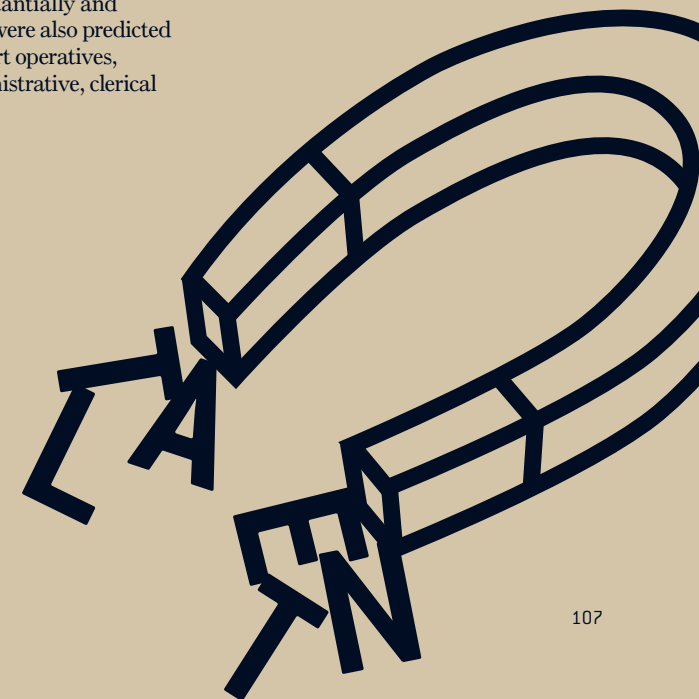
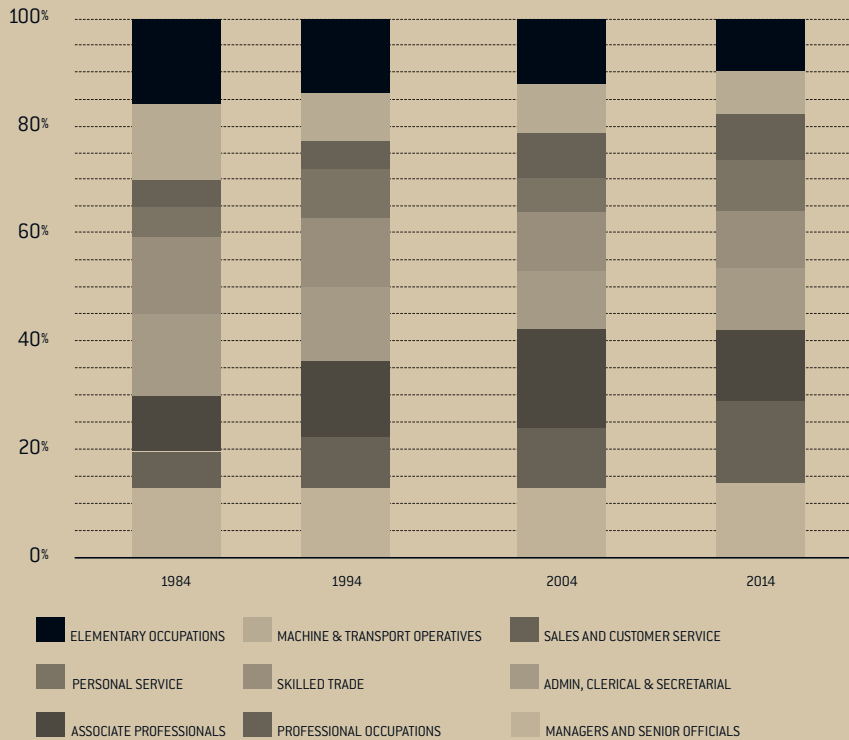


Figure 20: Occupational change in the Northwest 1994 to 2014



Source: Warwick Institute for Employment Research (2006), Working Futures 2004 to 2014: Spatial report.

10.2 Strategic dilemmas and options for public policy

None of the above changes the fact that the long term economic success of MCR and the wellbeing of its residents remain fundamentally dependent upon maintaining and enhancing its attractiveness to the high skilled and high potential labour that will drive future innovation across a range of current and future sector strengths.

As the study's econometric analysis showed, and as a significant body of previous research testifies, there are strong positive correlations between the density and range of high level skills and urban innovation and productivity, and the capacity of key centres of advanced employment to generate positive spill-over effects for the city regions and regions within which they sit.

The major strategic challenge, therefore, is how to establish and embed this understanding at the city regional scale and work through its spatial policy implications. An important corollary is the need to align policy priorities at national, regional, city regional and local level to ensure that strategic choices (a) are made on the basis of realism about what public policies can and cannot do to influence change, and (b) do not work against one another.

The current national policy context, in principle, is supportive of this ambition, but the challenge of realising it in a very fragmented institutional environment should not be underestimated.

The research underpinning this report concentrated upon measuring and mapping economic and related change rather than assessing the effects of particular policy choices on MCR's

performance. The strategic policy implications that flow from the analysis, therefore, are relatively broad brush rather than based upon forensic evidence about, or lessons from, the success or failure of previous initiatives.

Indeed it is by no means self-evident that policies have focused upon securing the conditions under which MCR can attract and develop high skilled workers, rather than contributing to this goal through the bi-products of other policy objectives (for example in relation to housing, transport and education).

In order then to avoid unsubstantiated leaps of faith in moving from evidence to policy prescription, it makes sense to outline a number of thematic challenges that are consistent with the study findings.

These strategic challenges can broadly be divided into two sets; one concerning ways in which demand for high level skills within MCR might feasibly be increased, the other focusing upon improving and expanding the skills base to which MCR firms and organisations can gain access.

Of the two, it is the former that will ultimately make most difference to the economic performance of MCR as a whole. The findings of the project suggest that whilst there are incidences of skills gaps in certain sectors and occupations within MCR, in broad terms the city region's current firms and organisations have been able to source the labour they have needed without too much difficulty, even in a period of sustained, national economic growth.

In this context, and in view of the effect that recession will have on the availability of skilled people, the effect of improving the size and quality of the pool of high level labour to which MCR employers have ready access is more likely to enhance the prospects of particular workers, than to improve economic performance at the level of the firm or the city region, unless it proceeds in parallel with growth in demand.

What is needed, in the long term, is a strategy that (a) supports both demand and supply side initiatives and develops them in parallel, and (b) accepts that the way to realise greatest value from the agglomeration economies that underpinned the comparative success of MCR during the boom years is to intensify them further, but also ensuring the benefits are captured by areas and residents that have gained less benefit from recent change thus far.

Taking a city regional view of the choices involved in developing and realising such a strategy, offers some inherent advantages over a fragmented process in which areas of MCR needlessly compete. However, it means facing up to some difficult dilemmas that are rarely taken into consideration when strategies and policies are developed at a sub-regional and city regional scale.

10.3 Strategic considerations: demand side

The first key consideration concerns the way in which the future of MCR's knowledge-driven economic activities relate to London and the greater south. It is clear that MCR is not a competitor to the capital and the super-region that surrounds it in any meaningful sense.

However, the extent to which its current and future economic role and functions are, and are seen to be, bound up in its relationship to the capital within a national division of economic labour, is especially important to the clarifying strategic goals.

The core issue, here, is whether MCR wishes to position itself as the key northern English subsidiary to the capital, able to capture lower level functions which may in future be priced out of the capital region, or whether there are a set of economic activities, peculiar to MCR and relatively independent of the greater south, that might become the focus of future strategy.

These paths are not mutually exclusive but they do point in different directions in terms of policy orientations. The former would demand attention to a range of issues that influence MCR's connectivity to London. These include travel time-distance, the potential effects of future agglomeration diseconomies or the impact of recession on the choices of firms currently based in the greater south, and the extent to which firms and talented individuals can be persuaded to consider MCR as an alternative location.

The latter would need to focus much more on niche sub-sectors and firms within MCR, whose trading links are with a variety of locations beyond the greater south, nationally and internationally; and on potential inward investors that could benefit from the wide range of assets that MCR can offer.

Further progress down either of these complementary paths depends upon relatively fine grained intelligence about the locational preferences of key target firms and the wider impact of investments, some of which should already be available within MCR's economic development and inward investment bodies, some of which is being provided by other MIER projects - but some of which need to come from more forensic work with particular types of firms. A useful bi-product of such work would be greater understanding of the specific urban assets that underpin locational choices.

The other key demand side challenge is how to improve the capacity of firms already operating within MCR to move up the value chain through innovation and the development of new or existing products and services. Again, this territory is being covered by the MIER, but there would appear to be merit in exploring further how city regional strengths in research and development, in particular, might be tapped more effectively for this purpose.

In many ways, universities are microcosms of knowledge-rich cities in that they are characterised by differential capacities to attract high level talent which, in and of itself, adds to their attractiveness for aspirational and talented workers in related fields.

Whilst there is a history of recent efforts to commercialise research through 'spin-out' or 'spin-in' companies and to promote engagement between academics and a variety of external stakeholders (including those at city regional and regional level) more could be done to encourage alignment between research in academia and the needs of city regional companies and organisations.

The starting point for such a dialogue would need to be a recognition that high performance companies will always source support from the best research providers available, wherever they may be, and that leading academics, similarly, see the market for their work as global.

Within these parameters, however, the scope for mutually advantageous relationships is considerable. The theme of sustainability, linked to climate change mitigation, alternative fuels, energy efficiency, carbon neutrality and environmental technologies is one obvious example of an area where leading edge science, competitive pressures on firms and organisations and the need for strategic foresight might be brought together effectively through organic policy initiatives.

10.4

Strategic considerations: supply side

On the supply side, there are two main considerations, each concerned with different aspects of access to high skilled employment.

The first and more intractable challenge, linked to education and skills, is to ensure that MCR residents are equipped, with the qualifications, confidence and learning capacities they need in order to take advantage of the higher skilled employment opportunities on offer. This is not an area in which the research underpinning this report has any direct implications, beyond the simple observation that there is a significant correlation between the absence of qualifications and city regional productivity.

It will be important, however, to respond to the issues raised by MIER's project on Sustainable Communities about learning lessons from the ways that some of the least advantaged areas of the city region have helped promote social and occupational mobility, rather than prevent it.

The other main consideration concerns physical access to high level employment. There are employer- and employee-focused aspects to this issue. The success of MCR firms and organisations is dependent upon them being able to draw upon the widest possible pool of high skilled labour available. This, in turn, demands a focus upon the accessibility of key city regional employment centres and an urgent continuation of the policy-development debate that underpinned the Transport Innovation Fund bid.

Improvement in transport connectivity within and beyond the city region is one way to increase the 'effective density' of the city region and encourage productivity improvements. However, the benefits of growing the high skilled workforce would be maximised if the spending power of the high skilled workforce could be captured, so far as is possible, within MCR itself.

The key issue, here, is housing policy and the extent to which planning and housing decisions made within, or for, the city region are helping to provide the sorts of residential choices and environments that are attractive to high skilled workers. What needs to be recognised, here, is that the south-facing nature of MCR economy described in the report, which has increasingly been associated with a preference for southern suburban locations by the highest skilled workers, is likely to become more rather than less marked in the future.

The challenge, therefore, is to ensure that artificial constraints are not put on key workers' ability to realise their residential preferences within the city region. The effect of this would be to deepen problems of housing affordability in certain areas, or drive people from the city region altogether.

At the same time a more expansive view of possible locations should be encouraged. Realistically, such an approach would need to build out from areas able to attract more affluent and discerning households. Within the north of the city region, Bury is perhaps the best example of an area that has successfully captured the economic benefit of attracting high skilled workers most effectively.

These strategic considerations are not simple or comfortable and it will not be possible to ensure that all areas and residents will benefit equally from the policy initiatives that might flow from them. The hope, however, is that taking a city regional view will maximise the benefit that MCR can realise from the opportunities and challenges it faces in the longer term.

The MIER Project consists of the main Executive Report and a set of working papers (published as appendices to the executive report) as below:

Executive report

Prof. Alan Harding (Project Director) - University of Manchester Institute for Political and Economic Governance (ipeg).

Prof. Harding is Professor of Urban and Regional Governance and Director of ipeg. Previously, he held Professorial posts at the University of Salford and Liverpool John Moores University. At various times Alan has acted as adviser to the OECD, the Department for Communities and Local Government and its predecessors, House of Commons Select Committees, the Northwest Regional Development Agency, the Mersey Partnership and the British Urban Regeneration Association on urban and regional development and governance issues.

Productivity, skills and agglomeration economies in the Manchester City Region

Prof. Mike Artis (Report Director) - Director of the Manchester Regional Economics Centre (MREC), University of Manchester

Prof. Artis is currently a visiting chair at the Department of Economics at the University of Swansea and a visiting fellow at ipeg. Previously, he held a Professorship at the European University Institute, Florence (1995 to 2003) and a George Fellowship at the Bank of England (in 2005). His research interests lie in economic modelling and forecasting, and in various aspects of intra-national macroeconomics with special reference to the analysis of consumption risk-sharing, regional growth dynamics and economic policy.

Stephen Greasley (Research Fellow, ipeg)

Ernest Miguelez (visiting Research Associate, ipeg, and PhD candidate at the University of Barcelona).

Residential migration

Nissa Finney (Report Director) - Research Associate, Cathie Marsh Centre for Census and Survey Research (CCSR), University of Manchester; and

Prof. Tony Champion Emeritus Professor of Population Geography at Newcastle University.

Prof. Champion has over 30 years' experience of studying migration and residential mobility, including looking at its determinants and its implications for population profiles and planning policies. Research projects currently underway include the evidence base on frequent movers (for the Social Exclusion Unit), the role of migration in changing the socio-demographic profile of British cities and their neighbourhoods (for Joseph Rowntree Foundation), and patterns of migration and population change in English cities for UK Government.

Dense labour markets in the Manchester City Region

Stephen Nicol (Report Director) - Managing Director of Regeneris Consulting.

Stephen has over 20 years professional experience in research and policy advice gained in the public and private sectors. He entered economic consultancy after a career as a professional economist in HM Treasury and the Department of the Environment. He has worked for a wide range of clients from blue-chip corporates, large developers, UK Government departments, the European Commission, local government and regional development agencies.

The Regeneris team also included: Neil Evans (Director); Ricardo Gomez (Senior Consultant); Rebekah Hicks (Consultant); Oliver Chapman (Consultant).

Literature review

All of the team contributed to the literature review, which was led by Champion, James Rees (Research Associate, ipeg) and Gomez. Rees also led on the analysis of data on the origins and destinations of students in city regional institutions that is summarised in the Executive Report.

